

# CENSUS OF INDIA, 1921 

VOLUME V

## BENGAL.

## PART 1. <br> REPORT

By

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## PREFACE.

The sixth Census of the Bengal Presidency was taken on the night of the 18th March, 1921. Details of the procedure followed are set forth at length in the Administrative Report, Volume V, Part III, of the series published in connection with the Census of India, but that volume is intended primarily for those in whose hands the arrangements for the Census of 1931 will be placed, and is not likely to reach the general reader. Assuming that this report will find a general reader, such a person may wish for some brief account of how the thing was done.

The vast majority of the population of Bengal does not live in towns, and - in rural areas the type of village generally found in other parts of India hardly exsists. Still less does the aspect of the countryside resemble that met with in Europe. Instead of orderly rows of fairly substantial houses ranged along some well used thoroughfare, one finds the homesteads of the rural population scattered over the whole face of the countryside, each consisting of matwalled huts ranged round a courtyard and buried under a thick growth of shady trees. At first glance it would seem well nigh impossible to account for every homestead, much less to complete a census of all the inhabitants. The task is, however, not as impossible as it appears, and the solution of the difficulty lies in the employment of local men, to whom the task of dealing with circumscribed areas, with which they have been familiar from their childhood, is a very different problem to that with which a stranger would be faced. The Province is divided into districts and distriets are parcelled out under police stations. For a smaller unit a well established survey unit is available, the mauza, which the landlords now use and with which, from their use of it, the cultivators have also become familiar. The whole area of a district is accounted for in terms of the mauzas under each police station, and the responsibility for the census of the mauzas can be handed over to locally appointed enumerators and supervisors. Each enumerator was given some 40 or 50 houses to deal with, and some 10 enumerators were placed under each supervisor. But in point of fact the supervisors were appointed first, the tahsil panchayats, those who collect the chaukidari tax and pay the village watchmen (chaukidars) being roped in to assist, and themselves to fill up as many of the posts of supervisor as possible, and the enumerators were selected afterwards with their assistance.

The first work of the supervisors and enumerators was to number the inhabited houses, using tar or some other suitable material for marking them, and to write up complete lists of houses for each mauza. While this was going on, instructions how to fill up the schedules were disseminated, and in the early part of February the Preliminary Enumeration commenced. The enumerators wrote up the schedules for all those ordinarily resident in each house, and the entries were carefully checked by the supervisors and others who were available to assist.

The final Census came on the night of March 18th, when the enumerators made a round of their blocks, struck off from the schedules the names of those who had died or had gone away, and entered particulars for
new-comers and new-born infants. Elaborate arrangements were also made so that travellers,should not escape being counted. Whether in point of fact the Census gains in accuracy through there being a final Census to an extent commensurable with the trouble which the final Census involves, is a matter of doubt. In the United States of America a final Census is not considered worth while; but in India it is certain that the large volunteer agency which is employed gains much inspirations from the knowledge that each enumerator has, that what he is doing on the Census night is being done by others throughout the length and breadth of the Indian Empire. Not only does this inspiration carry him along in his own work, but it gives his work an importance in the eyes of the public which it would not otherwise obtain.

As soon as the Census was completed, the enumerators set to work that same night, or very early next morning, ascertaining the totals for their blocks, and the supervisors for their circles, and within the next few days the final totals were completed and published. These were, of course, not always the exactly correct figures, and they only gave the total numbers of males and females. The Census statistics published in the companion to this volume, part II of volume V of the Census series, took a great deal longer to prepare.

Slips were made out for each individual, giving either by means of the colours of the slips symbols printed on the top, or details written in pencil, the full contents (except names) of the original schedule for each. The slips were prepared by clerks working on piece-rates, generally at each district headquarters, and in order that the copying might be finished with as little delay as possible, the total number of copyists employed ran into thousands. The slips, when completed, were sent to five central Census offices located at Burdwan, Rajshahi, Dacca, Barisal and Comilla, and in these the process of sorting was undertaken. The slips were sorted in pigeon-holes successively according to the entries of age, caste, etc., to obtain the statistics required for publication. Each sorter dealt with some 30,000 slips and entered his results in a series of forms of "sorter's tickets." The process was by no means as simple as it may appear from this brief description, but these are the essential features of it. Compilation followed, the process by which the results shown in the sorter's tickets were brought together to give statistics for the population under police-stations, in towns and in districts, required for publication. Compilation was carried out in the Central offices as far as to obtain the district totals, and the compilation registers with the sorter's tickets were then forwarded to an office in charge of my personal assistant in Dacca, Where the compilation was checked and the final tables prepared. Each final table was sent to the office of the Census Commissioner in Simla for a final check before publication.

This report will be found to differ from the reports of previous Censuses of Bengal, in that it sticks much more closely to the Census statistics themselves. Indeed, it contains nothing that is not statistical and only makes use of statistics other than those obtained from this and former Censuses, in order to amplify the conclusions and make use of the results which the Census statistics supply. It has not been permitted to digress on ethnological and kindred subjects, but on the other hand it goes somewhat more fully than its predecessors in its commentary upon the Census statistics of age, sex, civil
conditions and other purely statistical matters, and upon the relationship between the statistics, for example, of agriculture and vital occurrences, and the Census figures.

I cannot acknowledge too fully the services of the great body of private individuals and Government officials who conducted the Census and brought it to a satisfactory conclusion. My special thanks are due to the five Jepaty Collectors who were in charge of the Census offices at Burdwan, Rajshahi, Jacca, Barisal and Comilla, and especially to Babu Romesh Chandra Sen, who was in charge of Rajshahi, and to my personal assistant, Khan Sahib Abdul Jail Khan. Much useful work was also done by my head assistant, Babu Harendra Krishna Mitra, who has done for me the same work that he has done for two of my predecessors.

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## CENSUS REPORT

## OF

# BENGAL AND:SIKKIM. 

1921. 

## CHAPTER I.

## Distribution and movement of population.

1. Population.-The Province of Bengal remains to-day as it was constituted on April 1st, 1912. Since that date, adjustments of the boundaries between it and Assam on the one side, and Bihar and Orissa on the other, have affected only a few acres. In respect of its geographical and geological features, as well as of the character and ethnology of its peoples, it is more obviously a homogeneous unit than any other of the great Provinces in India. But for Marjeeling district to the north and the sparsely populated Chittagong Hill Tracts and Tripura State on the east, it is the delta of the Ganges and the Brahmaputra. Its area, exclusive of what is covered by the, largest rivers, is 82,244 square miles of which less than 12,000 square miles is. hilly or mountainous, and the rest a level plain. Its total population is 47,592,462 persons of whom all but some 150,000 live in the plains. . The Tittle mountain State of Sikkim to the north covers 2,818 square miles and has a population of 81,721 persons. It was only in Sikkim, the hill tracts on the east of the Province and in small areas in Darjeeling district and the least. accessible parts bordering on Chota Nagpur to the west, that the census was not taken synchronously on the night of the 18th March 1921 . Theseare areas in which a sparse population moves little and has little traffic away from home, and it may therefore be taken that the census figures give with considerable accuracy the number of persons who were in the Province on the: night of March tie 18th. The census of a stay-at-home rural population through the ayency of local people under the careful supervision which was exercised over them, is an operation which, even in a country where education is not far advanced, may be one of great accuracy. Almost every rural enumerator had lived all his life among the people he was to enumerate and was personally known to nearly all of them. The urban population is no more than $6 \frac{1}{2}$ per cent: of the whole, and a large proportion of it-lives in towns in which conditions approximate closely to those of rural areas. Only in Calcutta and its suburbs, Dacca city, certain industries municipalities up and down the Hooghly, and in the coal-fields are conditions very different. There the task of the enumerators was more difficult, but the arrangements were carefully made and the enumerators employed there as well as the enumerators who dealt with the travelling public were better educated than those who worked in riral areas. All, whether in towns or outsides, trok their work very seriously, those in rural areas especially taking it $\mathrm{r} \%$ obvious enjoyment of their responsibilities. Elaborate precautions were taken that every acre of inhabited area was parcelled out among the enumerators and such arrangements were made that the possibilities $0^{c}$ double enumeration would be likely to counterbalance the probabilities of omissions among those who werer : the move on the census night. It may pi considered very unlikeIy that the census total is out by as much as one per mille and it is probable that it is very much more accurate.
2. Comparison with the population of Great Britain and other Indian Provinces.-Though somewhat smaller than Great Britain, Bengal has more inhabitants than the British Isles. In area, Burma (231 thousand square miles) is the largest Province in India. Then come Bombay ( 187 thousand square miles), Madras ( 144 thousand), the Punjab ( 136 thousand), Baluchistan ( 135 thousand), the Central Provinces and Berar ( 131 thousand), the United Provinces ( 112 thousand), and Bihar and Orissa (112 thousand), Bengal, whose area is $82 \cdot 2$ thousand square miles, comes only ninth among the Provinces and is beaten also by Kashmir State ( 84 thousand) and the Rajputana Agency ( 129 thousand). In population, Bengal is, however, the largest Province, though the United Provinces with 46.51 millions and Madras with 42.79 millions follow it closely. Bihar and Orissa, 37.96 millions, Bombay, $26 . \%$ millions and the Punjab $25 \cdot 10$ millions follow
 Ut. $13 \cdot n g a l$ has increased only 2.8 per cent. compared with 8.0 per cent. between , 9 , i: 1 and 1911, it has been able to go ahead of the United Provinces in which the: "a has been a decrease of $\mathbf{3 . 2}$ per cent. Compared witk the other Provinces and States which happen to cover much the Sdive area, Benyal's population is in striking contrast. The area of Bengal is slightly larger than that of the Central Provinces without Berar, but its poprlation is nearly $4 \frac{1}{2}$ tımes as great. Hyderabad State has very nearly the same a $冫 a$, but its population is not much over a quarter that of Bengal. Kashmir is a little larger, but its population is less than one-fourteenth of Bengal's.
3. The manner of presentation of the statistics in the census tables.For the purpose or the census enumeration villages, or rather the units in Bengal which correspond to villages in cther parts of India, in rural areas and Wards or other muncipal civisions in owns were kept intact, and the population according to religion of every town and village is to be found in tables prepared and made over to District Officers. For the purpose of tabulation of the census figures the units employed were the population within the jurisdiction of police-stations. Although the figures, for all towns according to religion appear in the Tables Volume, only tows ' with a population of 25,000 or over were treated as separate units when "igures were abstracted for the Census Tables from VII onwards. The figures for the tables were prepared separately for each police-station and for each town of over 25,000 inhabitants. The mass of figures obtained has not, however, be iprinted in this form. Provincial Tables I and II at the end of the Tables ime give. figures for the population within the jurisdiction of each puace-station according to religious; and the number of literate persons in it. In the

Imperial Tables which precede these, figures are ordinarily given by Districts and Administrative Divisions.
4. Population of administrative units: Divisions:-The total population of the 28 districts into which British Territory in Bengal is divided is $46,695,536$. The 28 districts are placed for administrative purposes in five divisions. In area, Rajshahi Division is the largest with 19,018 square miles, then the Presidencv Division, 17,405 square miles, the Dacca Division 14,822 square miles, the Burdwan Division, 13,854 square miles, and smallest the Chittagong Division, 11,710 square miles. The area figures, division by division; and district by district, which have been adopted, differ somewhat from the figures used in the report and tables for the Census of 1911. It is only to a slight extent that the modifications correspond to changes of jurisdiction. Some of them are real changes which have taken place through the action of the great rivers in eroding at some points and building new land at others, and some are due to revised estimates of area based on recent survey operations, but for the most part they have been made in the attempt to treat in a consistent manner throughout the Province the not inconsiderable area covered by the waters of its rivers. The figures used in 1911, in the case of some districts, included the area of all rivers within their boundaries as well as half the area covered by rivers forming their boundaries; in the case of others internal rivers were included, but not boundary rivers, and in others, the area of all large rivers was excluded. In the figures which have now been adopted, the area of the big rivers which form the district boundaries has in every case been excluded. Such rivers, the Padma, Jamuna, Meghna, Hooghly, etc., are the largest in Bengal, but, especially in the 24-Parganas, Khulna. Bakarganj and Faridpur districts, there are others, some rather arms of the sea than rivers, which are not boundary rivers but are so large that to have included their area within a unit for which census figures were separately tabulated would very largely have affected the estimate of the density of population in it. The area of such rivers also has been excluded from the figures adopted on the present occasion. The figures include a certain. water area, but exclude all rivers so large that to have included them would have been to give a wrong impression of the density of population under the several police-stations past which they run.

The density of population is greatest in the Dacca Division, where it is 866 perscns to the square mile. It is 581 in the Burdwan Division, 544 in the Raishahi Division, 544 in the Presidency Division and 512 in the Chittagong Division, where the large sparsely populated hill tracts very much reduce the average. The population of each of the five is as follows:-

5. Districts.-In order of their total population the districts of the Province stand thus:-

| Mymensingh Dacca | * |  |  |  | Division. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Popalation. $4.8377311^{\circ}$ |  |
|  |  | -• | -•• | 4,037,730 | Dacca. |
|  | $\cdots$ | . | ... | 3,125,967 | Dacca. |


| Dutriot. |  |  | Pepaiation. |  | Dirmon. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Tippera | ... | ... | ... | 2,743,073 | Chittagóng. |
| Midnapore | ... | ... | ... | 2,666,660 | Eordwan |
| 24-Parganas | ... | ... | ... | 2,628,205 | Premidency. |
| Bakarganj | ... | ... | ... | 2,623.756 | Dadiency. |
| Rangpar | ... | ... | ... | 2,507,854 | Rajmbahi. |
| Furidpur | ... | ... | ... | 2,249, K 58 | Dacea, |
| Jessore | ... | ... | ... | 1,722,219 | Preaidency. |
| Dinajpur | - | ... | ... | 1,705,353 | Rajshabi. |
| Shittagong | ... | -.. | ... | 1,611,422 | Chittagong. |
| Rajshahi | ..0 | -.0 | ... | 1,489,675 | Rajahahi. |
| Noakhali | $\cdots$ | $\cdots$ | ... | 1,487,572 | Presidency. |
| Khulng | ... | ... | $\cdots$ | $1,472,786$ $1,453,034$ | Chittagong. |
| Burdwan | ... | ... | ... | 1,438,926 | Presidency |
| Pabna | ... | ... | ... | 1,389,494 | Rajohahi. |
| Marshidabad | ... | ... | ... | 1,262,514 | Presidency. |
| Hooghly | ..- | ... | ... | 1,080,142 | Burdwan. |
| Bogra | ... | ... | ... | 1,048,606 | Rajghahi. |
| Bankura | - | -. | ... | 1,019,941 | Bardwan. |
| Howrah | ... | ... | ... | 997,403 | Bardwan. |
| Malda | ... | ... | ... | 985,665 | Rajshahi. |
| Jalpaigari | ... | ... | ... | 936,269 | Rajshahi. |
| Calcutta | ... | ... | .. | 907,851 | Presidency. |
| Birbham | ... | ... | ... | 847,570 | Burdwan. |
| Darjeeling | ... | .., | ... | 282,748 | Rajehahi. |
| Chittagong Hill | Tracts | ... | ... | 173,243 | Chittagong. |

The population of Cooch Behar State is 592,489 , of Tripura State 304.437. and of Sikkim State, which is outside the Province of Bengal; 81,721.


It is immediately noticeable that most of the largest districts are in Eastern Bengal. The population of the average British district in Bengal is 1,667,608, but the two hill districts which come last in the order of the size of the population bring the average down considerably. The population of the average plains district (Calcutta excluded) is $1,813,268$ and only eight districts are larger than the average. Four of these are the four districts of the Dacca division. The others are Tippera, Midnapore, the 24-Parganas and Rangpur. Mymensingh is the largest by 50 per cent. Both Dacca and Tippera have now passed Midnapore which came second at the Census of 1901,
in the decade after which the scheme for dividing it was first definitely propounded, and the 24-Parganas and Bakarganj have now nearly caught it up. Of the plains districts, only Birbhum has a population less than half that of the average plains district, but po less than eleven-Khulna, Burdwan, Pabna, Murshidabad, Hooghly, Bogra, Bankura, Howrah, Malda, Jalpaiguri and Birbhum-have a population less than half the average of the eight largest, and the population of each of the last seyen just mentioned is less than one-quarter that of Mymensingh.
6. Average district in Bengal compared with the average district in other

Provinces.-The Permanent Settlement in Bengal and Bihar and Orissa has made Land Revenue Administration a lighter task than it is in other parts of India, and this is the explanation of the fact that much smaller districts have been formed elsewhere than in these Provinces and in Madras, where a somewhat different system provides that the district officer may pass more of his responsibility on to subordinates, but the fact is noteworthy that the average population of a district in each of the Provinces, Bengal, Bihar and Orissa and Madras is considerably more than double that in the rest of India. The average is highest in Bengal, rather lower in Bihar and Orissa and as much lower again in Madras. The other great Provinces follow in the order-United Provinces, Bombay, Punjab, Assam, Central Provinces and Berar, NorthWest Frontier Province and Burma as the following table shows:-



Mymensingh has far the largest population of any district in India, 48 ner cent. larger than that of Gorakpur in the United Provinces, which comes second, just beating Dacca in Bengal. Assam, like the United Provinces, has one district, Sylhet, enormous compared with its other districts. Malabar, the largest district in Madras, has not quite as many inhabitants as Dacca, while Darbhanga, the largest in Bihar and Orissa, comes midway between Dacca and Tippera. Raipur, with the largest district population in the Central Provinces, is only a little larger than Pabna, and Lahore and Ratnagiri, the largest in the Punjab and Bombay, are only a little larger than Hooghly. 'there is no plains district in Bengal with a population as small as that of the Southern Shan States, the largest district in Burma. Noakhali is not looked upon as a larger district in Bengal, but outside Bengal, Bihar and Orissa and Madras, there are only five districts in India with a larger popula-tion-Sylhet in Assam, and Gorakpur, Meerut, Basti and Azamgarh in the United Provinces. A consequence of the larger population of the average district in Bengal is that per head of its population district administration costs Bengal considerably less than it costs the rest of India, a fact that is apt to be lost sight of in a political discussion in reference to Bengal alone.
7. The population of the average police-station.-As has already been montioned, figures for the population under each police-station in the $P$ rovince are given in the Provincial Tables at the end of the Census Tables Volume. The population under the average polige-station in each district and division is as follows:-



The average population under a police-station for the Province is 69,848 . In Bibar and Orissa, the corresponding figure is 64,004 . It is not possible to carry the comparison to other Provinces as the census statistics for them are given by tahsils instead of police-stations. The noticeable feature of the figures given in the above table, which is apparent also in the diagram No. 5, is the disproportionately large population under police-stations in Eastern Lengal and in the eastern parts of Northern Bengal. The large figures against large districts is also noticeable, and significant of the fact that the administration of these districts is less close and less carefully carried out than in districts not abnormal in size.
8. Natural divisions.-For the purpose of discussion of the figures, it has been customary to present the statistics in the Census Report dividing the Province into " natural divisions" consisting of tracts in which the natural features are more or less homogeneous. The discussion of the figures will no doubt follow the customary lines in the reports for other Provinces, and it was necessary that they should do so in the case of Bengal in the days when it
included Bihar and Orissa, for the administrative divisions of the Province were then by no means conterminous with its natural divisions. Bengal, as it was constituted in 1912, is for essential purposes a homogeneous whole. Lastern Bengal has its contrasts with Western. Bengal, but they are contrasts which only gradually lose their definition as one passes from East to West. The boundary of the tracts which bear the characteristics of Eastern Bengal is by no means so clearly marked a line as that, for instance, which divides the Chota Nagpur Plateau from the plains of Bihar. If natural divisions there are in Bengal, they correspond as well with the administrative divisions of the Province as with any other system that could be devised. In the Report of the Census of Bengal and Bihar and Orissa in 1911, statistics for Khulna district were excluded from those of the Presidency Division and presented with those for the Dacca and Chittagong Divisions as part of the statistics for the natural division "Eastern Bengal." No doubt Khulna district has some of the characteristics of Eastern Bengal, but geographically the most striking contrast between Eastern and Central Bengal is the activity of the former's river-system and the decadence of the latter's, and it may be said that the westernmost of the active distributaries of the Ganges is that which divides Jessore and Faridpur districts and leaves Khulna district on its right not its left bank. The cultivating classes of Khulna district are moreover more closely allied to those of Jessore and the 24-Parganas than to those of Bakarganj. But for the case of Khulna district and the fact that the Dacca and Chittagong divisions were taken together, the " natural divisions" according to which statistics were presented as far as the present Bengal is concerned in the Census Report for 1911 were conterminous with the administrative divisions. The population of the Dacca and Chittagong Divisions has increased so much more quickly in the last half a century than that of other divisions, that Eastern Bengal has outgrown Western, Central and Northern Bengal and it is advantageous to make some division in it. There are obvious advantages in presenting the census statistics in the report according to the same arrangements as that of the Imperial Tables, unless it is necessary to do otherwise, and if the discussion of them according to "natural divisions" can he made applicable according to administrative divisions, it is plainly the more useful for administrative purposes. Accordingly, I propose, in this report, to set forth the census statistics according to administrative divisions, only placing those of Cooch Rebar State with those for Rajshahi Division in which it naturally falls. and those for Tripura State with those for the Chittagong Division. In this report the use of the term " Western Bengal " applies to the Burdwan Division. "North Bengal" to the Rajshahi Division with Cooch Behar, "Central Bengal" to the Presidency division, and "Eastern Bengal" to the Dacna Division and the Chittagong Division with Tripura State, the statistics for those two divisions being presented separately as well as together.
9. Density of population.-The average density of population over the whole of Bengal is 579 persons per square mile and in Sikkim 29. If the hill districts of Darjeeling and Chittagong Hill Tracts and Tripura State are excluded, the average density in the rest of the Province is 640 , but even over the plains there are very great inequalities in the distribution of the population, as the following statement of the average density over each district shows :-



These variations in the average density of population by districts are shown by the map in diagram No. 6 printed on page 8 as well as in the diagram No. 7 whinh shows the districts arranged in order of the density of their population.


Calcutta, which is all urban, comes first followed by Howrah, which takes so high a place because its area is small and it has a large urban population. The districts which follow are Eastern Bengal districts except Hooghly, which has a large urban population, and the south eastern districts of Northern Bengal. After them come the Central Bengal districts and those of Northern Bengal bordering on the Ganges, then the Western Bengal districts with Dinajpur and Cooch Behar, and last the incompletely developed Khulna and Jalpaiguri districts and the hills. To set forth the average density of population, district by district, does not, however, give the correct impression of the inequalities in the distribution which is found in the plains. The average density in 16 out of the 27 plains districts, including Cooch Behar as one, lies between 400 and 800 to the square mile, but there are police-stations undar which the average density is below 400 in Burdwan, Birbhom, Bankura, Midnapore, 24-Yarganas, Nadia, Rajshahi, Dinajpur, Jalpaiguri, Cooch Behar, Pabna, Malda, Dacca, Mymensingh, Bakarganj, Noakhali and Chittagong, no less than 17 out of the 27: and there are police-stations under which the average density is above 800 in all the 27, except Birbhum, Bankura,

Dinajpur, Jalpaiguri and Cooch Behar. A better impression of the inequalities of distribution of the population is given by the map in diagram No. 8 .


Subsidiary Table II printed at the end of this chapter gives an analysis of the area of the Province, district by district, according to the density of population which it supports. In preparing it, the area and population of all the police-stations with a density under 150 persons per square mile have been added together: similarly, the area and population of all with a density between 150 and 300 and so on. The result may be summarised as follows:-

|  |  | priogntage of total amea fith a dembitt of- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Cnder | 980-300. | 300-450. | 430-800. | 800-iso. | 730-000. | 800-1,030 | 0065 $1,050$. |
| Bengal ... | .." | $15 \cdot 4$ | $7 \cdot 6$ | $19 \cdot 3$ | $19 \cdot 4$ | $10 \cdot 2$ | 11.5 | $5 \cdot 8$ | $10 \cdot 8$ |
| Weat Bengal ... | -•• | 0 | 13.7 | $29 \cdot 6$ | $28 \%$ | $9 \cdot 1$ | 8.6 | $4 \cdot 1$ | 6.3 |
| Central Bengal ... | . $*$ | 21.0 | $3 \cdot 9$ | 172 | $29 \% 2$ | $13 \cdot 1$ | $7 \cdot 5$ | $3 \cdot 8$ | $4 \cdot 3$ |
| North Bengal ... | $\cdots$ | 14 | 11.4 | $27 \cdot 6$ | 26.7 | 124. | $15 \cdot 0$ | $2 \cdot 2$ | 3.3 |
| Esst Bengal ... | *** | 28.6 | 4.5 | 10.2 | 4.8 | 76 | $12 \cdot 8$ | 10.0' | 21.5 |

The area with between 300 and 750 persons per square mile covers twothirds of Western and Northern Bengal and nearly two-thirds of Central Bengal, but only $22 \frac{1}{2}$ per cent. of Eastern Bengal. The area with more than 760 per square mile covers about one-fifth of Western and Northern Bengal and somewhat less of Central Bengal, but no less than $44 \cdot 3$ per cent. of

Eastern Bengal. More than one-fifth of Eastern Bengal bears a density of population of over 1,050 to the square mile. Elsewhere in the Province such density is only reached in the industrial area round Calcutta and in the vicinity of the coal mines in Asansol. The few police-stations where it is reached in Northern Bengal are on the banks of the Jamuna river adjoining Eastern Bengal and form part of the great block of seven thousand square miles of raral area which bears this phenomenally high population, and comprises the Noakhali mainland, most of Tippera, Dacca, except for the Madhupur jungle, all the centre of Bakarganj, the south eastern half of Faridpur, the eastern part of Pabna and strips in Mymensingh along the Jamuna to the west, and the lower portion of the old course of the Brahmaputra to the east. This area supports some nine million people. Such a density in a rural population is only reached in India in comparatively much smaller areas in Muzaffarpur and adjoining districts in North Bihar, in the south-east of the United Provinces, at one or two points near the coast in the Bombay Presidency, and in Cochin, Travancore and parts of some of the southern districts of Madras. There is no area approaching it in size which supports so dense a population, urban or rural, in any part of the world unless it is in China.

At the opposite extreme, there is the hill tract, partly in British Territory and partly forming Tripura State, nearly nine thousand square miles in area with a population under 150 to the square mile and on the average only 34, and a block of about three thousand square miles of the Sundarbans in Khulna and the 24 -Parganas, which is swamp and jungle, practically uninhabited and flooded with salt water every high tide. The north-western half of Midnapore, all but the eastern extremity of Bankura, the central part of Burdwan and the western part of Birbhum, form a block of some six thousand square miles with a density below 450 . Nearly two thousand square miles, maindy in the southern part of it, has a density below 300. Very little of the block is forest but there is a laterite subsoil and the country is gently undulating. There are some two thousand five hundred square miles of somewhat similar country called the Barind with a similarly low density of population in the south and west of Dinajpur district, extending into Malda and Rajshahi, and a smaller block on another outcrop of red soil, the Madhupur jungle area in Dacca and Mymensingh. A better term for this subsoil than laterite is " The Old Allurium,"' for in the Madhupur jungle and the Barind at least, it does not seem to have been the result of the weathering of igneous rocks in situ, but appears more likely to have been a deposit laid down in fresh or brackish water and may be looked upon, therefore, as the beginning of the Delta formation. There is also an area of three thousand square miles with the same low density or lower in Jalpaiguri district extending into Cooch Behar. This runs into the foot hills of the Himalayas and much of it is as yet undeveloped, some being reserved forest.
10. Inequalities in the capacity of the soil.-Apart from the Sundarban area and Jalpaiguri district, the scantily-populated areas in the plains are not so because they are undeveloped. The slow increase in former decades and decrease in the last in such localities as Midnapore and Bankura districts, and the continued increase for instance in Dacca, Tippera and Noakhali seem to indicate that the pressure of the population on the soil is less rather than greater in the densely populated tracts than in the less densely. The inequalities in the distribution of population, great as they are, seem to follow still greater inequalities in the reproductive capacity of the soil. Agricultural statistics for every district in the Province are published annually. and those for the year 1920 have been used in preparing Subsidiary Table I printed at the end of this chapter which correlates density of population with area cultivated, rainfall, and the proportion of the gross cultivated area under each of the main crops. Except in the case of those districts which have recently been surveyed and for which statistics have heen prepared by the Settlement Department, little reliance can however be placed on the figures. Like the figures of the jute forecast, ther give a reasonably correct impression of variations from year to year, but from their method of preparation are necessarily quite unreliable as
absolute figures. It happens that the Settlement Department has mow surveyed aud prepared a record-of-rights for areas forming a strip, right arroks the Province from Bankura, with less than 400 persons to the square mile, to Dacca and Tippera with over 1,000 . I propose to analyse the acricultural statistics of the following:-Bankura (Sadar subdivision), Midnapore, Nadia, Rayshahi, Jessore, Faridpur, Mymensingh, Jacca, Tippera, Ninakhali (mainland only) and Bakarganj. Jalpaiguri district has also been dealt with by the Settlement Department, but as much of it is admittedly yet undeveloped, and as the aim at present is to correlate density of papulation with the full reproductive capacity of the soil, it is well to omit dalpaiguri. For the same reason, the figures for Noakhali mainland only, and not the islands, some of which are incompletely developed, will be considered. Parts of Bakarganj are in the same state, but the boundary between the onmpletely and the incompletely developed tracts is not one which can easily be defined, and the Settlement Officer did not attempt to draw such a line in presenting the agricultural statistics for the district in his report. All these eleven districts are eminently agricultural districts. In none of them, except Dacca, is more than a very small population of their population urban, and agriculture directly or indirectly supports the bulk of the people. Even in Dacca, the urban population is less than 4 per cent. of the whole.
11. Cultivated area and rainfall.-To state that the variations in the customary manner and extent of agriculture from one locality to another depend l-rgely upon differences in the rainfall is merely to repeat what is obvious. Not only does a more copious rainfall on a flat country, from which it can drain away but slowly, improve the soil and render more land fit for cultivation, but if it is not confined to a short period of the year, it enables more land to bear a double crop when it suits the cultivator to grow one. For the eleven districts under discussion, the percentage of their total area which is cultivated and the percentage which is double cropped are presented in the table below along with the annual rainfall and the density of population per square mile:-

|  |  | Anmal rainfall fa !acbos, | perdentafie op the total. AnKA MHCOII 18 - |  | porrentugn of krog ancia ofcrotes to total «rcz. | Hermona per equate malv. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Oullifrated. | Double oropind. |  |  |
| Bankara (Sadar subdivision) | -•• | 55.26 | $45 \cdot 52$ | -74 | $46 \cdot 26$ | 361 |
| Miduapore ... | ... | 59.45 | 61.63 | 1.46 | 63.09 | 528 |
| Nadia ... | -•• | 57.20 | 67.68 | 24.05 | 91.73 | 535 |
| Rajahali | *.* | 59.79 | 74.90 | 13.23 | 88.13 | 569 |
| Jessore | ... | 60.72 | 76.97 | 22.94 | 93.91 | 593 |
| Faridpur ... | *** | 65.59 | 78.26 | $24 \cdot 66$ | 102.92 | 949 |
| Mymeusingh ... | -•• | 83'81 | 66.77 | $23 \cdot 75$ | 90.52 | 776 |
| Dacea ... | $\cdots$ | 69.22 | 74.45 | 25:37 | 10032 | 1,14 ${ }^{\text {m }}$ |
| Tippera ... | ** | 111.92 | $80 \cdot 10$ | 28.84 | $108 \cdot 94$ | 1,078 |
| Noakhuli (mainland only) | ** | $126 \cdot 83$ | 76.73 | 93.61 | $110 \cdot 34$ | 1,202 |
| Baiarganj . $\cdot$.. | -•* | $84 * 29$ | 69.51 | $10 \div 2$ | 7¢.73 | 752 |



The correlation between the cultivated area, double cropped area and rainfall is also illustrated in diagram No. 9, and that between the gross area of the crops of a single year per cent. of the total area and the density of population in diagram No. 10. It is seen that the proportion of the total area which is cultivated increases with rainfall. The increase is however necessarily limited by the area required for habitation, communications, etc. In Mymensingh and Dacca, it is reduced by the forest area of the Madhupur jungle. In Tippera, and Noakhali, it would be greater but for the fact that the tanks are the only source of water-supply and a considerable area which might otherwise be available for agriculture is wasted in large onused tanks. Quite 5 per cent. of the whole area of Noakhali main.land is taken up by tanks and ditches and nearly 4 per cent. in Tippera.

The extent of double cropping is decided upon various considerations. The valuable crops in Bengal are the summer crops, which are taken up about August, and the winter rice crop, which is taken up at the end of the year. Spring crops grown in the cold weather and taken up at the end of it are much less valuable. In order that a summer crop and a winter crop may be taken off the same land, the land must first of all be of a suitable level. It must not go under water more than a foot or so in September or the winter rice cannot be transplanted. Both crops will be good ones only if the former gets a good start and can be taken up early, and the latter does not get weather too dry for it after it has been transplanted. What is requisite, therefore, is not only a good rainfall in the middle of the rainy season, but also sufficient rain both early and late in the year. It is the rain coming in March, April and May, and again in September and Octobers that determines whether a summer crop and a winter crop can be taken off the same land. Whether a spring crop will also be taken, depends upon the whether the cultivator finds it worth while to put one down. Unless the winter rice has been taken up very late, one could be grown almost everywhere in Eastern Bengal. The following table shows the rainfall, early and late, in seven of the districts under examination and the proportion of the cultivated area which has summer, winter and spring crops:-


The close relationship between the figures in column 4, column 9 and column 10 is remarkable. The cultivators of Midnapore and Rajshahi lave to, choose between summer or winter crops. The former prefers winter rice and the latter summer rice and jute, because much of his land is too high and drains too early for the winter crop to be a good one. The cultivators of Faridpur and Tippera grow summer crops to a consilerable extent and those of Mymensingh more so. They are able to get both summer and winter crops from a certain area, but the Faridpur cultivator with only 27.72 inches of rain in the five critical months is able to do so less often than they of Tippera and Mymensingh with 32.73 and $35 \cdot 86$ inches. That the Mymensingh cultivator does not do better than he of Tippera is due to the fact that he growa a great deal of jute, and the business of retting it does not leave him time to transplant, at that season, as much winter rice as he might with a good prospect of a successful crop. Only the Noakhali cultivator is able to put 45 per cent. of his land under a summer crop and sacrifice little of his winter rice. The Bakarganj cultivator with a small rainfall in March, April and May sticks to his winter rice. The Faridpur cultivator tries to recompense himself with a spring crop but it is not half as valuable as either a summer or winter, crop. The Mymensingh cultivator puts down a spring crop on the land on which he had not time to try a winter crop.
12. Density of population per square mile of cultivated area.-To return from this digression, it has been seen that there is some relationship between the cultivated area and density of population. The density of population per square mile of cultivated area and per square mile of the the gross crops of a single year in the eleven districts is as follows:-


The disproportion in density between Eastern and Western Bengal is not quite so great when density is presented as the number of persons per square mile cultivated as when presented as the number of persons per square mile of land whether cultivated or not. It is considerably less when density is presented as the number of persons per square mile of the gross crops of a single year, but it has by no means disappeared. Before a complete correlaton between density and the reproductive capacity of the soil can be established allowance must be made for the relative value of the different crops and for differences in outturn per acre of the same crop in different localities.
13. Density of population and outturn of food-crops.-The following table gives the area under the various crops stated in each case as a percentage of the total area of the district:-

|  | abra (btatad ab a fercemtage of total area) which is croppid with- |  |  |  |  |  | Totel cropd. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rice. | Other orreats and pulsos. | Juto. | Sugareann, druge and garcoucc. | Prait and verotabian. | Olt meeda. todder crope nill tolscallalivons |  |
| $\begin{aligned} & \text { Bankura (Sathr } \\ & \text { Bubdiviaion). } \end{aligned}$ | $40 \cdot 07$ | $3 \cdot 37$ | -04 | $\cdot 19$ | . 61 | $1 \cdot 98$ | $46 \% 6$ |
| Midnapore ... | 56:24 | - $2 \cdot 48$ | *39 | $\cdot 34$ | -37 | $3 \cdot 27$ | 63.09 |
| Nadin ... | 53.13 | 23.49 | 3.27 | $\cdot 65$ | 4.78 | 6.41 | 91.73 |
| Rnjshahi -.. | 60.74 | 868 | 8.28 | -83 | 2-36 | 7.42 | 88*13 |


|  |  |  |  |  |  |  | Total crbps. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rioce | Otber cereala and pulener. | Jate. | Saskareabe druga and parcotics. | Froit and vegotables. | $\begin{aligned} & \text { OU reodn, } \\ & \text { rodder crope } \\ & \text { mancellinecoas. } \end{aligned}$ |  |
| Jessore | 65'41 | 14-10 | 3.97 | 1.97 | 388 | 4.64 | 93*1 |
| F'aridpur ...* | 70.38 | 11.55 | $10 \cdot 40$ | -72 | 4.90 | 4.79 | 102.92 |
| Mymensingh ... | 60.93 | 4.54 | 14-21 | $\cdot 38$ | [-39 | $9 \cdot 07$ | 90.52 |
| Daccs ... | 55.04 | 15-81 | 14.56 | -66 | 7•14 | $7 \cdot 11$ | $100 \cdot 32$ |
| Tippere $\quad .$. | 75-96 | 734 | 15*32 | -34 | $4 \cdot 43$ | $5 \cdot 66$ | 108.94 |
| Nonksali (mainland) | 87'34 | $4 \cdot 70$ | 2.76 | -07 | $9 \cdot 12$ | 6.35 | 11034 |
| Bakarganj -... | 65.00 | $2.91{ }^{\text {. }}$ | $1 \cdot 16$ | $\cdot 55$ | 7.78 | $1 \cdot 27$ | 79-73 |

Before correlating density of population with total crop values, it will be interesting to discover the relationship between the density in the eleven districts under discussion and the total outturn of the food-crops which form the staple diet of the people. The bulk of it is rice. Other cereals and pulses, as the above table shows, always occupy a much smaller area and they are far less valuable. I propose to take their value at half the the value of the same area of rice in the same district. Experience has shown that to estimate the average outturn per acre of the rice crop is an exceedingly different matter, but the Settlement Officers of the districts have given their estimates, obtained partly by crop-cutting experiments, which however can prove very misleading, and partly from the opinions of the numerous officers who have been employed under them and have commonly had experience of Settlement work in several districts. Even if these estimates are not accurate in the absolute, they may safely be accepted as showing the outturn in one district relative to that in others, and in the present discussion use is made only of the relative outturn in the various districts.

The following table shows the manner of arriving at the relative outturn of food-crops of different districts. In order to have some convenient standard in terms of which to state the relative figures before correlating them with those for density of population, the figures for Midnapore have been taken as a standard (500) and the figures for other districts stated in similar terms:-


The correlation between the outturn of fond-grains crops and density is illustrated in diagram No. 11.


If the food crops of Midnapore district were just sufficient to maintain its population, and the population of other districts were supported according to the same standard, then-
$24 \cdot f \mathrm{p}$ er cont. of the foot-crups of Bunkura Salar sutdivision would lie aviilalde for export.


On the other hand:-


The rice produced on the Noakhali islands is more than sufficient to make up the deficiency in the food-supplies for the district as a whole. Dacca city is responsible for some 6 per cent. of the deficiency of the district, and as will now be shown the rural area of Dacca and still more so the other Eastern Bengal districts are able to export jute, betelnut, etc., more than sufficient. to pay for such quantities of rice as are needed to support the people at a higher standard than in Midnapore.
14. Density of population and total crop values.-In order to obtain the relative crop values per square mile of each district the simplest procedure is first to state the value of each other crop in terms of rice, and assuming. that variations in climate and fertility of the soil to affect other crops much as they affect rice, adjust the figures to allow for varying outturn in the rice crop, and reduce them to a standard. For this purpose the value of "other cereals and pulses' is taken to be half the value of the same. area of the rice, jute $2 \frac{1}{2}$ times, " fruit and vegetables" (the produce of betelnut gardens and chillies being the main item of Eastern Bengal) 3 times in Dacca, Tippera. Noakhali, Faridpur and Bakarganj and twice elsewhere, " sugarcane, drugs and narcoties " 3 times, and " oilseeds and miscellaneous" half. The result in each case is then multiplied by the average outturn of the rice crops in the several districts which was mentioned in the last paragraph, and reduced to a common denomination by taking the value of all crops per square mile in Midnapore as a standard, representing it by 500, and the value per square mile of each crop in Midnapore and elsewhere by a proportionate figure.

The following table gives the result of this calculation which is also illustrated in diagram No. 12:-


Relative crop values per square mile reduced to a standard according to which the total for Midnapore is 500 .

| - |  |  | Rioce | Other oeroal and patien and prisea | Jote. | Sugareane, drugrand arooti | Pritta and restables. |  | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baukurn (Sadar subdivision) |  |  | 404 | 17 | 1 | 6 | 12 | 10 | 450 |
| Midnapore ... | ... | $\ldots$ | 455 | 10 | 8 | 8 | 6 | 13 | 500 |
| Natia ... | ... | ... | 403 | 84 | 61 | 14 | 72 | 24 | 658 |
| Rajbhali ... | ... | $\cdots$ | 591 | 35 | 167 | 20 | 38 | 31. | 782 |
| Jessore ... | ... | $\cdots$ | 561 | 60 | 86 | 53 | 65 | 20 | 845 |
| Faridpur ... | ... | ... | 657 | 54 | 243 | 20 | 138 | 22 | 1,134 |
| Mymeusingh | ... | ... | 615 | 22 | 359 | 11 | 29 | 56 | 1,082 |
| Dacea ... | ... | ... | 559 | 80 | 368 | 20 | 216 | 36 | 1,279 |
| Tippera ... | $\cdots$ | ... | 805 | 39 | 406 | 11 | 140 | 30 | 1,431 |
| Noakhali (mainlaud) | ..* | $\cdots$ | 992 | 27 | 79 | 2 | 317 | 36 | 1,453 |
| Bakargaיj | $\cdots$ | ... | 740 | 17 | 33 | 19 | 265 | 7 | 1,081 |

According to these figures, rice accounts for 91 per cent. of the total value of the produce of agriculture in Midnapore, 90 per cent. in Bankura Sadar subdivision, 75 per cent. in Rajshahi, 68 per cent. in Bakarganj and Noakhali, 66 per cent. in Jessore, 61 per cent. in Nadia, 58 per cent. in Faridpur, 57 per cent. in Mymensingh, 56 per cent. in Tippera and only 44 per cent. in Dacca. Jute accounts for 33 per cent. of the total value of agricultural produce in

Mymensingh, 29 per cent. in Dacca, 28 per cent. in Tippera, 21 per cent. in Faridpur and Rajshahi, 10 per cent. in Jessore, only 5 per cent., 3 per cent. and 2 per cent. in Noakhali, Bakarganj and Midnapore and much leus than 1 per cent. in Bankura. Bakarganj, Noakbali, Dacca, Faridpur and Tippera owe much to the produce of their orchards and gardens, esperially betelnut plantations. This accounts for 24 per cent. of the total value of the produce in Bakarganj, 22 per cent. in Noakhali, 17 per cent. in Dacca, 12 per cent. in Faridpur and 10 per cent. in Tippera.

The correlation between the figures in the last column and density of population is illustrated in diagram
 No. 13, and it will be seen that it is a very close one. Properly, the discussion should not be carried further at this stage for the pressure of the population on the soil is relieved in each district to an extent corresponding to that to which occupations independent of agriculture draw off a proportion of the population. It will be carried further in relation to the occupation of agriculture and the relative standard of wealth of the cultivating classes in the several districts in Chapter XII of this report. It is, however, possible to go one step further. The figures in the last column of the table above indicate that in the several districts their agricultural wealth, assisted by the return obtained in other occupations to an extent similar to the assistance which is given in Midnapore, would be sufficient to support on the Midnapore standard a population as dense as that shown in the second column of the table below, in which the figures are presented along with those of the density obtained from the census statistics:-

|  |  | Density of populstoon supportable on 3itidnapure stsudard. | Densley of exlatIng populatios. | Gupportabla incrract at Mlduampo standard. |
| :---: | :---: | :---: | :---: | :---: |
| Bnnkeura (Sadar mubdivision) | ... | 476 | 361 | 33 per cent. |
| Miduapore | *** | 828 | 528 | 0 per cent. |
| Nudia .. | ... | 695 | 535 | 30 per cent. |
| Rajulınhi | *** | 826 | 569 | 45 per cout. |
| Jesgore | -•* | 889 | 593 | 50 per cent. |
| Faridpur | ; | 1,198 | 949 | 26 per cent. |
| Mynensiugh | ... | 1,143 | 776 | 47 per cent. |
| Dacca ... | 2.0. | 1,351 | 1,145 | 18 per ceut. |
| Tippern... $\quad \therefore$ | -** | 1,512 | 1,027 | 47 per cont. |
| Noakliali (mainland) | - - | 1,585 | 1,202 | 28 per cent. |
| Bakarganj ... | ... | 1,142 | 752 | 52 per cent. |

The calculation which has given the figures in the last column involves large assumptions. It may, however, be taken to indicate that the pressure of the present population on the soil is much greater in Midnapore than in the other ten districts and that in this respect the districts follow Midnapore approximately in the following order :-Dacca, Faridpur, Noakhali (mainland), Nadia, Bankura (Sadar), Rajshahi, Tippera, Mymensingh, Jessore and Bakarganj. Since 1872, though the population has increased more quickly in Tippera and Mymensingh than in any other districts in Bengal, there is still no indication that the pressure of the population on the soil has approached its limit. Bakarganj can bear an increase of 50 per cent. without allowing for further extension of cultivation into the Sundarbans. Jessore the same. Its population has gone down at each census since 1881, owing to the unhealthiness of its climate, but in the figures of the present decade there is indication of
improvement. Jessore and Bakarganj are the only two districts in Bengal whose population did not increase less or decrease more in the decade 1911-21 than in the decade 1901-11. Nadia and Rajshahi have, like Jessore been unhealthy districts for many years, and to this they owe the fact that the population has been kept down well below the limit which the soil can bear. In Midnapore, there can be little margin and Dacca and Faridpur in Eastern Bengal must shortly reach the same condition. Noakhali, which has a considerable greater margin, has its islands to fall back on. Its population has been crowded into a smaller space than before by the erosion of the sea-face, and it shows signs of relieving the pressure on the soil by taking more keenly to the cultivation of jute than formerly.

The examination of the agricultural statistics for these eleven districts has shown how varying capacity of the soil, under climatic conditions varying from place to place, enables very different densities of population to find support in different parts of the Province, and how it is possible for a population over 1,000 persons to the square mile in parts of Eastern Bengal to go on increasing rapidly, while a population less than half as dense in rural district in Western Bengal remains stationary or decreases. With the progress of civilization and the improvement of communications, the standard of living adjusts itself to variations from place to place in the capacity for production, whether in agriculture or industry. The standard of living maintained in agricultural populations in Europe seems ta have been adjusted to a density not more than some 250 persons to the square mile. The surplus population is drawn off into other industrial and commercial enterprises and the standard of living among agriculturists maintained and even considerably improved. In India, a stage of civilization has not vet been reached at which such enterprise draws off even a small portion of the labour not absolutely required for agricultural purposes. A stage has been reached in which the land available for cultivation is not sufficient to give full employment to a great multitude who see no occupation but agriculture to which they can turn their hands. The next stage threatens to be a long time before it is reached, and the time must necessarily be the longer on account of the fact that so large a proportion of those engaged in agriculture own substantial rights in the little plots they cultivate, and will not readily give them up when the time comes to leave agriculture for another occupation. In Europe, the maintenance of the standard of living places a limit on the increase in the numbers who continue to support themselves by agriculture, but in India, this is not the case. An explanation of the fact that Eastern Bengal districts are able to support their agricultural population at a higher standard of living than in Western Bengal, is sometimes sought in the higher proportion of aborigines in the population of Western Bengal, aborigines whose backward civilization demands only a low standard of living. This explanation, however, does not go nearer to the root of the matter than the explanation of the low standard of living in Lndia compared with that in Europe in the backwardness of Indian civilization. The true explanation of the possibility of a higher standard of living among cultivators in Eastern than in Western Bengal districts is to be found in such an analysis of agricultural statistics which has just been given for eleven districts.
15. Early accounts of the population.-The first census of Bengal was taken in the year 1872. Earlier than that date no attempt had been made on srstematic lines to discover what the population actually was. The Marquis of Wellesley called for information regarding the population from the Collectors and Judges stationed in the districts in the year 1801, but " the returns were so imperfect and when they were made by those two descriptions of the officers so contradictory that no general conclusion could be drawn from them. An actual enumeration of the inhabitants of these Provinces or a calculation founded on data promising a high degree of certainty is still a desideratum. Nothing more hás yet been produced than the estimates of ingenious men who differ considerably among themselves." The quotation is from the celebrated "Fifth Report" of 1812. At the time when the report was written an aftempt. was being made by Dr. Francis Buchanan, who afterwards took the name of Hamilton, to carry out a statistical survey of the Province. It was never
finished, but during seven years from 1807-14, in which he works in North Bengal and North Bihar, Buchanan arrived at results which showed the population in those parts very much the same as it was counted in 187\%. In the meantime, the only attempt to estimate the population was a very unsatisfactory one made by the Revenue Surveyors in each district as they dealt with it. Their estimates based on the number of houses were often very low indeed compared with the census figures of 1872, and even the Survey Officers themselves appear to have placed but little confidence in them. One wrote "I feel persuaded no very correct returns can ever be obtained by a surveyor in a perpetually settled soubah such as Bengal. It must be the work of the police under the strict superintendence of active magistrates." Though no estimate of the population of the Province made before the Census of 1872 is worth quating, the early official reports and the correspondence of the East India Company's servants give a clear impression that in the early days of last century, the population was distributed in a manner very different from its distribution to-day. To-day the population is distributed over the whole area of the Province. The only waste spaces in the plains districts are the Sundarbans, the fringes of the hills in Jalpaiguri district and small patches on the borders of Chota Nagpur to the West. A hundred years ago there appear to have been stretches unbroken by cultivation for considerable distances in parts of every district. Cultivators could always migrate and often did so from one pargana to another and had no difficulty in finding land which they could take up. The distinction between the cultivator's rights as a " Khodkast raiyat,", i.e.. in the estate in which his homestead stood, and as a "Paikast raiyat," i.e., in an estate in which he subsequently took up land, was in those days, a very important one. The landlords had some inducement to keep their tenant on their lands, and that there was always land to spare accounts for the fact that the customary rates of rents remained unchanged for long periods and the early Revenue Regulations make no provision for enhancement of rates of rent at all. In the days before the Pax Britannica was established cultivators settled round the residence of a powerful prince who would be able to protect them, and for many years afterwards centres of population, which had become so in those days of stress, remained. There were instances of military colonies which the Moghuls deliberately made centres of population by establishing soldiers as cultivators. One such was formed by the two parganas Dandra and Jugidia placed in the east of Noakhali district to form a bulwark against the Arracanese. In the statistics of the Census of 1872, there is some evidence of the old established centres of population where cultivators had been able to live secure. Such centres were Vishnupur in Bankura, Kushtia in Nadia, Puthia in Rajshahi, Rangpur, Thorla in Tippera and Chhagalnaiya in Noakhali, sheltered by the hills and under the protection of the Raja of Tippera. By 1872, however, the raids of the Marathas, the Assamese and the Maghs as well as the internecine strife among the noblcs of Bengal had been forgotten and the population had spread over the whole face of the countryside much as it is to-day, so that the figures of the Census of 1872 show very few police stations under which the population was less than 300 to the square mile.
16. Variation of population, 1872-1921.-The population of the area

| Date of consith. | Population. | Inornnee per cont. | Density. |
| :---: | :---: | :---: | :---: |
| 1881 | 37,014,621 | 6.7 | 450 |
| 1891 | 89,805,587 | $7 \cdot 5$ | 484 |
| 15001 | 1-981,369 | $7 \%$ | 521 |
| 1911 | 46,305,170 | 8.0 | 663 |
| 1921 | 47,592,463 | 2.8 | 578 | which now comprises Bengal was $34,687,003$ according to the Census of 1872 and the density 422 persons per square mile. Changes in the total at subsequent enumerations up to 1921 are shown in the margin. Figures showing the percentage of increase in each decade and the density at each census in the several districts and States are to be found in Subsidiary Table III printed at the end of this chapter. The first census in 1872 was carried out in the face of much public suspicion as to the ends towards which such a proceeding

aimed and its results are known not to have been as accurate as those of subsequent enumerations. This accounts for part of the irregularity of the changes between 1872 and 1881,- which the district figures show. 'There was, for example, an underestimate in Jessore and in Mymensingh which accounts for the large increase which these districts showed. The decreases between 1872 and 1881 in Burdwan, Birbhum and Hooghly were real decreases due to the outbreak of the "Burdwan Fever" epidemic. The decrease in Noakhali and the smallness of the increases in Bakarganj and Chittagong were the results of the disastrous cyclone and storm wave which swept the coast and islands at the head of the Bay of Bengal in 1876. In the parts affected, the subsequent cholera epidemic, occasioned by the contamination of the water-supplies with sea-water and the dead bodies of innumerable cattle that had been drowned, caused greater loss of life than the cyclone itself. Subsequent decades up to 1911 escaped a repetition on so large a scale of the calamities of the seventies of last century, but in the last decade the universal influenza epidemic has left a deeper mark on the population than any calamity for a century previously. The thirty years from 1881 to 1911 were a period of steady progress and the population of each district is shown by the census figures to have behaved much the same in the second and the third of the three decades as it had done in the first. The changes of density in different quarters in the Province are summed up as follows and illustrated in No. 14:-


The " Burdwan Fever" epidemic which lasted well into the eighties of the last century and again the calamities of the last decade have resulted in the population of West Bengal, but for the increases in its industrial areas, being much the same now as in 1872 . The districts worst affected by the earlier epidemic made, however, a rapid recovery in the decade 1891-1901, and may do the same again. Central Bengal has gained nothing since 1872, except through the industrial development in the neighbourhood of Calcutta and the extension of cultivation into the Sunderbans in the south of the $24-$ Parganas and Khulna. In North ©Bengal, the population has grown steadily, although slowly and unequally from district to district. In Eastern Bengal, on the other hand, it has grown very rapidly. The districts on the sea-face between 1881 and 1891 doubled the increase which the figures of subsequent enumerations showed to be the normal ones with them, and in this
part of the Province the increase since 1872 has been no less than $72 \cdot 4$ per cent. in 49 years.
17. Persons per acre and proximity in yards.-To some readers, a statement of the density of population of the Province at successive enumerations as the number of acres per person instead of persons per square mile may give a clearer conception of its meaning. The figures are given below together with others which refer to the distance which would separate each individual inhabitant from the next if all were stationed at equal intervals over the whole face of the country, and corresponding figures for England and Wales:-

|  |  |  |  | Pknsons | Cilse. | AORES | person. | Proxim | 1x fandi. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Beugal. | England nod Yaloe. | Bengal. | $\begin{gathered} \text { Rngland aud } \\ \text { Fiabeal } \end{gathered}$ | Beosons. | $\begin{aligned} & \text { Eorland mod } \\ & \text { Weles. } \end{aligned}$ |
| 1872 | ... | ... | .** | 422 | 389 (1871) | 1.52 | 1.64 | 93 | 96 |
| 1881 | -•' | . 0 | *** | .450) | 445 | 142 | 1.44 | 90 | 90 |
| 1891 | ..' | *** | .." | 484 | 497 | 1.32 | $1 \cdot 29$ | 87 | 85 |
| 1901 | ..* | *.* | - | 521 | 558 | 1"23 | 115 | 84. | 81 |
| 1911 | - | - | ** | 563 | 618 | 1.14 | 1.04 | 81 | 76 |
| 1921 | ..' | ".. | *.* | 579 | 649 | $1 \cdot 11$ | 0.99 | 79 | 74 |
|  |  |  |  |  |  |  |  |  |  |

The number of acres per person and their proximity in yards in Dacca clistrict with the highest density of any district are 56 acres and 56 yards. The corresponding figures for Bankura (Sadar subdivision) are 1.77 acres per person and proximity 100 yards. The figures mentioned in this paragraph are illustrated in diagram No. 15.

18. Movement of the median of population.-The median of the area of Bengal, the point such that straight lines drawn north and south and east and west through it, each divide the Province into two parts equal in area, falls about a mile south of the trijunction point of Nadia, Faridpur and Jessore districts. The "median of population" in 1872 lay some 16 miles to the south-east of it. The area in latitudes north of it bore a population less dense on the average than the area in latitude to the south of it. Ins those days, moreover, though the plains districts of Eastern Bengal had as bigh a density of population as those of Western, the large almost uninhabited Chittagong Hill Tracts and Tripura State so reduced the average density in longitudes to the east as to throw the "median of population" almost as far west as south of median of area. Since 1872 , the " median of population" has been drawn slightly northwards, some four miles in half a century,
but it has moved much further eastwards, some 16 miles, on account of the much more rapid increase of population to the east than to the west. The line of latitude through the median of area divides Eastern Bengal about equally. The motion of the popilation median northwards is to be put down to the relatively greater increase in North Bengal than in West Bengal, all but a small portion of which lies south of the median line of latitude. The following figures give the positions of the "median of population" at each successive census relative to the median of area:-


| 1872 | $\ldots$ | $11-21$ miles $W$. | 11.51 miles $S$. |
| :---: | :---: | :---: | :---: |
| 1881 | $\ldots$ | 7.25 miles $W$. | 8.88 miles 8. |
| 1891 | $\ldots$ | 4.32 miles $W$. | 9.44 miles 8. |
| 1901 | $\ldots$ | 2.93 miles $W$. | 8.75 miles $S$. |

1911 ... 84 miles E. 8.09 miles S. .

The large vacant spaces in the Chittagong Hill Tracts and Tripura State lying in the extreme east, while the heaviest populated parts of Eastern Bengal lie much nearer the median of area, have the effect of throwing the "centre of population" somewhat further west than the " median," but the motion of the "centre of population" appears to conform closely to that of the " median" and an independent discussion of it would therefore be of little value. The movement of both " median" and "centre of population" eastwards is, as the fipures regarding birth-place and migration to be discussed in chapter III of this report will show, due to growth of natural population and not to the migration eastwards. The effect of migration apart from increase in natural population would tend to move both "median" and "centre of population" westward instead of eastward, for though emigrants from Eastern Bengal to Calcutta and the industrial area in its neighbourhood are comparatively very few, this area as well as rural areas in Western and Northern Bengal, receive a stream of emigrants from Bihar and Orissa and the United Provinces. This stream does not flow on into Eastern Bengal and the area in longitudes east of the median hardly profits by it at all.
19. Administrative units in Eastern Bengal have now outgrown those of Western Bengal.-The effect of the continued movement of the centre of the population eastward upon the relative size of the administrative units in the several quarters of the Province is worthy of examination. The formation of districts took place somewhat haphazard immediately after the famous proclamation of the 11th of May 1772, in which the Court of Directors of the East India Company published its determination 'to stand forth as Dewan and by the agency of the Company's servants to take upon themselves the entire care and management of the revenue." The Quinquennial Settlement followed and after its term, short-term settlements of the revenue up till the time of the Permanent Settlement. During this time, there were numerous changes in jurisdiction, estates being transferred from one district to another and in some instances new districts being formed. But, generally speaking, the districts had by 1792 crystallised into much the same form as they retain to the present day. Districts were formed for the purpose of revenue administration, and changes made only upon considerations of convenience in carrying it out. Changes made after 1792 were made more deliberately and other considerations were entertained in making them. Before 1872 all had been surveyed and their houndaries adjusted and
defined. Parts of two adjoining or interlocked estates paying revenue $t \boldsymbol{c}$ different Collectorates were no longer necessarily in two different districts for purposes of general administration. The boundary between one district and the next had become a continuous line. Still, as there had been no census, the administrative units could not be said to have been adjusted in reference to the population. The population of districts as well as of the smalier administrative units, subdivisions and police-stations was shown by the Census of 1872 to be very unequal, and in the next decade much adjustment of boundaries was carried out. In 1872, Burdwan division was as it is now, except that Howrah was not separated from Hooghly, although it had a Magistrate of its own. The Presidency division did not include Murshidabad, and Khulna had not yet become a separate district. Rajshahi division included Murshidabad, but Jalpaiguri and Darjeeling belonged to a separate Cooch Behar division. Dacca division included Sylhet and. Cachar but Chittagong division was as it is now. After the census, Murshidabad was transferred to the Presidency division from the Rajshahi division, which also lost Malda but absorbed the Cooch Behar Division which had had only 1,045,942 inhabitants in 1872 more than half of whom lived in Cooch Behar State, and Sylhet and Cachar were excluded from the Dacca Division, so that the administrative divisions took the form they still retain except that Malda was placed in North Bihar. Chittagong Division was very much smaller than the others but after the adjustment, the population of each of the other four divisions was very nearly equal.

The following are the figures according to the Census of 1872 after the adjustments had been made, compared with the figures for the population of each division in 1921:-

|  | Division |  |  | 1872 | 1921 |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Burdwan | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $7,286,957$ | $8,050,642$ |
| Presidency | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $7,899,090$ | $9,461,395$ |
| Rajshahi | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $7,377,051$ | 10,345664 |
| Dacca | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $7.592,932$ | $12 ; 823,311$ |
| Chittagong | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $3,444,574$ | $6,000,524$ |

After the Census of 1872, Madaripur subdivision was transferred from Bakarganj to Faridpur and this left the population of the 24 -Parganas aud Jessore together larger than that or any other two adjoining districts in the Frovince. Khulna district was carved out of these two, and certain smaller changes were made in other places. No new district has since been formed, except that the Magistrate of Howrah has recently become Collector of a separate district. A number of new subdivisions were formed after the Census of 1872, but few new police-stations. After the adjustments made with reference to the Census of 1872, the following were the figures for the population of the average plains district, subdivision and police-station in each administrative division. Figures for Calcutta city and for Darjeeling district and the Chittagong Hill Tracts are not included:-


After the Census of 1881, the Sundarban subdivision in the 24-Parganas, Baruipur by name, ceased to have separate existence and Thakurgaon subdivision in Dinajpur district was formed, both arrangements tending towards equalization of the average subdivisional population. That it remained high in Rajshahi division was partly counterbalanced by the fact that some of the districts were very small.

The corresponding figures according to the Census of 1921, may be contrasted with those which have just been given:-

|  |  |  | $\Delta$ verage district popalation. | A vernge subdivisional population. | Popalation under the average police-station. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bardwan | ... | ... | 1,341,774 | 473,567 | 58,764 |
| Presidency | ... | ... | 1,710,709 | 427,677 | 58,242 |
| Rajshahi | ... | $\cdots$ | 1,437,559 | 628,932 | 67,995 ${ }^{\text { }}$ |
| Dacca | ... | ... | 3,209,328 | 755,136 | 89,139 |
| Chittagong | - | $\cdots$ | 1,942,427 | 832,469 | 105,950* |

The comparison indicates very plainly how the arrangement of districts and subdivisions has become out of date. The population of those units in Dacca and Chittagong divisions has far outgrown those in the Burdwan and Presidency divisions. After the Census of 1872, the average population under a police-station in Dacca division was considerably above the average for the Province, while in Burdwan division it was a little, and in the Presidency division, considerably below the average. This inequality was somewhat removed by the fact that a number of "Outposts" were located in Eastern Bengal. The difference between the population under the average police-station in the East and that in the West, is as great now as that between the average subdivisional population on the east and the west. There are, of course, other considerations besides the number of the population which determine the most suitable extent of jurisdiction of a policestation. The figures here given are intended only to indicate how, in the making of present arrangements, the phenomenal increase of population in Eastern Bengal seems to a considerable extent to have passed unnoticed.
20. Variation of population since 1911.-Between 1911 and 1921, the population of Bengal increased by 1,287, 292, $2 \cdot 8$ per cent. of the population in 1911, but this increase was not by any means spread evenly over the whole Province. The population of Western and Central Bengal has seriously

[^0]declined except in the immediate neighbourhood of Calcutta. That of Northern Bengal has increased by 2 per cent. while that of Eastern Bengal has increased by 8 per cent. The map in diagram No. 17 and diagram No. 18

show the proportionate increase and decrease in each district and State. The districts which have lost most heavily are six, Bankura 10.4 per cent., Birbhum 9.4 per cent., Murshidabad and Nadia 8.0 per cent. each, Burdwan $\$ \cdot 5$ per cent., and Midnapore 5.5 per cent. Then follows a group of eight
districts in which there has not been much change: Pabna-2.7 per cent., Malda-1.8 per cent., Jessore -1.2 per cent., Hooghly -0.9 per cent., Cooch Behar $-0 \cdot 1$ per cent., Rajshahi $+0 \cdot 6$ per cent., Dinajpur +1.0 per cent., and Calcutta City (the suburbs excluded) +1.3 per cent. Next come nine districts with an increase greater than the average for the Province, 2.8 per cent., but less than 7 per cent., Jalpaiguri 3.7 per cent., Faridpur 4.8 per cent., Rangpur 5;1 per cent., Howrah 5;7 per cent., Darjeeling 6;5 per cent., Bogra 6;6 per cent., Khulna 6.7 per cent., Chittagong 6.9 per cent. and Mymensingh 6.9 per cent. In six districts the increase has been 8 per cent. and over: the 24 -Parganas $8: 0$ per cent., Bakarganj 8.2 per cent., Dacca 8.3 per cent., Tippera $9: 7$ per cent., the Chittagong Hill Tracts 12.6 per cent., Noakhali 13.0 per cent. and Tripura State $32: 6$ per cent. The six districts in the first group all adjoin and lie to the west of the Province. So at the opposite side do the five with the greatest increase. Those situated down the centre in a line from north to south are those in which changes have been less pronounced. Different parts, however, of the same district have often been very differently affected, and a clearer impression of extreme variations which have taken place in the different quarters of the Province is to be obtained from the map in diagram No. 19 than from figures given district by district and the map in diagram No. 17. Decrease of population has been greatest

over a strip of country running from north to south in Western Bengal and lying just east of the line marking the transition from the new alluvial soil of the Delta to the undulating laterite formation to the west of it. Vishnupur subdivision of Bankura lost $16 \cdot 1$ per cent. The adjoining parts of Burdwan district and of Arambagh subdivision in Hooghly district suffered only somewhat less heavily, as did the edge of the plains in Asansol subdivision, the northernmost part of Katwa subdivisiou and a strip running
north and south through Midnapore district from the borders of Horxhbly almost to the borders of Balasore. The decrease is less marked and more evenly distributed in Birbhum. It has often been noticed elsewhere that the change of formation from plains to foot hills marks an unhealthy country, along the foot of the Himalayas from Jalpaiguri to Gharwal, in Assarn, at the edge of the Barind in Dinajpur and Malda, and even as far away as in East Africa. Another area of extreme decrease in population covers the centre and south-east of Nadia and the centre and east of Murshidabad. Iecrease, somewhat less marked but still over 7 per cent., spreads over nearly all of Nadia and over the western part of Jessore. Generally speaking, the part of Bengal where the population has gone down during the decade covers the whole of the Burdwan division and the northern half of the Presidency division with some relief following the course of the Hooghly but diminishing as its upper waters are reached. The area of this relief does not by any means coincide with the industrial area of which Calcutta is the centre, but extends much further both up and down the river and inland into purely rural areas. There is a notable focus of increasing population in the Bogra district and one of greater importance affecting Noakhali and Tippera districts and the eastern half of Dacca. The greatest increase here follows the Meghna river, being more on the east bank in its lower waters and more on the west bank higher up its course. The increase in this locality has taken place where the density is already over 1,000 persons to the square mile. Extreme increases elsewhere in Bengal, in the eastern parts of Jalpaiguri and Darjeeling districts, in the north-east of Mymensingh and in the south of Bakarganj extending into Khulna, in the Sundarban area in the 24-Parganas and in the hill tracts to the east, have taken place in areas which are still under process of development.
21. Conditions in 1911-21.-Though the first four years of the century had been good years, between 1905 to 1908 crops were not good and unhealthy conditions prevailed. There was, however, a great improvement in 1909 and 1910, and Bengal entered upon the decade 1911-21 in prosperity. The price of food-grains were then considered high, but they stood much higher during most of the decade and it was only for a short period in the beginning of 1918 that they touched so low a level again. The years 1911 and 1912 were free from serious calamities, although in both, floods caused sone damage to the crops in the Sadar subdivision of Birbhum and in 1911, in parts of Tippera and Noakhali, while in 1912, bad weather and the appearance of insect-pests spoiled some in Bakarganj. Crops elsewhere were good and these were healthy years generally, the beginning of a noticeable relief from malaria being apparent in Jessore which had been suffering very much in the previous decade, and to some extent also in Rajshahi. These two years were, however, not years of prosperity for the jhum cultivators in the Chittagong Hill Tracts and a tendency appeared towards migration into Tippera State and the Lushai Hills, which has gone on with some remissions ever since. In June 1912, the Gumti embankment near Comilla was breached and much damage done to crops in a limited area. The plains of Bengal, unlike other parts of India, are in no danger of famine caused by drought. The monsoon never fails to lay its rice-fields under water at the usual season. It is only the parts of Western Bengal that rise undulating from the dead level of the Delta that may suffer seriously from the want of rain. Calamity to the crops elsewhere comes more often by sudden and disastrous floods than through lack of water; and the repetition of damage by floods seems rather to have increased than diminished since a record of such occurrences has been kept. The clearing of forests in the hills of Chota Nagpur and in Cachar and Tripura State which formerly held back the rainwater after a heavy fall may be the reason that the floods in the Damodar, Ajay and other rivers in Wost Bengal and the Meghna, Gumti and Feni rivers to the east debouch more suddenly on the plains than formerly. Many of the hill streams, when they reach the plains, are confined between artificial embankments designed to protect the country from flooding, but the streams gradually raise their beds between the embankments, so that in time embankments high and atrong enough to have protected the country behind them when they were
first raised are no longer capable of doing so. The expense of their upkeep, moreover, is much greater than in former days, and, where they are maintained by private landlords, the latter have not the same inducements to spend money on them as they had when undeveloped land was easy to find, and, if they did not protect their tenants behind the embankments, those tenants would relinquish their holdings and go elsewhere.
22. Damodar floods of August 1913.-A disastrous flood came down the Damodar river in August 1913, topped the banks, breached the embankments and spread over a large area on either side. A certain amount of damage was done to the villages on the right bank of the river but this was small in comparison with the destruction caused on the left bank. The water poured through numerous breaches in the left embankment and spread over large tracts in the districts of Burdwan, Hooghly and Howrah. The Darkeswar, Selai, Rupnarain and other rivers were also in flood and large tracts in Ghatal and Contai subdivision of Midnapore district were under water. The death roll was not very heavy, nor did the destruction of the crop then on the land tell so heavily on the people as the loss of their cattle and the collapse of their houses. In other parts of Bengal, the year was somewhat less favourable from an agricultural point of view than the two which preceded it and floods did some damage to summer crops in the north of Tippera and in Feni subdivision of Noakhali.
23. Fall in the price of jute in 1914.-In 1914, the war broke out. Its only immediate effect upon Bengal was the sudden fall in the price of jute. The harvest was just ready, but the mills and the export firms were afraid to buy and almost the whole loss was thus thrown on the cultivator. That it. caused hardship and not disaster to him is to be explained by the fact that he did not depend on the proceeds of the sale of jute to buy food, of which he had sufficient from his own land, and that he had not yet adjusted his domestic economy to the high prices which jute had been fetching, but had used much of the money he had got for it to spend on such modern luxuries as a corrugated iron roof to his house and on extravagant expenditure upon ceremonial occasions. His loss caused a shortage of ready money, but not, ordinarily, a shortage of the necessities of life. As far as agricultural conditions were concerned, 1914 was a good year as it was also a healthy one, though the price of food-grains remained what it had been at the end of 1913. That there was considerable relief from malaria in many parts may have been due to the scouring of the country by the floods of the year before. In 1915, the rainfall was deficient and badly distributed especially in Western and Central Bengal, while floods ruined the winter rice-crops in Brahmanbaria subdivisiou in Tippera, and in parts of Kishoreganj subdivision in Mymensingh.
24. The Bankura famine of 1915-16. -There was so serious a failure of crops in Bankura that, before the middle of 1916, a famine was declared and famine conditions had prevailed for several months previously. Relief works, the largest of which was the re-excavation of the old irrigation channel known as the Subhankari Danra, were opened, and loans advanced under the Agricultural Loans Act, but this was not sufficient and much was expended both from Government funds and funds subscribed by public charity in gratuitous relief. The Bankura-Damodar Light Railway, which was under construction, also gave employment to many cultivators and 4,500 Bankura people were recruited for the tea gardens in Assam against less than 200 in the year before. In the year 1915-16, no less than Rs. 15,75,000 were advanced in the Province as agricultural loans, only Rs. 2,75,000 of which went to Bankura, while Rs. $9,50,000$ went to Tippera, considerably over Rs. $1,00,000$ to Mymensingh and Rs. 75,000 to Noakhali. There was great distress as the result of the floods in Brahmanbaria where Rs. 90,000 were spent in gratuitous relief, but the demand for agricultural loans came from localities in many districts which had suffered no loss to their crops at all. False cries of famine were raised in Noakhali, Dacca and elsewhere. The money-lenders who had advanced money in 1914 on the jute crop and failed to get it back when the fall in the price of jute occurred, had raised their rates of interest and demanded better security after this experience. There was a shortage of money in such localities but no shortago
of food-supplies, Famine conditions continued in Bankura until the winter harvest of 1916 and more than Rs. $5,50,000$ were advanced as agricultural loans in the district in the year 1016-17. In the summer of 1916, floods on the Ajay, Hinglo and Damodar caused damage in the Sadar subdivision of Birbhum and in the Sadar and Katwa subdivisions of Burdwan, but the repairs that had been made to the Damodar embankment after the floods of 1913 guved much further damage. The Gumti embankment in Tippera was again breached and there were floods in Feni subdivision in Noakhali. Floods also did damage in Eastern parts of Jessore and Khulna, round Kendua in Mymensingh and Patuakhali in Bakarganj. The price of jute, which had fallen by 50 per cent. on the declaration of war, rose considerably in 1916 and the harvest of 1917 fetched almost pre-war prices.
25. Large profits made by jute mills.-To compensate for the loss of the export trade to enemy countries came the great demand for jute for sandbags. It was the mills round Calcutta that were able to take the greatest advantage of the requirements of the allied nations in this matter. Working at highest pressure, undisturbed by the proximity of actual hostilities and demands by military authorities on their labour as in Europe, and taking advantage of the high prices paid for their produce which were determined by the increased cost of production at Dundee, the jute mills were able to make enormous profits so long as the war lasted. They had succeeded in throwing their losses on the cultivators of jute at the beginning of the war, and owing to the fact that in the later stages the demand was rather for the finished article than for raw jute they were able to keep for themselves a lion's share of the grains that accrued. It might have been expected that the coalmining industry would have reaped at least as good a harvest as the jute industry, since for the time being it enjoyed a monopoly in eastern parts besides receiving increased demands from Indian industries. It suffered, however, especially in the later stages of the war, very seriously from the shortage of wagons on the railways.
26. Increase of Japanese trade and its subsequent decrease.-When the war cut off supplies of cheap glass and metal utensils, buttons, etc., which had come from Germany and Austria and most of the supply of matches which had come from Sweden, it was Japan that took advantage of the situation. Pioneer concerns in Bengal, such as the comb and button factory at Jessore and a match factory near Brahmanbaria, were unable to compete with the cheapness of the imports from Japan and trade between Calcutta and Japan expanded enormously. But the Japanese over-reached themselves. Not only were they often crooked in their dealings, but the articles they supplied were of so very inferior quality and of such bad workmanship that it was easy to prophesy what is actually taking place, that as soon as supplies of better quality might be available the Japanese trade would dwindle as fast as it has grown.
27. Rise in prices from the middle of 1918.-The year 1917, for Bengal, was a year without trouble. Crops were satisfactory although it was a dry year, and the prices of rice after the winter harvest fell to their level in the beginning of 1911, but such conditions were not to last long. The real effects of the war on prices were about to be realized. They rose rapidly from the middle of 1918 onwards. The price of rice doubled itself in 12 months and went on rising to its highest limit reached in September 1919. The harvest of 1918 had been a bad one, but it had only been a contributory cause to the rise. As usual, those who suffered were not the cultivators, who profited financially rather than the reverse, but those of the middle classes who depend on small fixed incomes. The high cost of cloth, salt and kerosene oil affected the cultivators and caused much disturbance which sametimes culminated in the looting of a bazar, but the cultivators had money to pay for their requirements, although they'felt they were being victimised by the high prices which tradesmen could not but ask. The middle classes had no compensation and suffered very great hardship.
28. The influenza epidemic.-In the meantime in July 1918, the influenza epidemic appeared. The same disease seems to have appeared first and done very great damage in Europe, and to have touched almost every
other quarter of the globe beiore reaching India. Something of the efiect of the outoreak in Bencal may be ganged from the following figures which show the number of deaths recorded month by month from September $191 \overline{1}$ to March 1919, against the corresponding figures for the same season a year earier:-.


The difierence is not far short of 575,000 . How many of these reported deaths were due to infinenza is not known for they were returned as due to "fever," the diagnosis commonly adopted by the villager in all cases in which there are febrile symptoms and he cannot at once recognise smallpox or plagne. The following account of the outbreak in two parts is taken from the Reports of Sanitary Commissioner for 1918 and 1919. The turst extract is as follows:-

The oussmanding feature of the Sanitary history of the gear was the outbreak of the intuenze which, daring the latter half of the year, swept from end to end of this Province in two distmet epidemic waves. There is litule question that these risitations تere responsible for the fact that the mortality during 1918 exceeded the arerage of the previous five rears by 391,280 and totalled no less than $\mathbf{2} 39.822$ deaths more than in 191\%. Pandemics of infuenra bave devastated every part of the vorld on at least five occasions during the pasi hondred rears, but none of them have affected this country as seriously as the recent outhreat which spread with extraondinary rapidity owing to the greadr improved communications; and owing probably to the fact that its appearance coincided rith a time of scarcity aind high prices of food-stofts, the result of a partial failure of the harrest over a large area, exhibited a viralence far beyond that shown by the disesse on former occasions.

The first intimation of the disense in. Bengal was received in June about the same time as its appearance was reported in Bombay and many other parts of India. It was recognised almost simaltaneously in Calcutia and a number of other towns in the $2+$ Parganas, including Baranagore, Barractpore, Kaihati and Bhatpara, also in parts of Howrah, at Kanaghat in Nadia, and in some other places as distant as Paban, Malda, Dinajpor and Noakhali. And so rapidly did the infection spread that tefore the end of July it had appeared in epidemic form in every district in the Prorince with the exception of Bantura and Bakarganj which were noe attacked until Anģast. Plsces situated on the main railmay and steamer rontes were first atracked, and employees at the docks, on the railway and in the postal services, and traders were the earliest rictims. Calcutta appears to hare been the main disseminating centre for the disease and the extraorijnary rapidity oi its spread is undorbtedly doe to the relatively excellent railway communications of the Province which now have brought all the more important trading centres within 24 hours of the metropolis. This accounts for the fact that in scores of towns and villages the earliest recognized cases sccurred amougst persons returned from Calcutia who brought the disease with them and from rhom it spread by personal contact to their relations and others, passing in this way rapidiy throughout the country. In many instances, the cases wisch introduced the infection into a locality was clearty recognived. For example, the first rise in Khulna Jail ras a prisoner irom Karachi. and in Kaligrame in Halds a teacher in the Local High School brougit the disease with him from Calcutta. At Jiti Tea Evate in the Jalpaiguri district, infection was introduced by some shopkeepers, and at Chenmari, the Doctor Babu brougit the infection from a neightoning garden to which he had gone to attend a delivery case. Marwari traders and other shopkeepera were often responsible for introducing the disease into many localities. The firs epidemic outbreak, which lasted about sir weeks, was characterized by the rapidity with which it spread. the large number atracked. the mildness of the disease. the absence of complications and the fact that it wae chiefly confined to torns. This outbreak mobsided aboat the middle of Aropst and for about a month the disease seemed ti bave disappeared. But in - viddle of September. there was a recrudescence and a mecond epidemic wave passed over the Prorince. Which althroph not a quite as widespread as the first one, was infinitely more serions. being characterived bv the great frequency of dangerous respiratory and other complications which resolted in many
instances in an appalling mortality. On this occasion villagen were more neverely affected than the towns. Tbere is little exact information regarding the case mortality, but it appears to have been under 2 per cent., in the first epidemic, whereas in the second cutbreak it varied from 10 to 20 per cent. or over. The greatly increased mortality was due to the frequency of serious complications, involving either the renpiratory tract, the heart or the nervous system. What the actual mortality from influenza Was, it is impossible to say, but it probably amounted to a total of from influenza 350,000
to 400,000 deaths during the year.

Judging by the mortality returns, the incidence and intensity of the disease up to

|  | - |  |  | Exaens deatb-rute from July to November per 1.000. |
| :---: | :---: | :---: | :---: | :---: |
| Hooghly | ... | .. | .0. | 11.3 |
| Chistarong | ..' | ..0 | ... | 11.2 |
| Burd wind | ... | ... | ..' | 11.0 |
| Darjooling | ... | ... | . | 10.4 |
| Bnnkifa | ... | .** | ".0 | 10.0 |
| Jalpaiguri | ... | **' |  | 90 |
| Nadta | ... | ... | ... | $7 \cdot 9$ |
| Noakhall | ... | . $*$ | ." | 7.9 |
| Onlcuta | ... | ... | ... | 7.4 |
| Midnapore | ..0 | . 0 | ** | $6 \cdot 4$ |
| Birbhum | ... | ... | ... | 5.9 |
| Murnhidabud | $\cdots$ | .. | ... | 68 |
| Bogrim | ... | ... | ** | $5 \cdot 2$ |
| Khalna | ... | $\ldots$ | ... | 4.4 |
| TLppora | $\ldots$ | $\because$ | $\cdots$ | 4.4 |
| Mymonaing | ..* | .. | ..." | 42 |
| Howrah | .'. | .. | $\ldots$ | 8.7 |
| Rajabahi | $\cdots$ | ..* | $\cdots$ | 8.4 |
| Rangpur | -0. | ... | ... | $8 \cdot 2$ |
| Daces | - ... | ... | - 0 | $8 \cdot 2$ |
| Dinajpar | ... | ..' | $\cdots$ | $2 \cdot 7$ |
| Malda | $\cdots$ | $\cdots$ | $\cdots$ | 1.4 |
| Yarddpar | $\ldots$ | $\ldots$ | ... | 0.6 |
| Pabns | ... | -* | ... | 0.2 |
| Jessort | ... | . $*$ | $\ldots$ | $0 \cdot 1$ |

the end of November showed very great variations in different parts of the Pro- vince: Burdwan, Bankura and Hooghly districts in the Burdwan division; Darjeeling and Jalpaiguri in the Rajshahi division; and Chittagong in the Chittagong division suffering very severely; the total increase of mortality during the five months July to November, over the average of the previous five years approximating to 10 per 1,000 . The table in the margin gives the excess mortality during the period mentioned for all districts arranged in the order of precedence.
It will be seen from the table that, taken as a whole, the Burdwan division euffered most severely, the Chittagong division coming next, followed by the Presidency division. The Rajghahi division with the exception of Darjeeling and Jalpaiguri district suffered much less than the three just mentioned and the Dacca division also escaped fairly lightly. Cortain districts appear to have been hardly affected at all. For example, the mortality in Pabna and Faridpur was very little in excess of the normal, whilst in Jessore district it was even lower than the average. Turning to the towns we find a similar variation in intensity. The greatest excess mortality during the five months referred to occurred at Ramjibanpur in the Midnapore district, but strangely enough the Chairman of that municipality expressly states that the town entirely eacaped the epidemic of influenza and ascribes the high death-rate to malaria. But Khirpai and Chandrakona which are situated in the same district returned excess death-rates of $19 \cdot 3$ and $13 \cdot 1$, respectively, during the period of July to November. Among other towns which suffered eeverely may be mentioned Asansol ( 13.5 ), Sonamukhi $(20.8)$, Arambagh ( $14 \cdot 2$ ), Chakdah ( $13 \cdot 0$ ), Kurseong ( $15 \cdot 7$ ) and Sherpur ( $16 \cdot 1$ ). A number of towns suffered very lightly indeed or appeared to have escaped almost altogether. Among these may be mentioned Birnagar in the Nadia district, which showed no increase of mortality, Jangipur in Murshidabad, which reported a death-rate little below the average, and Tangail in which the mortality from July to November was $3: 3$ below the normal. Not only did certain localities suffer far more severely than others whilst some entirely escaped the disease, but the incidence of the disease also varied very greatly among different classes of the population. In general, females suffered more severoly than males, whereas children under 10 and old people suffered less severely than voung adults. Certain special classes were less affected. In several instances it was noticed that sweepers did not suffer, and it was assumed that they escaped owing to the fact that other communities are careful to avoid contact with them. In many cases it was reported also that fishermen and boatmen were almost immune to the diseuse. Owing to the sudden onset and rapid spread of the epidemic, little could be done to check the ravages of the disease, and in the face of such a widespread outbreak both medical and sanitary organizations were powerless even to attempt measures adequate to the occasion. Moreover, the lack of knowledge and of any real specific against the disease rendered efficient general treatment impossible; and although a list of yemedies have been recommended as of value, their number"and variety suggests that the majority of them are of little real use. In conclusion, it may be pointed out that the occurrences of these two widespread epidemics of influenza emphasize verv clearly the need-firstly, for an adequate agency for research in the hospitals, the field and the laboratory, into the causes, treatment and prevention of disease, and secondly, for the establishment in every part of the country of suitable organizations designed on the one hand for the protection of the public health and for systematic application of measures of prevention and control of infectious disease generally, and on the other, for the gradual education of the public in respect of every matter affecting the healthe of the community.

And the second extract:-

a brief account was given of the epidemio of influenza which broke out in the Presidency in 1918, causing great loss of life, especially during the latter part of the year. Between 350,000 to 400,000 people are supposed to have, died of influenza in 1918. The epidemic briefly described in the last year's report continued throughout the early months of the present year, and although it was not quite as virulent as in 1918, it occasioned very considerably mortality in many areas. It is certain that much of the excess mortality from fever reported during the first six months of the yeas was the direct result of influenza. Tho excess fever mortality for this period for all the districts of Bengal is given in the margin, the figures representing the difference between the fever death-rato of Jannary to June 1919, and the mean fever death-rate for the corresponding period during the year 1913-17. These figures probably. give some idea of the incidence of influenza during the early part of 1919. Daring the period July to December, influenza was in general less prevalent than the first half-year, but in all the districts of the Burdwam division with the execption of Bankura, there was a considerable excess mortalityThere was a similar excess mortality in the Presidency division in the districte of the 24-Parganas and Khulna, and during the last four months also in Rajshahi and Dinajpur. There was a slight excess in Darjeeling in July, August, September and December, and a sudden considerable increase in Malda in the month of December only. In the Dacca division, it was noticeable that in spite of the cyclone Dacca and Faridpur districts showed fever mortality considerably below the mean of the years 1913-17 and only showed a slight excess mortality in December. Bakarganj and Mymensingh, on the other hand, reported a higher mortality every month. In the Chittagong division, every district showed a great increase in fever mortality during the last eir months of the year. It is probable that in the case of all the districts reporting excess fever mortality during the last half-year, influenza has been responsible for part of the increase, but it is not easy to say to what extent this has been the case. The total mortality from influenza during 1919 may be roughly estimated at 200,000 . It is probable, therefore, that the great epidemic of 1918-19 has destroyed close apon 600,000 lives. The incidence of the disease has been far from uniform. Burdwan and Birbhum districts appear to have suffered most severely and have probably lost in each case an aggregate of 3 per cent. of their population from influenza during the last two years; Bankura, Nadia and Murshidabad have also each lost about 21 per cent. of their population; in Hooghly, Darjeeling, Jalpaiguri, Midnapore and Chittagong, the deaths represent $s$ loss of from 1.5 to $1: 8$ per cent., in Noakhali, Malda, Mymensingh, Pabna and Tippera the loss is rather over one per cent.; in Dacca, Rajshabi and Khulna it is rather less than one per cent.; in Howrah, 24-Parganas and Dinajpur it is about 7 per cent.; in Rangpur about 6 per cent.; in Bogra about -5 per cent. and in Jessore and Faridpur between 3 and 4 per cent. only.

The disease did not die out altogether in 1919. Sporadic cases continued to appear right up to the time of the Census of 1921, and Sikkim had a serious visitation as late as October 1920.

The monsoon appeared early in 1918. The total rainfall was heavy, but it was unevenly distributed and floods caused damage over a large proportion of Northern Bengal. Brahmanbaria subdivision of Tippera district suffered a repetition of the disastrous floods of 1915. The rains, however, stopped early and the result was a bad harvest, particularly in Western Bengal which aggravated the effects of the prolongation of war on prices. Famine conditions again appeared in Bankura and did not disappear until the winter harvest of 1919 . In August and September 1919, common rice was selling at abnve Rs. 9 per maund, and although the price fell so as to touch Rs. 7 in March 1920, it was up again to Rs. 8-8-0 in September. The two outstanding features of 1919 were the famine in Bankura formally declared in May and a phenomenal cyclone in Eastern Bengal in September. Though the path of destruction caused by it was a narrow one the destruction wrought by its passage through Khulna, a corner of Jessore, Faridpur, Dacca, Mymensingh
and on into Tippera was complete. The actual loss of life was estimated at 3,500, but it levelled houses and trees in its path and destroyed innumerable live-stnck. The loss of life was greatest in Lohajang thana in Lacca, where it was 1,200 . Most of the deaths were due to drowning, but pumbers were killed by falling trees and houses and some died from exposure. Immediate steps were taken to prevent the outbreaks of cholera and dysentery which commonly follow such visitations and they were successful except in Khulna

Except that Khulna was unfortunate in having crops destroyed by a salt water inundation in an area of some 50 square miles, 1020 was a year of improvement in agricultural conditions and a good harvest brought the high price of food-grains down considerably at the end of the year. It saw however', 'the development of a serious slump in trade and industry in and around Calcutta. Immediately following the armistice there had been great industrial :activity; numerous new concerns had been floated and their directors had proceeded without much discrimination to sink their capital in bricks and minrtar. Mills and factories went up before the difficulty of obtaining machinery were realised, a shortage of wagons paralyzed the activities of the coal mines and deprived working concerns of the supplies of coal they required, the volume of trade with Europe shrunk phenomenally and the decade ended in industrial stagnation and widespread disturbance, caused by labour strikes promulgated at the worst chosen times by leaders generally ignorant of economic laws and conditions, and actuated by political motives of disaffection.
29. Summary.-The amount advanced by Government in successive years as agricultural loans, if not an index of general prosperity or the reverse, is a reliable measure of the extent of the sum total of the minor disasters which have affected the agriculturists from one year to another. The figures are given here by way of a summary of the foregoing description of the conditions which have prevailed in the decade:-

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1911-12-Rs. 53,516.
1912-13-Rs. 64,699.
1918.14-Rs. 3,88,217 ... Mainly in the areas afected by the Damodar Floods.
1914.16-Rs. 1,64,385.
1915-16-Rs. 15,78,340 ... Tippera Rs. 9,59,148, Bankura'Rs. &,78,920, Mymensingh
                            Rs. 1,10,323.
1916-17-Rs. 8,29,231 ... Bankura Rs. 5,62,958, Burdwan Rs. 1,03,983.
1917-18-Rs. 1,00,625.
T918-19-Rs. 6,33,085 ... Mainly in Bankura and Tippers.
1919-20-Rs. 21,63,661 ... Dscea Rs. 8,17,050, Bankurs Re. 5,33,413, Khulns
    R8. 1,74,967, Faridpur Re. 1,23,342 and Bakarganj
    Rs. 1,14,980.
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1920-21—Rs. $1,14,433$.

The advances towards the end of the decade were necessarily somewhat increased by the fact that prices were higher and the average amount advanced to an individual had to be increased. The advances after the cyclone in 1919 were the greater because of the dramatic character of the disaster and the fact that it touched besides the cultivators a more articulate section of the people, who brought the necessities of the case more vividly before the public.
30. Irrigation and other improvements.-Improved security against floods seems to have been obtained during the decade through the systametic repair and improvement of the embankments on the Damodar river as well as on the rivers in Midnapore district, and by Government having taken over the Gumti embankment in Tippera, but the responsibility for the embankments in Birbhum still remains with the landlord's. The operation of the Embankments Act has been extended in various localities within the 10 years. The threat of the silting up of the Bidyadhari channel which takes the drainage oi Calcutta was at least put off by the provision of a spill area, but the prohlem of Calcutta drainage is likely to come to the fore again before many years have passed. Improvements and extensions in irrigation works have been very few, although since the war certain new undertakings on a small scale have been begun in Contai subdivision.
31. Improvement of communications.-Railway extension received a set-back owing to the war, but within the decade the Sara Bridge has been opened and the broad gauge system extended to Santahar with a new broad gauge line opened from the bridge to Serajganj. The broad gange line through Kalna, Katwa and Azimganj, along the west bank of the Baghirathi river in Burdwan, Murshidabad and Birbhum, is also new. A' metre gauge connection has been opened between North Bengal and Mymensingh viâ Fulchari. and the Assam-Bengal Railway has been extended from Akhaura to Asuganj and to the west of the Meghna from Bhairab to Tangi on the DaccaMrmensingh section of the Eastern Bengal Railway and from Bhairab to Kishorganj and Mymensingh with a branch to Netrakona. New light railway lines are the Bankura-Damodar Railway, the extension of the Darjeel-ing-Himalayan Railway from Siliguri to Tista Bridge, the Jessore-Jhenida Railway and the Burdwan-Katwa line with the extension to Ahmadpur, which was subseauently added. These new lines have opened up what are in the main prosperous agricultural localities. The inhabitants are not inclined to emigrate, and increased facilities for getting away have been no temptation to leave. Nor is there any waste land for cultivation and immigration for the purpose of taking it up has not been possible. The cultivator benefits through improved facilities for marketing his produce and the agricultural labourer is able to move more quickly and for shorter periods to localities where there is greater demand for his services, but these new lines have had no direct effect on the numbers of the permanent inhabitants. Improvements: in road communications have been comparatively insignificant except in. the Duars in Jalpaiguri district. The tendency of recent times has been for the District Boards to spend their money more freely on education than on communications
32. Changes of population, 1911-21, compared with changes, 1901-11.-The proportional increase in each district at each successive census is set forth in Subsidiary Table III at the end of this chapter. The figures show that the changes which took place between 1901 and 1911 in most districts followed the tendencies which the figures for earlier'decades had indicated. That decade in Bengal was free from any great calamity and appeared to be one of normal progress, and the changes in population which took place may be considered normal to the circumstances of each district. The decade 1911-21 has not been one of normal progress. The war brought in its train widespread disturbance of economic conditions and an abnormal rise of prices which had their effects upon the birth-rate if not upon the deathrate, while the influenza which appeared in epidemic form in the middle of 1918 caused great loss of life. The population being little affected by migration, the difference between the increase of $8: 0$ per cent. in Bengal for 1901-11 and 2.8 per cent. for 1911-21 was determined by the additional disabilities felt in 1911-21 which were not felt in 1901-11; and a comparison of the difference between the change of population in 1911-21 and the change in 1901-11 in the case of the sveeral districts should indicate broadly in what measure they shared in additional disabilities of the last decade or aroided the disabilities under which they: suffered in the previous one. In the following table are contrasted the increase or decrease per cent. in each district in 1901-11 and 1911-21, the districts being arranged according to the extent of the changes which took place in the earlier period. The figures at once disclose the fact that those districts which showed the greater increase in 1901-11 generally showed the greater increase again or the less decrease in 1911-21. The figures in the fourth column of the table show the change in 1901-11 less 5.2 per cent., the difference between the average increase for the Province in 1901-11 and the average increase in 1911-21:-


| Rajshahi |  |  |  |  | Peyrontage change (W) $\rightarrow 1$ I rediond 1, 51 pet rent. is ties |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $1801 \sim 11$. | 1911-91. |  |
|  | ... | -* | $+1.4$ | + 0.6 |  |
| Midnapore | ... | ... | + 18 | - 5.5 | - 38 |
| Bankura | ... | ... | + 2.0 | - 10.4 | - 3.2 |
| Murshidabad | ... | ... | + 29 | - 8.0 | - 2.3 |
| Birbham | ... | ... | + 3.7 | - 9.4 | - 1.5 |
| Hooghly | ... | ... | + 3.9 | - 0.9 | - 1.3 |
| Cooch Behar | ... | ..0 | + 46 | - 0.1 | - 0.6 |
| Calcutta | ... | ... | + 5.7 | + 1.3 | + 0.5 |
| Bakarganj | ... | ... | + 60 | + 8.2 | +0.8 |
| Darjeeling | ... | ... | + 6.6 | $+6.5$ | + 1.4 |
| Dinajpur | ... | ... | + 7.7 | $+1.0$ | + 2.5 |
| Faridpar | ... | ... | $+8.7$ | + 48 | +3.5 |
| Khalne | ... | ... | + $9 \cdot 1$ | +6.7 | + $3 \cdot 9$ |
| Rangpur | ... | ... | $+10.7$ | + $5 \cdot 1$ | + 5.5 |
| Howrah | ... | ... | $+10 \cdot 9$ | +37 | +5.7 |
| Chittagong | ... | ... | + 11.5 | +68 | + 6.3 |
| Dacca | ... | ... | + 11.9 | + 8.5 | +6.7 |
| Malda | ... | ... | $+13.9$ | - 188 | + 7.7 |
| Noalchali | ... | ... | $+14.0$ | $+130$ | +78 $+\quad 78$ |
| Tippera | . ${ }^{\text {a }}$ | . | $+14.7$ | +9.7 | + 8.5 |
| Jalpaigari | ... | ... | + 14.8 | $+3.7$ | + 86 |
| Bogra | :.. | ... | $+15.2$ | $+6.6$ | $+10.0$ |
| Mymensingh | ... | ... | $+15.5$ | $+6.9$ | $+103$ |
| 24-Parganas | ... | ... | +17.1 | + 800 | $+11.9$ |
| Chittagong Hil | acts | ... | + 23.3 | $+12.6$ | $+18 \cdot 1$ |
| Tripara State | ... | ... | + 32.5 | + 32.6 | $+27.3$ |

The measure of the effect of the additional disabilities on the average district being $5 \cdot 2$ per cent., a lower figure in the third column than in the fourth column against a particular district indicates that district bore more than its fair share of the additional disabilities of the decade, and a higher figure in the third column than in the fourth indicates that that district rescaped some of the disabilities of the decade or was relieved of some of those under which it had laboured in 1901-11. The figures of the third and fourth columns of the table above are plotted in the diagram No. 20. The broken

line in it indicates for each district the increase in 1911 less $5 \cdot 2$ per cent. The continuous line indicates the increases and decreases of 1911-21. It is to be noticed how closely the general trend of the one curve follows the other indicating that the changes of 1911-21 have closely followed the changes of

1901-11. The districts for which the continuous line passes above the broken one are the districts which relative to others have done best in the last decade compared with their progress in the decade before, and those for which the continuous line passes below the broken line are those which have borne the brunt of the disasters of the decade. Among the latter appear to come Malda, Birbhum, Bankura, Murshidabad, Jalpaiguri, Chittagong Hill Tracts. the 24 -Parganas, Bogra, Mymensingh and Midnapore in that order and among the former Bakarganj, Jessore, Noakhali, Darjeeling, Rajshahi and Khulna in that order. It is not, however, to the divergencies between the two curves that the reader's attention is directed as much as to the tendency of the curves to run together, indicating that the districts of the Province have retained to a remarkable extent their relative characteristics of progressiveness or decadence in respect of population in spite of the disturbed conditions of the last ten years.

A systematic enquiry was made between 1911 and 1916 by Dr. C. A. Bentley, the present Director of Public Health, Bengal, into the extent and distribution of malaria in Bengal. Using the results of investigations by various medical officers made during the same period and in the few years preceding it, and the returns from the public dispensaries showing the number of patients treated and the number whose malady was diagnosed as malaria, Dr. Bentley was able to trace a very close correlation between the changes of population of the decade 1901-11 and the prevalence of this disease as indicated by the spleen index (percentage of children examined in each locality who had enlarged spleen) and malaria fever index (percentage of malaria cases treated in dispensaries out of the total number of patients). A close correlation has just been traced between the changes of population in 1911-21 and the changes in 1901-11, and in the case of certain districts which have proved exceptions to the rule of correlation, it is known that there have been changes in the prevalence of malaria in recent years and that, but for these, the correlation would have been closer than it is. There has, for example, been a noticeable relief in the prevalence of malaria in Jessore and Rajshahi in recent years and a notable increase of it in Malda. It follows that it is possible to establish a close correlation between the prevalence of malaria and the changes of population in the last decade as well as in the decade 1901-11.
33. Prevalence both of malaria and the influenza epidemic dependent on economic conditions.-The above shows conclusively that the correlation traced by Dr. Bentley between prevalence of malaria and change of population was no accident, but it also points to another of his conclusions. He follows Malthus in the general proposition that growth of population is limited by the extent of the means of subsistence, and believes that malaria manifests itself in Bengal as the instrument of adjustment of such growth to economic conditions. He holds that in a large measure malaria is not a root cause of depopulation, but appears in localities which suffer adverse economic conditions, and keeps down the population by a less obvious, but essentially parallel train of reactions to those by which starvation produces the same result, depopulation, in the acutest stress of economic conditions, famine.

Novel disabilities have appeared in the decade 1911-21, the chief of which have been the phenomenal rise in prices in the last years of the decade and the advent of influenza in epidemic form. The first, equally weighted all over the Province, merely added to existing economic stress. The second was a new scourge added to the existing one of malaria. The total of them all has reduced an increase of 8.0 per cent. in 1901-11 to 2.8 per cent. only in 1911-21, but it has not disturbed the correlation between the changes of population and the prevalence of malaria. The conclusion is that the incidence of the fresh disabilities, of which the high mortality from influenza was one, as well as the prevalence of malaria, depends and depended on economic conditions.
34. Vital statistics.-The present system of reporting births and deaths and completing vital statistics from the returns was introduced in 1892. Births and deaths in towns had been registered since 1872, but only deaths in rural areas had previously been reported. In towns, householders are required by law to report vital occurrences to the town police. In rural areas, each
chaukidar or village watchman is provided with a note book in which he is required to have all births and deaths that may occur within his jurisdiction recorded by himself or the panchayet. He takes this on the parade days, generally once a week, to the police-station which is the registering centre. The statistics thus obtained are compiled by the police and sent monthly to the Civil Surgeon who prepares a return for the whole district to be used in the compilation of the report published annually by the Department of Public Health. The statistics are checked from time to time by Inspectors or SubInspectors of Vaccination, and chaukidars are punished, if necessary, for neglecting to report properly. The chaukidar is, however, commonly illiterate and necessarily makes trequent mistakes and omissions, and when he is ill or when he resigns or dies and some one has to be appointed in his place, there is often a hiatus in his return which cannot be expected to be filled up later with any certainty of correctness.

An enquiry was held between 1906 and 1909 in thana Galsi of Burdwan in Western Bengal and on the strength of its results the conclusions which appear on page 80 of the Census Report for 1911 were based. They were to the effect that apart from mistakes in the record of still-births and a very few omissions the " net difference between the number of vital occurrences and the number registered is very small." The conclusion reached in Eastern Bengal and Assam by the Sanitary Commissioner's staff was a very different one; verification in that Province had frequently shown more than 10 per cent. of omissions. The impression prevailing in Western Bengal given on the same page of the Census Report for 1911 was that " in the towns a higher level of intelligence and fear of legal penalities tend to make registration more accurate than in rural tracts." In respect of towns also, the authorities in Eastern Bengal and Assam held a different view. It was recognised that registration in areas where it was cumpulsory was unsatisfactory, and in 1909 an attempt was made to stimulate the work of verification by Inspectors of Vaccination and a reward of four annas offered for each case of conviction of persons guilty of default in reporting a birth or a death. But in his report for 1910, the Sanitary Commissioner wrote "complaints have not infrequently been made that Inspectors cannot reap the reward of their labours because Magistrates do not take action on their reports." In 10 towns in Eastern Bengal and Assam, 642 defaulters had been reported and only 75 prosecuted. When Bengal again became a single Province it was realized that the matter required further examination and enquiries were started in 1914 and 1915 by properly qualified medical officers in small areas in Jalpaiguri and in Malda. The comparison of the results of the enquiry in Jalpaiguri district with the returns for the district as a.whole showed that the latter under estimated births by some 11 per cent. and deaths by some 8 per cent. The corresponding figures in connection with the enquiry in Malda were-some 20 per cent. and some 16 per cent. The conclusions were not very reliable for the areas chosen were small and the investigations did not commence and end with calendar years. It was, however, recognized that they proved the earlier conclusions as to the accuracy of the returns to be incorrect, and similar enquiries extending over larger areas were commenced in parts of Burdwan and Murshidabad. In Murshidabad vital occurrences have been examined in three circles, one in Jangipur municipality and two in rural areas, each with a population of some 5,000 . They have shown what was already suspected from the experience of the Government of Eastern Bengal and Assam and enquiries in Chittagong and other places that the returns for towns tend to be very much less accurate than those for rural areas. They showed also that the returns in rural areas contain many mistakes and show many omissions. Some very interesting information has been obtained regarding the statistics of deaths according to age, of the average age of the mothers at the birth of their children, and of relative mortality from different diseases, which will be referred to in chapter $V$ of this report. The areas dealt with are however still too small to enable the discovery of a factor to be applied to the returns obtained by the ordinary means of births and deaths in the whole Province, to correct their inaccuracy with any approach to certainty. The enquiries show the returns to be far less accurate than they were held to be 10 years ago, but they do not reverse the proposition that over a large area the returns can
safely be compared between one year and another. Dealing, as we are at the present stage, with changes in population from one census to the next, we are chiefly concerned with the figures for the excess of births over deaths recorded. The census figures, as is shown in the next paragraph, enable us to discover with some accuracy how far the returns are incorrect in their estimate of this excess. The discussion of the age statistics in chapter $V$ produces with less accuracy an estimate of the deficiency of the return of births, and from the two results an estimate of the deficiency in the return of deaths may be obtained.
35. Changes of natural population compared with excess of births over deaths.-The term " natural population " is one which is commonly used by statisticians and is a convenient one. By the "natural population" of a district or other unit of area is meant the number of persons living at a particular time who were born in it. It is the actual population minus the number of immigrants to the place plus the number of emigrants who have left it. Subsidiary Table IV printed at the end of this chapter gives for each district and State of the Prorince, as well as for Divisions and for the Province as a whole the actual population, number of immigrants, number of emigrants, and the " natural population" in 1921 and in 1911. The number of immigrants to a Division is not the sum of the number of immigrants to each district of the division for the immigrants to a district include those who came from other districts within the Division. Similarly with the emigrants. But the "natural population" of a Division, the number of persons born in it and still living either in it or elsewhere, is equal to the sum of the natural population of each district. The proportion of immigrants to the total population of a Division is thus necessarily less than the average of the proportions of immigrants and of emigrants to the total population in districts within it, and when the whole Province is taken together, the proportions of immigrants and of emigrants to the total number of inhabitants. and to the " natural population" becomes comparatively small. Now the increase in the " natural population" between 1911 and 1921 is equal to the excess of births over deaths in the same area plus the number of immigrants who died in the area between 1911 and 1921 minus the number born in the area who died elsewhere in the same period. This is true for any area. We have not statistics for deaths among immigrants or among emigrants and must estimate them approximately. but when the proportion of both immigrants and emigrants to the " natural population" is small, any reasonable mistake which we may make in our estimate of births among immigrants and emigrants will not very seriously affect our calculations.

The number of immigrants to Bengal in 1911 was 1,970,778; in 1921, 1,929,640. There has not been very much change in the total though the number who came in and went out again during the decade must have been very much greater than either figure. We may take it that the average number of immigrants present at one time during the decade was $1,950,000$ and the average number of emigrants 635,000 . It is known that the immigrants to the Province include an abnormally large proportion of persons between 20 and 40 , and especially a large proportion of adult males. In 1911 about one-fourth of the total number of immigrants came from districts adjoining the Province and among them there were 95 females per 100 males. The bulk of this immigration, therefore, represents. the results of short moves- which happen to have crossed the border of the Province, marriages across the border and the like. The persons affected were probably in all ages except the ages of early infancy. The bulk of the remaining three-fourths mast have been adults some of whom came in couples, male and female, but if children were born to them they were born in Bengal and are not counted among the immigrants. The death-rate among immigrants, taken as the Bengal death-rate in the ages between 20 and 40 for three-quarters and the Bengal death-rate for all ages except early infancy for the remaining quarter, comes to about $22 \cdot 3$ per mille. We may raise this slightly on account of the fact that immigrants are generally poor and belong to a class with a high death-rate. Let us take it at 22.8 . It will appear to the reader that the estimate has been very roughly made, but it is to be remembered that a reasonable mistake in it will not appreciably affect the result. The death-rate among emigrants may be taken to be about the same. Emmigrants from Bengal are rather better off as a class than immigrants, but on the other hand short moves, marriages, etc., across the border are responsible for a larger proportion of emigration than of immigration. Using this figure for the death-date among immigrants and emigrants wo get
for the 10 years-
deaths among immigranto- 444,600 , an. ${ }^{\text {J }}$
deaths among emigranto-144,700
and during the decade the increase of natural population has been $1,431,012$. The excoss of births over deathe according to the census tigures is, theretore, 1,$1 ; 1,1050$ According to the returns of the Department of Yublic Health the excess duriug the decade was 753,590 in the whole Province with the exception of the Chittagong Hill 'Tracts, Cooch Bohar and Tripura State in which no syotem of recording vital satistces is in force. The population of these is, however, small compared with that of the whole Province and we shall not set our calculations far wrong by assumiug that the excess in Tripura State and in Chittagong Hill Tracts was in the same proportion as in the adjoining districts of Chittagong division and that in Cooch Behar in the average proportion in Jalpaiguri and Rangpur districts on either side of it. Assuming this we must add 38,900 to the figure 753,590 to get the excess for the whole Province. $\Delta$ ccording to the census figures , therefore, the excess was $1,131,100$ against 782,600 according to the returns. The difference 338,600 in ten years in a population of $46,306,170$ represente an underestimate in the returns of the excess of births over deaths by about 0.73 per mille per annum. Birth-rates have, therefore, been understated in the returns by so much more than death-rates.
A similar calculation for part of the Province, for a Division or a district would not prove satisfactory, for the proportion of immigrants and emigrants to the total population rises as the area becomes smaller, and the necessary roughness of the estimate of deaths of immigrants and emigrants affects the result more seriously.

When figures for each district are separately considered the proportion of immigrants and emigrants to the total population becomes so targe as in some cases to disguise completely the correlation between the increase of the natural population and excess of births over deaths. The comparison between the figures in the case of districts is, however, worth making.

In the table below, the increase per cent. in the natural population, 191121 for each district iz contrasted with the excess of births over deaths recorded in the decade per cent. of the actual population of 1911. The districts are placed in order of the changes in natural population and the figures are illustrated in diagram No. 21.



The correlation of the figures in the two columns above is strictly speaking unjustifiable for the one gives figures per cent: of the natural population in 1911, and the other per cent. of the actual population. It would have been more correct to correlate the actual figures for increase of natural population and the excess of births over deaths, but the figures so given would have been difticult to follow. The correlation can only be expected to be close in districts whose population is little affected by migration and in such case the natural population and the actual population are very much the same. w nere, therefore the correlation should prove a close one, it should not be appreciably affected by what has been done. The fact that in 1911 the actual population of the Province (excluding Cooch Behar, Tripura State and the Chittagong Hill Tracts for which there is no record of vital statistics) exceeded the patural population by 3 per cent., would have the effect of reducing the tigures in column 2 in the case of the average district in the ratio of 100 to 103 before correlation between the figures in the two columns could be expected to be exact. That the correlation has been made in this way has the effect of drawing the broken line in the diagram downwards in the case of districts which attract immigrants, and upwards in the cases of those which send out emigrants, but in the case of districts in which the number of immigrants roughly balances the number of emigrants the effect has been very slight.

The correlation has been most disturbed in the areas which attract the greatest proportion of immigrants, such as Jalpaiguri, the 24-Parganas, Howrah, Calcutta and Darjeeling, and in the opposite direction in the case of such a district as Bankura which sends out a large emigrant population. In the case of the former the deaths among immigrants considerably exceed the deaths among emigrants and as a consequence increase in natural population is considerably greater than the excess of births over deaths. In the case of the latter, deaths of emigrants are the more numerous and increase in natural population is considerably less than the excess of births over deaths. The broken line in the diagram falls appreciably below the unbroken line, as it would be expected to do, in the case also of Khulna, Dinajpur, Rangpur and Bogra which attract immigrants to a less extent than Jalpaiguri, the 24-Parganas, Howrah and Calcutta, and runs above the unbroken line in the case of Midnapore, Nadia and Murshidabad which, less conspicuously than Bankura, are the districts from which emigrants go out, but the correlation produces unexpected results in some other instances. Hooghly is a district with a larger immigrant than emigrant population and it would have been expected that the decrease in the natural population would have exceeded the excess of deaths over births. It seems likely that there may have been peculiar defects in the returns of vital statistics for Hooghly, though, as both immigrants and emigrants are numerous, it may have been that the death-rate has been much higher among the one than among the other and that this may have produced the unexpected result which the diagram shows. A similar unexpected result is to be noticed in the case of Burdwan, Malda, and Rajshahi, though in a much lesser degree. Chittagong, Dacca; Tippera and Noakhali are districts which send out more emigrants than the immigrants they receive. Here, too, there is some likelihood that the returns are abnormally defective in the direction of the omission of births, but it is also true that these are healthy districts and that there is probably a lower death-rate among immigrants to them than among emigrants who have gone elsewhere, and that in this may lie the explanation for the apparent anomaly in the correlation. What has been written in this paragraph is on the whole an excellent advertisement for the accuracy of the vital statistics as far as they show the excess of births over deaths, but no further.
36. Birth-rates and death-rates of the decade compared with those at the previous decade.-A closer examination of birth-rates and mortality-rates will be made when chapter $V$ of this report is reached, but in discussing the disabilities under which the country has fallen, and their effects upon the population figures, one's attention is apt to be drawn too much towards the reduction of the population by an increased mortality and not enough towards the decrease in the number of births. The days have gone when famine in Bengal was a direct cause of death. The influenza epidemic caused heavy
mortality, but in spite of its effects, the average mortality recorded among males during the last decade has been no móre than 31.7 per mille per annum and among females $30 \cdot 5$, the calculation in both cases being based on the population of 1911. Between 1901 and 1911, the corresponding figures were rather under 34 for males and rather over 31 for females. The latter figures were based on the population of 1901. Between 1901 and 1911 there was a greater increase of population than between 1911 and 1921, so that if the rates for each year could have been calculated on the population for the year the average mortality-rates for the past decade would have proved more nearly the same as those for the decade before. That there have been fewer births of recent years and consequently less infantile mortality, always proportionately very high in India compared with its level in European countrie3, has contributed to a certain small extent to keep down the death-rate. but the fact remains that the mortality during the past decade has been at almost exactly the same average rates as in the decade before. The contrast between the rates of recorded births in 1901-10 and 1911-20 shows a very ditterent picture. The actual number of births recorded in 1901-10 in Bengal was $15,797,344$ and in 1911-20 only $14,860,257$, a decrease of 937,087 in an increased population. The average birth-rate calculated in both cases on the population at the beginning of the decade has fallen from 36.84 per mille per annum to $32 \cdot 25$. It will be seen, therefore, that the disabilities of the past decade have reacted on the figures for the population through the reduction of the birth-rate rather than through increase in the death-rate.

## Western Bengal.

37. In Western Bengal, conditions change between the lower reaches
 of the Hooghly and the western boundary of the Province, a distance of a hundred miles, from those of new delta formation to something approaching those of the arid plateau of Central India. It was, therefore, only to be expected that there would be found great changes both in agricultural conditions and in density of population in passing from one side of the Burdwan division to the other. The map which appears in diagram No. 22 on this page shows the density of population in each policestation and that in diagram No. 23 shows the changes which have taken place in the population of police-stations during the decade. The census figures in 1911 did not however show separately the population of every policestation as it exists to-day. The unit of tabulation then used was the revenue thana, the jurisdiction of which generally corresponds to that of the police-stations as they were 50 years and more ago. The revenue thana is not, however, a well understood unit nowadays. Especially in the eastern part of the Province each revenue thana is now under two or three separate policestations, one of which retains this old name. To give figures for the popula-
tion under the old name is liable to cause confusion, since most people would
 understand at the mention of that name the police-station which now bears it. It was in view of such difficulties as this that the census figures have this time been tabulated police-station by police-station. The proportional changes of population are, however necessarily given separately only for each of the old units where there has been division of them. In some cases moreover, where police thanas ${ }^{+}$ have been carved out of more than one revenue thana, it has been necessary to treat two or more revenue thanas together when stating the variation between 1911 and 1921.
38. Burdwan district.-Burdwan district long from north-west to south-east shows characteristics of both delta and upland. Asansol sub-

| Burdman. | Population. 1931. | Demalty per aquare milo. | Fariation per ceat. 1911-21. |
| :---: | :---: | :---: | :---: |
| DISTRIET TOTAL - ... | 1,488,826 | 882 | 8.8 |
| Aanmed smbdiviafor -- | 403,884 | 681 | $+4^{\circ} 0$ |
| Amasol policertatica ... ... | 85,769 | 1.858 |  |
|  | 24,634 | 1.173 |  |
| Barabeni Salinpur $\quad \cdots \quad \cdots \quad \cdots \quad \cdots$ | ${ }_{89}^{40.081}$ | 878 40 | + 5* |
| Deebiergerh $\quad-\cdots$ | 44,189 | 1,837 |  |
| Ranigral $\quad-\quad .0$ | 40.998 | 1.291 |  |
|  | 60,389 41.953 | ${ }_{698}^{688}$ | + 5t |
| Yaridpar $\quad$... $-\cdots$ - | 11.953 43.000 | ${ }_{384}^{689}$ |  |
| Ioke - -- -- | 40,p5s | 288 | 19 |
| Sadar aebilfiafon | 689,72e | 488 | -1197 |
| Burderan policeratution | ${ }^{61.683}$ | 781 | - 73 |
| ${ }_{\text {Sabibenj }}^{\text {Satuchia }}$ | 52, 7188 | 874 | - 14.0 |
| Satracha Memari $\quad \cdots \quad \cdots \quad \overline{-}$ | 65,943 88,837 | 684 689 | - 8.4 |
|  | 73,791 | 385 | - 11.0 |
|  | ${ }^{80,888}$ | 818 | - 18.0 |
|  | 62.835 87.147 | 303 426 | $={ }_{14}^{1 / 3}$ |
| Heoda -- | 85,185 | 43 | - 16.3 |
| Katme embdivialon | 838,282 | 882 | - 8.8 |
| Kutwe polico-action -. -. |  | 694 |  |
| getrgram \#ogathot | 77.618 | 871 | - $13 \cdot 4$ |
| પrobgatkot - -- - | 70.775 | 498 | - 79 |
| Malsa embdiv/alon | 205,984 | 681 | - $\mathbf{8}^{\prime} 8$ |
| Kalna polion-tatios |  |  |  |
| Parbastiali $\quad$ - $\quad=$ | 63,049 | 489 | - ${ }^{\text {¢ }}$ |
| Yeotetmar - - | 40,480 | 479 | - 97 | division rising in low undulations contains the Raniganj coal-field with its large industrial population, but its rural population is scanty. Iron and steel works and pottery works are found among the coal mines, the most important of which are under Deshergarh, Niamatpur, Asansol and Raniganj police-stations along the Damodar river, but the coal-field extends under Salanpur, Barabani, Jamuria and Ondal policestations also. There has been a decrease of 12.8 per cent. in Koksa which is purely agricultural, and it seems that but for industrial expansion there would have been a decrease instead of an increase under the other police-stations of the subdivision. After Koksa,

the least densely populated parts of the districts lie in the line across the Sadar subdivision under Ausgram, Gulsi, Sahibganj, and Satgachia policestations, the population in the southern half of the Sadar subdivision being somewhat heavier. There has been a decrease in the population during the last decade in every part of the district except the industrial area of Asansol where the coal mines alone now have a labour force of 51,500 . The decrease bas run very high in the parts of the Sadar subdivision adjoining Bankura district, but much lower in the south-east corner. It is noticeable, moreover, that the towns and the area round the towns have suffered less than the reast. This is contrary to the experience of the decade 1901-11, when malaria took a heavier toll in the immediate neighbourhood of the towns in Burdwan district than further away from them. It is just the area which has shown the greatest decrease that suffered most from the floods of such rivers as the Damodar, Ajay, Khari, Kumar and Bhagirathi, especially early in the last decade, the areas under Gulsi, Khandagosh, Raona, Sahibganj and Ketugram police-stations. From the waterlogged condition in which so much of the Sadar and Katwa subdivisions lie so many months of the year, they are full of malaria, and they also suffered very badly in the influenza epidemic. There is, however, some sign of relief from malaria and some hope of security from disastrous floods since the systematic repair of the embankment of the Damodar by Government. Burdwan district suffered very badly in the epidemic of malarial fever which swept over Western Bengal half a century ago, and was generally spoken of as "Burdwan fever." Its population lost $6 \frac{1}{2}$ per cent. between 1872 and 1891, but showed its power of recuperation by an increase of 10.1 per cent. between 1891 and 1901. It increased only ; 4 per cent. between 1901 and 1911 and has now lost $6 \cdot 5$ per cent.

At the beginning of the decade the recorded birth-rate was lower than in any other district in the Province except in Calcutta, and it fell as it fell in almost all parts in 1915, but it rose in 1916 and 1917 higher than at the beginning of the decade to fall again in 1918 to 29.0 per mille, in 1919 to $21 \cdot 2$ per mille and rise again to $25 ; 8$ per mille in 1920. The recorded deathrate at the beginning of the decade was up to the average for Western Bengal which was considerably lower than in Northern Bengal and in Nadia and Murshidabad, but much higher than in Eastern Bengal. It rose in 1914 to 38.8 per mille but fell steadily from 1915 to 1917. In 1918, it rose on account of the influenza epidemic to 51.8 per mille and was 50.5 in 1919, falling, however, to 36.8 in 1920. During the decade recorded deaths exceeded births by 115,910, a greater excess than that shown by any other district, although in proportion to population the excess was greater in Birbhum, in Calcutta and in Darjeeling. Deaths exceeded births in every year except 1911, 1916 and 1917.

The figures showing the extent of immigration and emigration and the natural population for the last three censuses are given in the margin. Immigration into Burdwan district has steadily increased, but since 1911 there has been a very decided decrease in the numbers born in Burdwan who have gone elseWhere. It is partly the coal mines of Asansol subdivision that are responsible for the immigration to the district. The decrease in the number of emigrants seems likely to be the effect of relaxation of the pressure of the population on the soil with the reduction of its number. Migration between Burdwan and Bankura is very much in favour of Burdwan and that between Burdwan and Nadia and between Burdwan and Birbhum less so, but more migrate from Burdwan to Hooghly than the reverse. Large numbers have come especially to Asansol subdivision from Chota Nagpur and the Santal Parganas. Large numbers find their way from Burdwan to Calcutta, but not many to North or East Bengal. Marriages across the
border commonly account for more migration of females than of males. Tinere is nothing abnormal, therefore, in the number of emigrant females from Burdwan being greater than the number of emigrant males.
39. Birbhum district.-Most of the Birbhum district is slightly undulating and the soil is the "Old Alluvium." Except in the south-west which falls within the Raniganj coal-field, the district is purely agricultural. The population is very evenly distributed although somewhat heavier in Rampurhat
 subdivision in the north of the district than elsewhere. This subdivision adjoins the Santal Pargaadas and a large proportion of the population consists of Santals. Like Burdwan district, Birbhum was losing population until 1891 but gained 14 per cent between 1891 and 1901. The Sadar subdivision lost
$=\stackrel{9.1}{9.8} \quad 3.8$ per cent. in 1881-91, and gained 14.0 per cent. in 1891-1901, but only $1 \cdot 6$ per cent. in 1901-11. The Rampurhat subdivision gained 8.0 per cent. in 1881-91 $11 \cdot 7$ per cent. in 1891-1901 and 6.7 per cent. in 1901-11. During the last decade, almost every part of the district has lost equally. The Sadar subdivision suffered severely from floods, there has been malaria and the district was hard hit by influenza. Aboriginal tribes seem to have suffered more severely than Bengalis in the epidemic and those in Birbhum were no exception to the rule.

The recorded birth-rate in the district was high at the beginning of the decade and continued high until 1915 when it fell to $24: 1$ per mille from 34.6 per mille in 1914. It rose again and continued about its former level till 1918, but fell to 23.7 in 1919 and rose only to 27.6 in 1920. The deathrate at the beginning of the decade was considerably above the average for Western Bengal and for the Province, but lower than in Nadia and Murshidabad and the western districts of North Bengal. It rose, however, to 46.7 per mille in 1914 but fell steadily after that until 1917 when it was 26.3 . In 1918, it was $49 \cdot 6$ and in 1919 it reached the enormous figure of $62 \cdot 3$. Deaths recorded in the decade exceeded births by $\mathbf{7 4 , 5 5 3}$ no less than 7.96 per cent. of the population of 1911.

The number of immigrants to the district, as well as the number of
 emigrants from it; has decreased since 1911, though both increased somewhat in the decade previous. The balance of migration with neighbouring districts in Bengal is somewhat against Birbhum, but there has been a large ingress from the Santal Parganas which has, however, fallen off very decidedly in the last ten years. In the case of this district, females are in excess of males both among immigrants and emigrants.
40. Bankura district.-Bankura district is sharply divided into upland and plain, the line of the division corresponding closely with that separating the Sadar subdivision from Vishnupur subdivision. The density of population in the uplands is on the average 100 persons per square mile
less than in the plains, and the proportion of aborigines is higher than any-
 where else in Bengal, except in Balughat sulsdivision of Dinajpur, Jalpaiguri and Chittagong Hill Tracts, while the proportion of Muhammadans is lower than anywhere except the Chittagong Hill Tracts and Darjeeling. Some 7 . per cent. of the area is forest. In a good year the outturn of the rice crop is high, but unlike the rest of the Province, Bankura runs the risk that a dry season or an early cessation of the rains may produce a drought which will ruin the crop. This has happened twice in the last
decade and on both occasions famine conditions had to be relieved by the gratuitous distributions of both private and public charity. The uplands however, drain well and the country is comparatively free from malaria, though it suffered very severely from the influenza epidemic, coming as it did after famine had sapped the vitality of the population. The hand-weaving industry is an important one, Bankura having more looms in proportion to its population than any other plains district, and a svstematic exploitation of cloth produced in the time of famine did much to help the people engaged. The population of the Sadar subdivision grew steadily at each census up to 1911, but the case has been different with the waterlogged plains of Vishnupur subdivision which lies half waydown the strip of country running north and south through Western Bengal against the edge of the uplands. This strip of country. ill-drained and liable to floods the effect of which are accentuated by dams and weirs placed across the rivers and creeks for irrigation purposes, is the most malarious part of Bengal. Vishnupur subdivision suffered severely from "Burdwan fever," and between 1872 and 1891, while the population of Sadar subdivision increased by 24 per cent., Vishnupur subdivision lost 8 per cent. Between 1891 and 1901, like Burdwan district, Vishnupur recuperated and gained 7.2 per cent., but it lost $3 \cdot 1$ per cent. between 1901 and 1911, while the Sadar subdivision gained 4.9 per cent. and between 1911 and 1921 its loss has been $16 \cdot 1$ per cent., such a loss as no subdivision in Bengal has sustained in any decade since 1872. The corresponding loss in the Sadar subdivision has been high, $7 \cdot 0$ per cent. but this is less than half the rate of decrease in Vishnupur. Except that the recorded birth-rate in Bankura did not fall so low in 1915 nor show so much improvement between 1916 and 1918, it followed very closely the birth-rate in Birbhum during the decade. The deathrate did not rise in 1914 and 1915 as high as in Birbhum and fell to $36 ; 5$ per mille in 1919 when the rate in Birbhum rose to 62.3 but otherwise the annual death-rates in the two districts were much the same. Deaths recorded in Bankura in the decade exceeded births by $27,235,2 \cdot 4$ per cent. of the population of 1911.

While Burdwan is a district which attracts more immigrants than the

| Bnakura. | 1021. |  |  | $1911 .$ <br> Doth soxec. | 1801. $\qquad$ <br> Both mexel. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mn'er. | Fersiles. | Total, |  |  |
| Actual popuiation | ${ }^{609} .334$ | 810.807 | 1,019,041 | 1,188, 670 | 1.118. 111 |
| Immigrants | 10.740 | $1 \mathrm{l}, 708$ | 29,888 | 46.189 | 99,431 |
| Emulgrants |  | -8,956 | 131.068 | 177,384 | 148.818 |
| Nataral populatioa | B7t, 181 | \$70.963 | 1,141,416 | 1,267,874 | 1,883,593 |

emigrants it sends out and Birbhum is a district which has no very strong tendency in this or in the reverse direction, Bankura sends a large proportion of its children elsewhere to earn their living.

The numbers of both immigrants and emigrants have decreased during the last decade to much the same extent as they increased during the decade before leaving the balance of immigration over emigration about the same as 20 years ago. Bankura people have moved to Burdwan and Hooghly in much larger numbers than Burdwan and Hooghly people have moved to. Bankura. The balance of migration between Bankura and Midnapore though still against Bankura is more even.' Migration between the two is mainly in marriages and short moves which happen only to cross the border. There are more Bankura people in Calcutta, the 24-Parganas and Howrah than there are from any Eastern or Northern Bengal district except Dacca, Faridpur and Bakarganj, but they are not attracted to Calcutta as Oriyas and Biharis, or people from Midnapore, Hooghly or Burdwan, and those who go out from Bankura to earn their livelibood prefer to stick to agriculture. A few go to the tea-gardens in Assam, but the bulk prefer to follow the same pursuits as at home in rural parts of Burdwan and Hooghly.
41. Midnapore district.-Midnapore, like Bankura, is sharply divided into upland and plain. The main road from Bankura through Midnapore and on to Balasore closely follows the dividing line between the 'two: Tipland covers Binpur, Jhargram, Gopiballavpur, Nayagram and Salbani, and the western halves of the area under Midriapore and Kharagpur police-
 stations. The rest of the districts is an alluvial plain but its characteristics are by no means always the same. Near the uplands though none of the "'Old Alluvium" breaks the ${ }_{0}^{11: 1}$ surface there are distinct watersheds between the streams. At the other extreme,' there are stretches towards the Hooghly estuary which require to be surrounded by embankments to keep out salt water and there is a long line of sand-hills some few miles inland from the sea-coast. The effect of the embinkments and the sand-hills is to impede the drainage of the interior. Below the fringe of the uplands the rivers are con:s fined within artificial embankments to protect the surrounding country from ${ }^{15}$ damage by sudden floods . 7 which rise between these ${ }_{17} \cdot 17$ embankments with surprising suddenness after ${ }^{78}$ heavy rain. The control exercised over these rivers for irrigation purposes further detracts from their efficiency in carrying the flond-waters through to the sea, and the common result is that the floods breach the embankments and cover the country behind. Rice survives immersion for a period up to six or seven days, but in this area once the flood water has broken out of its proper channels there is very little means by which it can get away. The country remains waterlogged for weeks, the crop is lost and the stagnant water helps the spread of malaria. The density of population in the uplands, except for Midnapore town, is well under 300 persons to the square mile, 300 being as much as the soil of such country is
found to bear in other districts also. The density over the rest of the district varies from 500 to the square mile to above 900 in the circuits protected by embankments towards the estuary of the Hooghly and nearly 800 along the sea face.

Midnapore suffered from " Burdwan fever'" along with the other districts of West Bengal, but the epidemic though very severe and estimated to have caused a mortality of a quarter of a million continued for a shorter period than further north and had passed away by 1877. The period of recuperation thus came earlier than in Burdwan. The population increased 4.6 per cent. between 1881 and 1891 and 6.0 per cent. between 1891 and 1901, but only $1 \cdot 2$ per cent. between 1901 and 1911 and in the last decade there has been a decrease of 5.5 per cent. The gain or loss has by no means been the same in different parts of the district. There has been steady increase in the uplands until the last decade in which their loss is to be put down mainly to the influenza epidemic which wrought great havoc among a population with a large proportion of aborgines. There has also been steady progress which the disabilities of the last decade have not been able altogether to deface in the fertile soil against the Hooghly and the Rupnarayan and along the sea face, where the 'Julpai"' lands, formerly reserved for the manufacture of salt, were brought under cultivation after the middle of the last century when the manufacture of salt by evaporation of sea-water was finally given up. The population of Tamluk and Contai subdivisions increased more than 10 per cent. between 1891 and 1901. That of the former increased $3 \cdot 1$ per cent. and that of the later 2.5 per cent. in 1901-11. Ever since the first census in 1872, it has been the water-logged country against the fringe of the uplands that has proved decadent. In 1872, Ghatal police-station had a density of 1,129 persons to the square mile, Chandrakona with Ramjibanpur 880, Daspur. 1,311, Debra 1,016, Keshpur 476, Sabang with Pingla 756 and Narayangarb 432, Pataspur 693 and Dantan 518. The density in the last two was slightly heavier 50 years ago than it is now. In the others it was much heavier. Debra has lost more than half and Ghatal, Chandrakona, Keshpur, Daspur, Sabang and Narayangarh something like one-third. The outline of the strip of country which has suffered so badly is very clearly marked in the map in diagram No. 23 showing the changes which have taken place during the last decade. The constant recurrence of floods and the lack of drainage have caused a permanent depreciation in the capabilities of the soil, influenza caused great mortality and malaria takes its regular toll, while all these disabilities have combined to keep down the birth-rate. The birth-rate recorded for the district was low at the beginning of the decade, and, though it showed no drop as in Burdwan, Birbhum and Bankura in 1915, it showed no rise from 1916 to 1918 . It was only 27.7 in the latter year and fell in 1919 to $24 \cdot 2$ but rose in 1920 to $26 \cdot 8$. The death-rate has also shown less violent fluctuations than in the districts to the north of Midnapore. Its highest level until 1917 was $33 ; 6$ per mile in 1912 and 1918 took it no higher than $38 \cdot 1$ though it was $40 \cdot 1$ the next year. During the decade recorded deaths exceeded births by $63,859,2 \cdot 26$ per cent. of the population of 1911 .

Midnapore is a district which sends a large number of its people to other
 parts. During the decade before last there was a large increase both in the numbers of immigrants and of emigrants. During the last decade the immigrants have somewhat decreased but the emigrants have continued to show a distinct increase. A decrease in the pressure of the population on the soil might be expected to show itself at once by a decrease in the number of those who go elsewhere to earn their living, and in other Western Bengal districts which have lost population this has been evident during the last decade. The figures for Midnapore bear out the conclusion which has already been reached that the pressure of the population on the soil is very great, and the fact that in spite of a decrease of population
emigration has increased points towards the suspicion that the capacity of the soil at least in parts of the district, is deteriorating. Employment on the railway and in the railway settlement and works at Kharagpur have brought many immigrants to Midnapore. More come from Bankura than have gone out to it, but there is little migration from Orissa or from Singhbhum. Emigrants from Midnapore go in large numbers to Hooghly, Howrah, and the 24 -Parganas where they usually obtain employment as unskilled labourers. Few have gone further east.
42. Hoogwly district.-Hooghly district has no upland, but Arambagh subdivision falls within the waterlogged belt below the uplands where the people are sodden with malaria and the land seems to have suffered permanent depreciation from frequent floods. This subdivision partakes of the character of Vishnupur
Sernmpare subolivialon Tarlpal palico-atalion … Jarzemat Semipmore Ulempers Ehadreswat
Slagar
Apembegh anhdfofsion Arambant policeratation Gorb.t

- ...
Khaubin $\quad \cdots \quad \cdots$
 in Bankura which adjoins. it. The rest of the district, except the parts along the Hooghly which have been animated by the touch of industria-- lism, is characterised by overgrown vegetation burying the homesteads of the population, and generally wears an air of stagnation. The density of population in Arambagh subdivision which is purely agricultural is high for the capabilities of the soil, more than 200 persons to the square mile higher than in Vishnupur subdivision; that in the rural parts of the Sadar subdivision is somewhat lower and of Seramporé subdivision somewhat higher. Up till the middle of the nineteenth century the settlements along the river-Bandel, Chinsura, Chandernagore and Serampore-were considered far more healthy than Calcutta. Bandel especially was a health resort. The " Burdwan fever"' however, which seems to have appeared in epidemic form in Jessore and moved westward, attacked Hooghly district about 1857 and raged for 20 years though it must not be supposed that it afflicted all parts of the district throughout that period. It spread from place to place, its average duration in one locality being from three to seven years. The mortality was very heavy and was estimated by the Census Superintendent of 1881 at no less than 650,000 . Relief came earlier than in Burdwan where the fever had appeared at least ten years later, and after a loss of 12.9 per cent. in the district between 1872 and 1881, there was an increase of $6 \cdot 1$ per cent. from 1881 to 1891, reduced to 1.4 per cent. between 1891 and 1901, when malaria had established itself in endemic form. Between 1901 and 1911 there was large increase in the Serampore subdivision, $11 \cdot 6$ per cent., mainly due to immigration of workers to be employed in the jute mills, for the juteweaving industry expanded fast in the decade. Arambagh subdivision lost 3.2 per cent. mainly owing to economic stress caused by the deterioration of the soil so often covered by the floods of the Damodar and the Ajay. Rural areas in the Sadar subdivision showed some improvement except around Chinsura itself. During the decade 1911-21, the district has lost 0.9 per cent., the rural areas especially Arambagh subdivision having fared worse than in the previous decade, while the contrast between industrial and rural areas has been exaggerated. Arambagh subdivision has not suffered as severely as Vishnupur, its neighbour, but it has lost no less than 10.8 per cent. of its total population, while the adjoining rural parts of Serampore; which had shown
improvement in the previous decade, have now shown considerable loss. The Sadar subdivision has fared much as in the previous decade though Chinsura and Magra this time show an increase of 7.8 per cent. The large increase of $24 \cdot 6$ per cent. in Serampore, Uttarpara and Bhadreswar is solely due to the immigration of mill hands. The jute mills of the district have been foums to employ as many as 51,180 persons, while persons at work in industrial concerns of all kinds employing 10 or more men have been found to be as many as $72,354$.

The recorded birth-rate in Hooghly district fell very low in 1913 and 1914 compared with the level in other districts. It improved slightly up to 1917, but fell in 1918 to $25 \cdot 7$ and in 1919 to $21 \cdot 5$. In 1920, it was $27 \cdot 5$. Over the decade it has been lower than in any other district except Calcutta and the 24-Parganas. The death-rate was higher in 1912 and 1913 than in succeeding years before the influenza outbreak. It rose to $47 \cdot 2$ in 1918, but was down again to $36 \cdot 1$ in 1919 and $35 \cdot 6$ in 1920. The average has not been abnormally high and the excess of deaths over births in the decade 63,292 is mainly attributable to the low birth-rate.

The figures for the natural population of Hooghly show how heavy a loss
 it suffered during the last decade. The actual population was made up by the increased number of immigrants and by the appearance of so large a decrease in the number of emigrants as 59,594 . Decreased emigration is partly due to relief of the pressure of the population on the soil, but to a great extent also to the fact that labour now finds an easy market without going out of the district. The class from Hooghly that finds employment in office work in Calcutta, moreover, seems to have taken much more than formerly to living in the district and going in daily by train. Increased immigration has been attracted by the growth of the jute industry established on the banks of the Hooghly. The district has an immigrant population amounting very nearly to 20 per cent. of the total. The proportion actually surpasses the corresponding proportion in Howrah district and in the 24-Parganas, though it is not so high as in Jalpaiguri and Darjeeling. The greatest number come to Hooghly from Patna, Gaya, Monghyr and Shahabad in Bihar and from the adjoining districts Ballia, Ghazipur, Benares, Azamgarh and Jaunpur in the United Provinces. Cuttack and Balasore also send a large contingent. From all these parts they come to the industrial centres. The immigrants to rural areas come mainly from Bankura. The balance of migration between Hooghly and Midnapore is in favour of Hooghly and in a less degree that with Burdwan and Nadia also. Emigrants have gone chiefly to Calcutta and Howrah though large numbers are also found in the 24 -Parganas. Since a large proportion both of immigrants and emigrants have left their homes in search of work, it is not surprising in the instance of this district to find an excess of males over females in both classes.
43. Howrah district.-The high density in Howrah district, 1,882 persons per square mile, is due to the fact that much more of the district is urban than is the case with other districts of the Province, and to its proximity to Calcutta. The presence of the marshes has prevented a dense rural population from crowding against the eastern side of Calcutta, but though the land west of Howrah town lies low, conditions have been greatly improved by the Howrah drainage scheme completed in 1885 and affecting 50 square miles and the Rajpur scheme completed in 1895 and affecting 270 square miles, and it is able to support a large rural and residential population. Roads and railways radiate westward from Howrah, while on the Calcutta side the only ways out they are able to find are north and south parallel to the Hooghly. The East Indian Railway from Howrah has two lines north and north-west, the Bengal-Nagpur Railway after getting out of the town swings round towards the river again and proceeds through Ulubaria in the south-west,
while between are two light railways to Amta and Sheakhala. Roads radi-

| Howrat. | Popolatlocs 1021. | Drasty per | Tarfation per cent. 1311-81. |
| :---: | :---: | :---: | :---: |
| DISTRIOT TOTAR - - | 097,408 | 1,882 | + E*7 |
| Sadar anbi/vialon | 820,777 | 2,083 | $+5 \cdot 8$ |
| Howtsh town * - - - | 180.641 | 19,530 | 1 |
|  | ${ }^{1810288}$ | 1,968 | $+\quad 07$ |
|  | 79.374 | 2.007 <br> 2.103 <br> 1015 | 8 |
|  | 16,298 | 3,103 | + 88 |
|  | 4,031 | 3,183 1,184 1,684 | 55 |
| Proctia -r -- -- -- | 5,84 |  |  |
| Ufobarla ambilvicior - | 476,628 | 1,888 | + $\mathrm{E}^{-6}$ |
| Amta policentation -- | 137,245 | 1,383 | + 21 |
|  | 99,671 | 1,349 | $\pm 2.8$ |
|  | 99,056 | 1.357 | + 110 |
|  | 23,049 | $\xrightarrow{\mathbf{1}, 269} \mathbf{1 , 1 9 4}$ |  |
|  | 23,671 | 1,076 | 41 | ate from the town in a similar manner. Thus every part of the district is in easy communication with the head-quarters, and under every policestation there is a density of population well over 1,000 to the square mile.

The history of the last 50 years in Howrah district has been one of sustained progress. It suffered severely from "Burdwan fever," but there was an increase of 6.2 per cent. from 1872 to 1881. Since then the increase has been $13 \cdot 1$ per cent., 1881-91 11.4 per cent., 1891 -1901 and 10.9 per cent., 1901-11. The increase during the last decade has been reduced to 5.7 per cant. and has been the same in Ulubaria as in the Sadar subdivision, whereas for 1901-11 the proportionate increase in the latter was double that in the former. There has been.a same falling off in the increase in Howrah city as well as in the rural areas of the Sadar subdivision, whereas the increase round Glubaria town and just north of it through industrial development has been maintained at the rate of the former decade. How far the population of the district as a whole is recruited by immigration for comparatively short periods is indicated by the excess of 72,899 males over females against 53,780 in 1911. The jute mills are the largest employers of labour. At the time of the census, though they were then working at a very much lower pressure than a year or two previously, their labour force amounted to no less than 67,447 . The list of other industrial concerns established in the district is a long one, cotton mills, jute presses, iron foundries, machinery and engineering works, brickfields, railway workshops, oil mills, flour mills, etc. The number of persons at work in concerns employing 10 persons or more amounts to one-ninth of the total population of the district.

The recorded birth-rate in Howrah for the first seven years of the last decade was up to the average of Western Bengal. It fell somewhat in 1918 and 1919 although not to the same extent as in the other districts of the Burdwan Division. The recorded death-rate has remained as low as the Eastern Bengal level. It rose only to $32 \cdot 2$ in 1918 and $35 \cdot 1$ in 1919. There was no fall in 1920, but during the decade recorded $\cdot$ births, exceeded deaths by 12,850.

The fact that the number of immigrants found in Howrah is less than it


| Howrah. | 1991. |  |  | 1911. | 1901. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maler. | Femaleat | Total, | Por sexem. | Both soxes. |
| Aetral popolation ... | 201,131 | 462,952 | 997,403 | 943,503 | 850,514 |
| Imonigrante ... | 120,215 | 62,048 | 181,858 | 189,984 | 144,640 |
| Bmistauta ... - | 4.563 | - 21,64 | 68,500 | 40,392 | 23,808 |
| Nataral popalation ... | 410,490 | 431,253 | 871,744 | 793,910 | 739,990 | be taken to indicate that the foreign element is less than formerly, but rather that the town of Howrah, which as far as statistics of immigration go, dominates 2,386 the statistics for the dis739,980 trict, has reached the point when the descendants of immigrants are taking the place of the original settlers and coming to swell the number of the native-born. The increased emigration from Howrah dors not necessarily prove that Howrah people are going elsewhere. It is probable that the bulk of those born in Howrah but found elsewhere only happened to have been born while their parents were temporary sojourners in Howrah, and afterwards went back with them to their native country. Howrah is the only district of Western Béngal for which the last decade has

produced an increase in the uatural population. The increase has been $9 \cdot \varepsilon$ per cent., so that it is evident that the population of the district must be in a far better economic position and far healthier than that of the other districts of the Burdwan Division. Migration to Howrah comes from other Provinces from the same directions as to Hooghly. The balance of migration in all directions from neighbouring districts, except Calcutta, is in favour of Howrah: As was only to be expected, there is a large excess of males over females among the immigrants.

## Central Bengal.

44. From the lower reaches of the Hooghly in Western Bengal to the fringe of the western uplands is barely 50 miles. In the Chittagong Divis: ion, the newest delta formations are nearer still to the hills. Through Central and Northern Bengal on the other hand, the space which corresponds, the distance between the Sundarbans and the foot-hills of the Himalayas is not less than 300 miles. In the Dacca Division, the space is reduced to half by the appearance of the Garo Hills 100 miles south of the latitude of the southernmost Himalayas, and the intrusion of the estuary of the Meghna with its tides nearly another hundred miles inland from the open sea. Practically the whole Province is delta and the character of its formation
 in any locality varies with its position relative to the outer edge which is pushing slowly foward into the sea and the hills which frame it on other sides, varies in other words according to its age. The changes in the formation of the country which take place very gradually over the space of 300 miles between the sea-face in Khulna district and the foot-hills in Jalpaiguri. are thus reproduced much more speedily in passing northwards through Dacca Division and north-westward through Burdwan Division, and only in miniature in the Chitta gong Divisiun where the eastern hills come close down to the sea. The appearance and character of the countryside follow the changes in the formation of the soil, though the reproduction of these changes is tinted throughout by the excess rainfall to the east diminishing to the north and west and appearing again under the Garo Hills and the Himalayas. It might be expected that the changes in the constitution of the population, almost entirely dependent on the productivity of the soil would be of the same character, and generally speaking this is so. Variations in density in Northern and Central Bengal, except where they come under the influence of the commercial and industrial activity of which Calcutta is the centre, take place very much more slowly in passing from place to place than in either Eastern or Western Bengal, and the population retains the same character over far wider tracts.
45. The 24-Parganas.-The 24-Parganas is unique in Bengal in being able to show variations in civilization from virgin forest practically uninhabited on the sea-face, through varying intensity of cultivation in rural areas with small conservative towns, to the progressive suburbs of a great city, all within the limits of one administrative district: $\boldsymbol{\beta}$ Half the district, the south-eastern half, is still only partially developed, and much of it is buried under forest trees and a dense undergrowth growing in soft mud which is frequently flooded by high tides. Over this half of the district the density of population is below the average of 400 persons to the square mile. Along the Hooghly from Budge-Budge up to Naihati the density hardly falls below 2,000 and in the suburbs adjoining Calcutta and at Barrackpore and Titagarh it rises to over 7,000. South of Calcutta as far as Baruipur, Magrahat and Diamond Harbour, the density is generally about 1,000 and in parts considarably higher. Close against the Eastern Suburbs, the land lies very low and the density falls under Dum Dum, Magrahat and Bhangar police-stations, but it rises again towards the north-eastern corner of the district. The population has increased no less than $66: 2$ per cent. since $1872 ; 6: 9$ per cent., $11 \cdot 9$ per cent.; $9 \cdot 9$ per cent., $17 \cdot 1$ per cent., and 8.0 per cent., at successive census enumerations.

The earlier tendency was towards greatest increase on the fringes of the Sundarbans. Calcutta

lation from Calcutta. The population of the fived an overflow of popucant. and that of Barrackpore subdivision 41.7 per cent
the subdivisions was above 10 per cent. During the past decade developmatert has taken place further into the Sundarbans, but has fallen off at the fringes. The purely agricultural parts of the district have shown little advance aud
 some have lost population, Baraset subdivision 4.3 per cent., and in Basirhat subdivision, Sarupnagar and Baduria 3.9 per cent. and Haroa 1 -3 per cent. Here malaria has been the main cause. Progress south of Calcutta in the region affected by the Magrahat drainage scheme has been dissappointing. In the five Suburbs the recorded death-rate rose very much above that of the previous decade and their increase has been no more than 13.8 per cent., compared with 40.3 per cent. in 1901-11. Industrial progress has continued along the Hooghly. Barrackpore subdivision has gained 18:5 per cent. and the area under Budge-Budge policestation in the Sadar subaivisicn 15.0 per cent. The jute mills in the district at the time of the census employed as many as $160,0 \div 2$ persons, while the total number employed in industrial concerns of all kinds having not less than 10 employees each amounted to 213,262 .

The birth-rate in the district is much below that in others on account of the fact that the population in industrial centres contains a preponderance of males. Moreover, wives of immigrants expecting children commonly return to their homes for the event of the birth. The death-rate is low, for the immigrant industrial population consists mainly of persons in the prime of life. Births recorded during the decade exceeded deaths by 5,852 .

The figures printed in the margin show that the continued progress of the
 24 Parganas is not by any means due to immigration alone. In fact the growth of the natural population has contributed nearly half to the increase in the actual population during the last 128.sio decade. The enormous in1.971,952 crease in the number of immigrants between 1901 and 1911, 174, 276, has been reduced to 55,967 , partly no doubt because the nativeborn children of immigrants are taking the place of the generation which settled in the district. The number of emigrants has diminished almost to the level of 1901 and the natural population has increased by 5.5 per cent. against $10 \cdot 1$ per cent. in the previous decade. The greatest number of immigrants
come from the western disticts of Bihar and the adjoining districts in the United Provinces. Cuttack and Balasore send a large quota and so do Midnapore and Huoghly but the numbers from the East are few. Khulna sends a number principally employed on the rivers and canals, but contingents from Dacca and Chittagong divisions go rather to Calcutta itself than to its neighbourhood. As might have been expected there is a large excess of males among the immigrants.
46. Calcutta.-A separate volume of Tables has beeen published containing the census statistics of Calcutta and its suburbs and a commentary upon the figures is contained in a separate Census Report. The City, the area administered by the Corporation with the Fort the Maidan and the Port. has a population of 907,851 and a density of 43,000 to the square mile when the water area is left out of account. The population has increased 43.4 per cent. since 1872, the changes shown at successive census enumerations being a decrease of $3: 3$ per cent. and increases of $11 \cdot 4$ per cent., $24 \cdot 3$ per cent., $5: 7$ per cent. and 13 per cent. The constitution of the population is peculiar, men out-numbering women by two to one and hardly more than 20 per cent. being people who look upon the city as their real home. The crude annual birth-rate is very low, the average for the last decade having been only 20.1 per mille; the death-rate is lower than formerly but still high considering that the bulk of the population consists of adult males below the age of 40 . It was $30 \cdot 1$ per mille annually on the average for the last decade and deaths exceeded births by 95,817 .
47. Nadia district.-The Nadia rivers, a century and a half ago, were active distributaries of the Ganges, but since the Ganges found its way into the Meghna the tendency has been for less and less of its waters to leave the

and 1911 there were decreases in Kushtia subdivision 4.2 per cent., in Mcherpur 5.3 per cent. and in Chuadanga 4.8 per cent., and increases in the Sadar subdivision of 2.0 per cent. and in Ranaghat of 1.7 per cent. During the prast decade Kushtia and Ranaghat have lost least and the central portion of the district has suffered most, the area under Hanskhali, Kissenganj, Chapra, Damurhuda, Chuadanga, Jibannagar, Alamdanga, Mirpur, Gangani, Metherpur, Karimpur and Tehatta police-stations. The recorded birth-rate has been comparatively high throughout the decade, the average for the ten ye:ars being as much as $34 ; 8$ per mille per annum compared with $30 ; 2$ for the Western Bengal districts. The death-rate however, has been higher. For the, first five years it was almost as high as in Malda and Murshidabad which showed the highest rates of mortality in Bengal, while in the latter five years its rate was only passed in Murshidabad and Darjeeling. Recorded deaths in the ten years exceeded births by no less than 86,539 .

During the last decade both the numbers of immigrants to and emigrants

| Nadia. |  | 1821. |  |  | $\frac{1911 .}{\substack{\text { Both } \\ \text { nexis. }}}$ | $\frac{1001 .}{\substack{\text { Roth } \\ \text { v-ren. }}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Malos | Yemales. | Total. |  |  |
| Aetual population | ... | 701,210 | 736,227 | 1,487.672 | 1,817,849 | 1,66P,291 |
| Immigranis ... | ... | 22,1884 | . 20.075 | 82,460 | 73,193 | 82,010 |
| Natural popalatiou | ... | (68,014 | 747,879 | 1,624,486 | (, 1367.972 | 1,732.004 | from Nadia district have decreased. The decrease in the number of immigrants does not reduce it to the level of 1901 though that in the number of immigrants takes it much lower. There is some support, therefore, for the contention that the pressure of the population on the soil in the district is less heavy than it was. But considering the fact that the density is now only what it was in 1872, lower than it has been at every subsequent census and lower than in any adjoining district, it is surprising that as many as a hundred thousand Nadia people go elsewhere to find a living. Emigrants from Nadia are found in larger numbers in Jessore than in other neighbouring ditricts, but migration across the Ganges to Rajshahi and Pabna has been considerable and numbers have gone to the 24-Parganas, Murshidabad Faridpur and Hooghly. The balance of migration is against Nadia in every direction though it is only very slightly uneven between Nadia and Murshidabad. Large numbers of Nadia people are found in Calcutta but not so many as from Burdwan, Hooghly and Midnapore.

48. Murshidabad district.-The part of Murshidabad district west of the Bhagirathi river resembles Birbhum in character, while that to the east resembles Nadia and suffers similarly from defective drainage. The density of population is generally greater than in Nadia and is higher in the south-
 west and along the banks of west and along the banks of
the Ganges especially in Jangipur subdivision than in the centre of the district. The district suffered from "Burdwan fever" which continued into the eighties of last century. The increase of population between 1872 and 1881 was only 1.0 per cent. and only $2 \cdot 0$ per cent. between 18si and 1891. There was some recovery in the next decade and an increase of 6.6 per cent., but it was redticed to 2.9 per cent. in 1901-11 and in the last decade there has been a loss of 8.0 per cent. Between 1901 and 1911, there was a decrease of population on the right bank of the


Bhagirati from Murshidabad southwards, and eastwards to the Nadia border and the Ganges, where the loss was due to malaria, while Kandi subdivision gained 9.7 per cent. and Jangipur subdivision $7-1$ per cent. During the last decade almost every part of the district has lost population. The recorded birth-rate has been very high throughout the decade, the annual average being no less than $38-3$ per mille, but the average death-rate has been still higher, $41-7$ per mille. It roce to 51.8 per cent. in 1914 on account of malaria and reached 58.3 in 1918 when the influenza epidemic caused great mortality. During the decade recorded deaths exceeded births by 46,900 .

In 1901, the number of immigrants to Murshidabad approximately balanced the number of emigrants from it. The decade from 1901 to 1911 showed a slight increase in the number of immigrants and a substantial increase in the number of emigrants. The last decade has shown a slight decrease in the number of emigrants and a substantial decrease in the number of immigrants The result oi the 20 vears has been to make the number of emigrants now nearlr twice as great as the nomber of immigrante. Partly this is due to the iact that the immigration to the western parts of the district from the Santal Parganas and Birbhum has been stared and the native-born children of immigrants have taken the places of their fathers, but the density of population is less now than it was 20 years ago, and that the proportion between immigrants and emigrants has changed in this manner is significant of the deterioration in the reproductive capacity of the soil at the hands of a fever-stricken agricultaral population. The figures for migration seem to indicate that Murshidabad suffers more severely even than Nadia from the erils which have come about by the decar of the distribatary river srstem from the Ganges, the consequent fall in the subsoil water-lerel and its concomitant disabilities. Emigrants from Murshidabad go rather to Malda and Rajshahi than to neighbouring districts in other dinections. The balance of migration between Nadia and Murshidabad is abont even and between Birbbum and Murshidabad is in favour of the latter, but there has been a steadr and increasing flow of migration from Murshidabad across the Ganges to Malda and Rajshahi the number found in these two districts who were born in Marshidabad exceeding the number born in them and found in Marchidabad br as much as 44,000 . A considerable number from Marshidabad and Nadia find their way as far as Dinaipur and even Rangpur. A large proportion of the immigrants to the district are from the Santal Parganas, though the number of such is decidedly less than 10 vears ago. It is becanse a larger proportion of emigrants from Tadia than from Murshidabad go in search of work in industrial centres in Hooghly. the $\mathbf{2 4}$-Parganas and Calcutta. that there is an excess of males among the emigrants from Nadia 2gainst excess of females among those from Murshidabad.
49. Jessore district.-Jessore, like Tadia, is a land of moribund rivers

 and obstructed drainage. The streams which cross it used at one time to be fed from the Ganges, but most of them now receive no water from that source. They are no more than channels of local drainage and are quite unfitted for this service haring been


formed to carry much more water. Consequently many of the rivers maintain but a languid vitality in the rains and for the greater part of the year are merely chains of stagnant prols overgrown with weeds. Only the Garai and the Madhumati to the east are still live rivers, though in the south of the district streams are affected by the tides and kept open by that means. The soil has deteriorated since it has lost the annual deposit of silt it once obtained and there has been a fall in the subsoil water-level. The high land is too dry to he valuable and
there are wide marshes at low levels which do not drain and in which water lies all the year round. The density of population is, however, decidedly higher than in Nadia, and, as the figures given in paragraphs 11 et seq. show, the pressure of the population on the soil is comparatively light and there is a considerable margin for the agricultural population beyond their requirements for sustenance. The density along the eastern margin is comparatively high, and on the southern border against Khulna it is also very much higher than in the middle and west of the district. It is lowest in Bongaon subdivision, rather heavier in the centre of the district, but decreases again to the east before the more densely populated area served by the Garai and the Madhumati is reached.

It is commonly believed that 1817 was the first year and Jessore the first place in which cholera broke out in epidemic form, but this does not appear to be justified for there are historical references to earlier epidemics. In 1836 an outbreak of malarial fever of a malignant type appeared, and, as has already mentioned, passed from Jessore into Nadia and Western Bengal. Until 1864, there were only temporary cessations for two or three years after 1843 and after 1850. Another outbreak lasted from 1880 to 1885 , but after that malaria remained only in endemic form. The district continued however one of the most unhealthy in the Province well into the new century. The Census of 1881 showed an increase of $33 \cdot 6 \cdot$ per cent. over the population according to that of 1872, but though this was a period of recuperation after a long series of epidemics, little doubt was expressed at the time that most of the difference was due to defective enumeration in 1872 . Since 1881, the population has declined, $2: 6$ per cent. in 1881--91, 4.0 per cent. in $1891--1901,3.0$ per cent. in 1901--11 and $1 \cdot 2$ per cent. in the last decade. The average density which was 663 persons per square mile in 1881 is now no more than 593. The health of the district has however improved very much of-recent years. During the last decade only Bongaon subdivision and the two towns of Jhenida and Jessore and the country in their immediate neighbourhood have maintained their evil reputation and in the last few years Jessore itself has much improved. After remaining almost stationary for 40 years, its population has increased 13.8 per cent. in the last decade. It seems that the tide of ill-fortune, which has flonded the district for a century, has at last turned. The district is one of the two in the Province which alone have done better as far as variation in the population is concerned in the decade 1911--21 than in 1901-11. Magura subdivision which showed losses of 8.5 per cent. and 4.1 per cent. in 1891-1901 and 1901-11 now shows an increase of 6.1 per cent. while Jhenida subdivision which lost 4;5 per cent. in 1881-91, $2 ; 3$ per cent. in 18911901 and 6:1 per cent. in 1901-11 now shows a small increase though the areas under Jhenida and Kotchandpur police-stations show a considerable loss. Narail subdivision escaped some of the disabilities of former decades and
has maintained an increase. The Sadar subdivision shows a loss, but only a slightly higher loss than in the previous decade. Only Bongaon continues to lose heavily.

The recorded birth-rate has throughout the decade been very much lower than in Nadia, Murshidabad and Khulna, and fell as low as 24.9 per mile in 1918, 21.0 in 1919, and 21.4 in 1920. But the death-rate has also been low. It sank to 23.6 in 1917 and in spite of the influenza epidemic only rose to 30.0 in 1918 and $30 \cdot 2$ in 1919 and fell again to $28 \cdot 3$ in 1920. The average for these three years was lower than anywhere in the province except Mymensingh and Tippera. During the decade reported deaths exceeded births by $2 f, 868$.

During 1901--11 the number of immigrants to Jessore increased more than
 the number of emigrants from it. During the last decade immigrants have decreased more than emigrants and the proportions of the one to the other and of either to the total population are now just what they were 20 years ago.
The figures of migration, therefore, do not indicate, as in the case of Midnapore, Murshidabad and to a less extent Nadia, that the decrease of population has not relieved the pressure of the population on the soil. The figures are further indication that Jessore has reached a turning point in the tide of its adversity and that for it better times are at hand. Immigrants come in greatest numbers from Nadia, though there is much intermarriage with people of Faridpur and Khulna. There is a remarkable contrast between the small numbers from Bihar and Orissa, the United Provinces and further parts of India in Jessore and Khulna and the very much larger numbers in Nadia and Murshidabad as well as in the 24-Parganas. Males exceed females among the the emigrants, but not among the immigrants, and in the natural population there is a notable excess of males.
50. Khulna district.-Khulna is very different in character from Mur-
 shidabad, Nadia and Jessore. It is a new delta formation intersected in all directions by tidal aivers which are wide estuaries as they approach the seaface. The southern half of the district is unbroken Sundarban forest, dense growth standing in soft mud half in and half out of the water and threaded by innumerable creeks and channels. The Khulna rivers do not now act, as once they did, as active distributaries of the Ganges, and the silt they carry is brought down only by the drainage of Jessore district and part of Faridpur, the drainage of Nadia and Murshidabad passing mainly into the Hooghly. The delta in Khulna does not seem to have pushed forward into the sea at all since it was first surveyed 150 years ago. Just off the coast is the curious patch of deep sea called the" Swatch of No Ground," and active delta formation is going on further east. The forest in Khulna district
is" reserved," while that in the 24-Parganas is only "protected." Colonization is not attempted in the 2,297 square miles which it cevers. The perrents onumerated in it were found in boats engaged in collecting forest produce. The jurisdiction of the police-stations marked with a star in the marginal table extends into the forest and through to the sea-face, but the density of population shown against them has been calculated only on the area which lies outside the forest boundaries. The density over the whole district is only 307 persons to the square mile, but excluding the forest area it is nearly twice as much. It rises high in the north-east corner and is high also in the north-west adjoining Basirhat in the 24-Parganas. This corner is higher and is not cut up by great rivers as is the north-east. The forest comes further north in the middle than to the east and west, and north of it as far as the middle of the northern border there is an area with comparatively low density.

The district was carved out of Jessore and the 24-Parganas in 1881, and the population has increased at each successive census, by $3 \cdot 2$ per cent. in 1872-81, $9 \cdot 0$ per cent. in 1881-91, $6 \cdot 4$ per cent. in 1891-1901, $9 \cdot 1$ per cent. in 1901-11 and 6.7 per cent. in the last decade. The Sadar subdivision has gone ahead 10.0 per cent., 17.7 per cent., 10.1 per cent. and 6.2 per cent. in successive decades since 1881, but the other subdivisions have not made such continuous progress. Bagerhat subdivision on the eastern side gained $13 \cdot 3$ per cent. in 1881-91, but this was reduced to 6;6 per cent, in 1891-1901 and 4.2 per cent. in 1901-11. During the last decade there has been a much larger increase of $14: 3$ per cent. The progress in Satkhira has been very uneven. An increase of 5.7 per cent. in 1881 - 91 gave place to a decrease of $1 \cdot 5$ per cent. in 1891-1901. In 1901-11 there was a substantial increase of $11 \cdot 9$ per cent., but during the last decade it has been no more than 0.8 per cent.

The recorded birth-rate in Khulna has been comparatively high throughout the decade, but the average has been lower than in Nadia and much lower than in Murshidabad. The rate remained above 35 per mille up till 1918 except for a drop to 32.9 in 1916. The death-rate kept low, only once going up to 30 per mille before 1918, and in four years out of the seven being below 26 . It has, bowever, been considerably higher during the last three years when in addition to influenza and the high prices, Khulna suffered from a good deal of sickness after the cyclone of 1919 and to some extent from failure of crops owing to salt-water inundation. During the decade births exceeded deaths
 the population of 1911. The figures printed in the margin show to how great an extent the progress of the population of Khulna is due to natural growth rather than to migration. The number of immigrants fell between 1901 and 1911 and though it has risen again during the last decade, it is still less than 20 years ago and is only 4.2 per cent. of the whole population. The excess of immigrants over emigrants is no more than some 22,000 . The development which is going on in Khulna is in fact carried out mainly by Khulna people, just as that in Bakarganj is carried out by Bakarganj people. In both districts there is room for development and more than one writer has alluded to the waste spaces in these two districts as available to the surplus population of Bengal. But in point of fact the population of the rest of Bengal makes little or no attempt to use them. Only those born close to the Sundarhans seem to have any wish to go into them. They are not at present a safety valve for Bengal against the increasing pressure of its population, or if they $9, \mathrm{re}$, the pressure has not yet become great enough to lift the spring.

## North Bengal.

51. In Northern Bengal, as in Central Bengal, changes in the density
 of population from place to place are slow, and this characteristic is the more obvious in Northern Bengal since rural conditions are there undisturbed by the appearance of organized industry. Rajshahi Division is far separated from the region of delta building, and but for the Tista no important river traverses it: There has of course been agricultural expansion, but apart from its effect, the country must have been physiographically much as it is now, when a great part of the Lower Delta in Eastern Bengal had not yet emerged from the sea. .The population is correspondingly unprogressive. The north is sparsely populated and still in process of development. In the southwest there is an outcrop of the "Old Alluvium" which, as elsewhere, can only support a comparatively low density of population.: The greatest density is along the banks of the Jamuna river which forms ths eastern boundary of the Division. It is a new river, a course into which the main stream of the Brahmaputra has found its way within the last century and a half, deserting its old bed through Mymensingh. The change was by no means catastrophic nor is it an isolated instance of such a change within the same period, for since Major Rennel's survey of the rivers of Bengal between 1764 and 1775 the main stream of the Ganges has deserted its old independent course through Faridpur and Bakarganj to the sea, and joined the Meghna 70 miles inland. Because the Jamuna is a new active river, the lands washed by it rather take the character of the lands in the Lower Delta and the population on its banks approaches in density that of the Eastern Bengal districts. The region of high density along its banks is continued up the course of the Tista through Rangpur district, cutting through the central portion of Northern Bengal and leaving less densely peopled tracts with many wide marshy depressions on either side. Before the Jamuna cut through it, a wide belt of marsh extended from Rajshahi through Pabna into Dacca district. The Jamuna raised much of it, while the Barel river, the only instance of a distributary of the Ganges northwards, has in the same period done much to obliterate the great Challan Bil.

The changes of population in Northern Bengal as a whole and alm, in
 individual localities since 1872 have also been characterized by moderation. In the decade 1911.21 there has been rapid increase ouly in parts of the least developed north; moderate increase centred in the north-west of Bogra and effecting adjoining parts of Rajshahi, Dinajpur and Rangpur; and moderate decrease in a belt running from the middle of Rajshahi to the southeast corner of Pabna, where the activity of the Ganges in eroring much old land from its north bank is a contributary cause, and upon the outcrop of the "Old Alluvium' 'inMalda, and Dinajpur and its vicinity. Rapid decrease has appeared in the centre of Malda.
52. Rajshahi district.-The "Old Alluvium" appears in the western
 part of Rajshahi in what is called the Barind. The formation represents a further stage of disintegration than that which can properly be designated laterite, but the surface soil contains much the same constitutents in much the same proportions as the soil of the uplands in Bankura and cannot support a high density of population. Some signs of the same formation appear again under Nandigram police-station in the northern extremity of Natore subdivision, and over this formation, in Godagari, Tanor, Naimatpur and again in Nandigram the density is below 400 persons per square mile. The district is badly
drained. A net work of moribund streams no longer continues to do. its work efficiently. One river the Barel, which has already been mentioned is an exception and is a live river, but. it pours water from the Ganges into the lower country instead of assisting the drainage, and it and the Jamuna further east, by filling the lower end of the Challan Bil with silt, are largely responsible for the decadence of the original drainage system. The centre and east of the district are characterised by a series of marshes, and there are tracts of high lands too high to produce a good: winter crop interspersed among them and lying along the southern boundary close to the Ganges. Puthia is the residence of the old family of great landlords among whom Rani Bhawani who lived in the days of early English rule in Bengal is famous, and Puthia and Nator were formerly centres of density of population. Traces remained at the time of the first census when the density in Puthia was 1,022 persons to the square mile and in. Charghat 932, densities higher than were found anywhere else in Northern Bengal, but the unhealthy character of the country has now obliterated them and reduced the average densitv to below 600 . A much heavier population is now found further north than Púthia, for Bagmara, Mohanpur, Nandanali, Naogaon and Badalgachhi all have nearly 800 or over 800 persons per square mile. Rampur-Boalia, the headquarters of the district, is an important old town but suffers from bad communications. No railway approaches it and the Ganges in the dry season is very difficult of navigation. The silk industry which used to be an important one in Rajshahi has now almost dsappeared.

The population of the district as a whole has been almost stationary since the first census in 1872 . In successive decades it has gained 1.9 per cent.r lost 0.8 per cent., and gained $\rfloor: 6$ per cent., $1 \cdot 4$ per cent., and in the last decade 0.6 per cent. The area surrounding Puthia and Nator has proved unhealtthy all through the period. Parts of it have Iost nearly half their population since 1872, those most affected lying just north of the Barel river ${ }^{3}$. the root cause of their decadence. The population is sodden with :malaria. Pruthia with Durgapur lost 6.5 per cent. in $1901-11$ and has now lost a further $7 \cdot 4$ per cent. Nator with Bagatipara lost $12: 5$ per cent. in 1901-11 and now another 9.1 per cent., and Burigaon with Gurudaspur 7.8 per cent. in 1901--11 and now 9.4 per cent., while Lalpur with.Walia south of the Barel lost 8.12 per cent. in 1901-11 and now another 6.3 per cent. There is, however, some promise for the future in the fact that the decrease in this area has on the whole been less in the last ten years than in the previous decade and that the recorded death-rate in 1918, 1919 and 1920 did not rise so high above the average for previous years as in the Province generally. A picture in striking contrast is presented by the changes which have taken place in Naogaon subdivision in the same period. The area drains down without difficulty into what remains of the great Challan Bil and is practically free from malaria, while round Naogaon itself the cultivators have the privilege of growing ganja and make great profit out of it, much more of which they have been able. to keep. out of the hands of middlemen since the development of a Co-operative Credit Society among them, which has proved the most successful of such ventures in the Province. In spite of the fact that Panchupur and Raninagar partake of some at least of the disadvantages of Nator, the subdivision as a whole gained $12 \cdot 1$ per cent. between 1891 and 1901, $8 \cdot 9$ per cent., between 1901 and 1911 and has now gained a further 6.5 per cent. In the Sadar subdivision gain in Godagari since 1901, $17 \cdot 1$ per cent. in one decade and 8.5 per cent. in thenext, and slight increases under the other thanas on the western side of the district have counteracted the loss around Puthia and maintained the total population of the subdivision almost exactly what it was twenty years ago.

Rajshahi recorded a high birth-rate throughout the decade compared with the average rate for Northern Bengal. It was over 40 per mille in 1912, 1913 and 1917 and dropped below 35 only in 1915 and 1919. The death-rate. at the beginning of the decade was not so high as in Malda and Dinajpur though much higher than, for example, in Bogra, Pabna and Rangpur, but it did not rise later in the same proportion as in North Bengal generally. It was below 35 in 1911 and 1913 and rose above 40 only in 1918 and 1919. The highest figure 41.5 was reached in the latter years. In the decade recorded
births exceeded recorded deaths by $11,124,75$ per cent. of the population of 1911, a proportion which is almost exactly the same as the corresponding proportion for the whole of Rajshahi division.

Inmigration to the district has steadily increased during the last 20 years.

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | The number of tmigrants

rose considerably between 1901 and 1911, but has decreased during the last ten years to something number of immigrants from Murshidabd. The decided increase in the little in the last half century and the migration fopulation has increased but sure on the soil is not heavy. Males exceeded females among the emigrants for they are largely composed of field labourers who have come to work, but females exceed males among the emigrants for in a large measure marriages across the border are responsible of what emigration has taken place.
53. Dinajpur district.-Dinajpur district lies partly on the "New Alluvium," and partly on the "Old" in the Barind to the south and southwest. The latter is gently undulating and as usual it is unable to support the same density of population as the plains.

There are some low hills also in the north-west along the Kulik river, but
 ween the district headquarters and the Rangpur boundary lies a triangular area under Dinajpur, Chirirband, Parbatipur and Khansama police-stations where the average isabout 600 .

There is reason to believe that the population of the district decreased during the earlier part of the last century and it gained less than 4 per cent. between 1872 and 1891. There were more substantial gains of 5.7 per cent. in 1891-1901 and 7.7 per cent. in 1901-11, reduced to 1.0 per cent. in the last decade. The growth of 50 yars has been by no means evenly distributed, for Thakurgaon subdivision has gained only 2.5 per cent. and in its southwestern corner and the adjoining part of the Sadar subdivision there has actually been a slight loss, while, on the other hand, Balurghat subdivision
gained 14.2 per cent. between 1891 and 1901 and 15.8 per cent. between 1901 and 1911, and the Barind area of the Sadar subdivision and that under its eastern police-stations gained almost as fast. The disabilities of the last decade have fallen more heavily on the less densely populated south-western half of the district than on the other. In it the great advances of the previous years have in the case of many police-stations been turned to loss, Gangarampur with Tapan 6.3 per cent., Balurghat with Kumarganj 2.9 per cent., Kaliaganj with Itahar 2.1 per cent., Banshihari with Kushmundi $5 \cdot 3$ per cent. and Raiganj with Hemtabad 2.6 per cent. The result is largely to be put down to the influenza epidemic. The population contains a large proportion of aborigines and these as elsewhere seem to have suffered more severely than other races. The plains of Dinajpur have lony been malarious and it has been malaria that has kept back Thakurgaon subdivision. In the last decade, however, Thakurgaon has not shown less increase than the district as a whole and the area adjoining Rangpur has this time proved the most progressive part of the district.

The birth-rate in Dinajpur during the last ten years has been almost as high as in Rajshahi and considerably above the average for Northern Bengal. It was returned as high as 40 per mille in 1917, and it dropped below 35 only once, in 1919. The death-rate followed that in Rajshahi closely but was rather higher at either end of the decade and rather lower in the middle. It was below 35 in 1913, 1914 and 1916 and rose above 40 only in 1918 and 1919, being returned as 43.7 in the latter year. During the decade recorded births exceeded recorded deaths by $888, ; 05$ per cent. of the population in 1911.

| Dinajorr. | 189. |  |  | 191!. <br> Both <br> Both |  | a large number of immi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Matas | Pamb | Toast |  |  | grants who have come in a steady stream from the Son- |
| Aetual popalin:lon <br>  |  |  |  |  |  | tal Parganas and their neighbourhood for many years. That the number of | recorded is considerably less than in 1911 is due to the fact that former settlers from the Sontal Parganas are dying off and leaving their native-born children to succeed them, while the stream of immigration is slowing down. The number of emigrants is slowly increasing but is still only one-sixth of the number of immigrants. The natural population has increased by $4 \cdot 1$ per cent. in 1911-21 against a decrease in the preceding decade, and shows a noticeable excess of males. As in the case of Rajshahi and for the same reason there is an excess of males among the immigrants and an excess of females among the emigrants.

54. Jalpaiguri district.-Jalpaiguri district had developed rapidly since tea was introduced in 1874 into the Western Duars, the strip between the Tista and Sankos rivers. It consists in the main of slightly undulating plains, but rises in the north to meet - the first slopes of the Himalayas in a series of plateaux varying in elevation from 500 to 2,000 feet

below 200 under Rajganj police-station. In the part of the Western Duars in the Sadar subdivision, the density is generally rather over 30 , but considerably lower in the Alipur Duar subdivision and under 200 below the hills on the East. The population of the district has increased by 125 per cent. since 1872. The increase has been mainly through immigration to the tea-gardens, for the district is very unhealthy, and has been mainly confined to the Western Duars. The area west of the Tista had an average density of $34!9$ persons to the square mile in 1872 and the average to-day is only $3 \dot{44}$. Between 1891 and 1901, it lost nearly 2 per cent. while it gained no more than 3 per cent. in 1901-11 and has lost it again in the last decade. The population of the Western Duars on the other hand was only 90,668 in 1872 and it is now 558,971 so that it has been multiplied six times. The increase during the last decade has been very much less than in the 20 years before as the marginal table
 indicates. The reason is that the tea industry has not been growing of late years as it did earlier. The birth-rate runs comparatively high but the district ${ }_{250}^{00}$ is very malarious and the death-rate also is very high and would be higher still but for the careful attention given by tea-garden managers to the health of their labour. The excess of recorded births over deaths was under 5,000 between 1901 and 1911 and in the last decade deaths exceeded births by 10,367 .

The district, especially the eastern part of it, has been peopled by immigrants within the last century. During the last 50 years the tea industry

| - Jalpajgari. |  | 1281. |  | Total. | 1911. | 1901. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | malon. | Pematas. |  | $\begin{gathered} \text { Both } \\ \text { sexes. } \end{gathered}$ | Both mexes. |
| Actuni popalation | $\cdots$ | ${ }^{303.397}$ | 432,972 | 934,969 | 20:630 | 746,3:6 |
| Immigranta -- | $\cdots$ | 143,5868 | 193,203 | 239.984 | 265.389 | 188.293 |
| Emarants | $\cdots$ | 18.531 <br> 370.413 | - $\begin{array}{r}13.697 \\ 393,101\end{array}$ | 28,179 | 20.939 | 17.426 |
| Natural popu'alion | .-- | 370.413 | 323,161 | 693.574 | 638.301 | 615.529 | has been largely responsible, drawing its labour mainly from the Chota Nagpur Plateau, but agriculturists have followed in the wake of the garden coolies and many from Cooch Behar have migrated northward who have never had any connection with tea. That the number returned as immigrants has increased by only 1.4 per cent. during the last decade against 41 per cent. in the previous one is due partly to the fact that during the war and afterwards recruitment of coolies for the tea-gardens was almost suspended and partly to the fact that the native-born children of immigrants are taking the places of their parents. That there has been an excess of deaths over births but an increase in the natural population is due to the fact that immigrants have subscribed largely to the number who have died. Though so many of the immigrants are labourers, the excess of males among them is not very great for the reason that women as well as men find employment upon the tea-gardens.

55. Darjeeling district.-The Siliguri subdivision of Darjeeling district lies in the plains. The rest stands in the Himalayas and reaches a level of $\mathbf{1 2 , 0 0 0}$ feet in the north-west corner of the district. Most of the district is however at a much lower level, for the ridge on which the headquarte:s station is built at a height of nearly 7,000 feet dominates all the rest of the


dirision. and round Darjeeling itself much profit is obtained by growing potatoes and vegetables which find their way to the Calcutta market.

Tea now employs a labour force of some 56,000 and there is no possibility of mach increase. The density of population is but 243 persons to the square mile, but this does not appear low when it is remembered that little more than one-third of the district is culturable. The most densely popalated parts are those where tea-gardens lie most closely together on the slopes and spurs of the central ridge which culminates in Senchal Hill under the police-stations of Darjeeling, Jore Bungalow, Sonada and Nagri. Karseong stands at a bluff to the south and below it tea-gardens are closely packed in the Terai, giving to Pankhabari police-station a comparatively high densitr. The northern vallers of the Sadar subdivision under Pulbazar, the Tista Taller under Rangli Rangliot and Kalimpong, and the eastern forest area under Gorubathan are sparsely populated. while the high western ridge under Sukhiapokri is scarcely inhabited at all. Siliguri subdivision is in character much like the adjoining parts of Jalpaiguri district to which it formerly belonged, and with the lower parts of Kurseong subdivision is proverbially malarious. It carries a density of population about 300 to the square mile. only a little less than that of Jalpaiguri. Its population consists mainly of Bengalis, while the bulk of the population of the rest of the district is of quite a different trpe. Its races are very numerons; the indigenons Lepchas, numerous Nepalese tribes each quite distinct from the others and many speaking their own languages although able also to use Khas, the linain fmnea of the hills, the Bhutias from Bhatan. Sikkim and the Chumbi ralley of Thibet, and the up-country plains-men of India who form the trading communitr, make a very heterogeneons population.

When what is now the Sadar and Kurseong subdivisions first came under British protection in 1850. Kalimpong still being part of Bhutan, it contained. according to Hooker. hardly more than a hondred inhabitants for it had been torn by continual faction between the Bhatanese, the Thibetans and the Nepalese. But-immediately natives of surrounding countries poured in both to settle and to be employed in the tea industry. The population increased 64 per cent. between 1572 and 1551 and 43 per cent. between 1851 and 1591, but the increase had fallen to $11 ; 5$ per cent. in 1891-1901 and 66 per cent. in 1901-11. During the last decade the increase has been about the same 6.5 per cent., Kalimpong having maintained its progress and put on 214 per cent. while the decrease of 8.8 per cent. in Kurseong subdivision in 1901-11 has been reduced to $2 \cdot 1$ per cent. and Siliguri has gained 4.9 per cent. against the 2.5 per cent. of the previons decade.

The influenza epidemic caused great mortality in the hills and hang atout longer than in the plains. probably because the greater distance and the less frequent intercourse between one collection of homesteads and the next caused infection to spread less rapidly. There were also local epidemics of relapsing ferer and the recorded death-rate for the district rose as high as 53-1 per mille in 1918, was maintained at $48 \cdot 4$ in 1919 and dropped only to 43.9 in 1920. So high a death-rate as $53-1$ per mille was only tonched br two other districts in the Province during the decade. Murshidabad and Nadia which in 1918 had death-rates of $\mathbf{5 8 . 3}$ and 53.3 . Both of these had lower
death-rates than Darjeeling in 1919 and in 1920. During the derale, deaths exceeded births by more than 21,000 .

The hills have been peopled by immigrants since 1850 and migration since the same date is responsible for much of the population of Siliguri.

| Dacjomilna. |  | 1281. |  |  | 1911. | 1901. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Ystm. | Pema'or. | Total. | cresth | ${ }_{\text {cosen }}^{\text {Buth }}$ |
| Aetual mopulation |  | 149.044 | 133,854 | 282,748 | 985,650 | 213.117 |
| Immigrains ... | ... | 62.715 | 19,137 | ${ }^{1110.342}$ | 117.1:8 | 131,231 |
| Nntural ppoutation | ... | 8,630 83,409 | 90.210 | 183,639 | 159,604 | 130,429 |
|  |  |  |  |  |  |  | Those who had been born outside the district numbered half the population in 1901, but as the first settlers have been succeeded by their children the proportion has steadily diminished since. There is still a steady stream of migration across the Nepal frontier and more than half of the immigrants still come from Nepal, though the actual number born there has decreased by $15 \cdot 7$ per cent. since 1911. Tea cultivation is not spreading as it did 20 years back, for most of the land which is suitable has now been taken up, but the labour force requires steady recruitment. Nepalese pass through Darjeeling to go into Jalpaiguri, but the number of Darjeeling-born who go down to the tea-gardens in the Duars is comparatively small. Inmigrants from Purnea into Siliguri subdivision are numerous and there are numbers in the district from other parts of Bihar and the United Provinces, but Bengali immigrants are few. The number of emigrants has increased only slightly in the last decade compared with the increase between 1901 and 1911. The Bengalis dislike and fear the hill people and the latter do not willingly go out of sight of the hills, nor try to mix with people of the plains. A few only of those returned as emigrants are soldiers, for recruitment for Gurkha regiments at Darjeeling is mainly among men who have come straight from Nepal. Considerable numbers are no doubt the children of plains-men who came to Darjeeling engaged in trade.

56. Rangpur district.-Rangpur district is smaller in area by 450 square miles than Dinajpur, but its population is very much larger than that of any other district in North Bengal. The density of population is generally well over 600 to the square mile. In all the north-western part of the dis-


Saidpur police-station. The population of Rangpur declined at each census until 1901, when an increase of 4.3 per cent. brought the number of its inhabitants back to what it had been in 1872. In the next decade there was a substantial advance of 10.7 per cent. and the increase from 1911 to 1921 has been $5 \cdot 1$ per cent. It seemed up till 25 years ago as if the population was too heavy for productivity of the soil to maintain. The change has been brought about partly by improved railway communications which have opened up the market for the disposal of agricultural produce, and partly by immigration from Pabna, Bogra and Mymensingh to the new formations along the Jamuna, but there seems to have been in addition a decided improvement in the general health of the district and a partial disappearance of malaria. The district felt the earthquake of 1897 very severely and it is surmised that by a slight change of levels from place to place a distinct improvement in the drainage was brought about. Whether this was so or not, the fact is apparent that a remarkable change in the character of the population occurred about that time. From stagnation the population has become decidedly progressive. The increase in the last decade has been most marked in Gaibandha subdivision, but everywhere there has been some advance. The recorded birth-rate did not fall towards the end of the decade to the same extent as in most parts of the Province, nor did the district suffer severely from the influenza epidemic, and as a result there has been an excess of births over deaths recorded during the decade no less than 88,342 .

The number of immigrants to Rangpur increased very much between 1901 and 1911, when there was a great influx of Muhammadans from Pabna
 nnd Mymensingh to new formations in the Jamuna river. As in other parts, the people who live on the chars formed in the rivers are in some measure a race apart, and the new formations on the Rangpur side of the river were colonized not by the people of the adjoining mainland but' by people whose land on the other side of the river and further down had been washed away. The influx from Bogra and Pabna has, in a large measure, decreased of late years, but it still continues, while that from Mymensingh has very decidedly increased and is largely responsible for the increase in population of Gaibandha subdivision. Rangpur has wide trade connections in tobacco, etc., and more immigrants from the United Provinces and Rajputana than other North Bengal districts. A considerable number of Sontals, too, have migrated as far and are to be found under Badarganj and adjoining police-statons. The number of emigrants is increasing, although only at much the same rate as the total population. Among the immigrants, males exceeded females by 2 to 1 , but even so the natural population shows a large excess of males.
57. Bogra district.-The Karatoya river traverses Bogra from north to
 south and divides it into two unequal portions with distinct characteristics. The eastern portion is covered' with the alluvium of the lower Brahmaputra valley, while the western and larger portion rises slightly and shows signs of an outcrop of the " Old Alluvium." Towards the west the drainage, which is generally satisfactory although there are wide marshes in parts, passes towards the south into the Challan Bil instead of into the Karatoya and the Jamuna. The rich soil on the eastern side of the district supports a large density of population well over 800 to the square mile and a similar high density is found about Adamdighi in the
west adjoining the progressive Naogaon subdivision of Rajshahi. A density below 600 characterises the watershed passing through Panchabibi, Khetlal, Dhupchanchia, Kahalu, and the south-west corner of the area under Bogra police-station to Sherpur. Bogra is decidedly the most healthy district in North Bengal and its population has increased by no less than 63.5 per cent. since the first census in 1872. The increase was in greater proportion in each successive decade until the last $7 ; 0$ per cent. in $187 \%-86,11 \cdot 3$ per cent in 1881-91, 11.8 per cent. in 1891-1901 and 15.2 per cent in 1901-11, and has been evenly distributed over the whole district. In the last decade the increase has been 6.6 per cent, which is higher than in any North Bengal district. It has been greatest in the north-west corner, but otherwise fairly evenly distributed. For two police-stations Dhunot and Dhupchanchia, the figures show a decrease, but there is some doubt as to whether the population of Dhunot and Sherpur was separated in 1911 along the line of the present boundary and that of Dhupchanchia was correctly separated from that of group comprising Bogra, Kahalu, Gabtali and Adamdighi for which boundaries of police jurisdiction have cut across the boundaries of the old revenue thanas.

Bogra is remarkable for the great proportion of Muhammadans in the population, a proportion greater even than in any of the Eastern Bengal districts. Mubammadans are generally found to show.greater fecundity than Hindus in Bengal and the progress of Bogra is to be put down in part to this high proportion. The district lost somewhat in the first influenza outbreak, but almost escaped the mortality from this cause after the end of 1918. Recorded births in the decade exceeded deaths by 36,861 .
 north and from Bihar and the United Provinces. The number of emigrants has continued to increase and is now double the figure for 1901. This is in the main due to the opening of a railway through the district. The people have not gone in numbers to Pabna but a number have crossed into Naogaon subdivision of Rajshahi and into Rangpur. Very few go to the neighbourhood of Calcutta.
58. Pabna district.-A succession of marshes which contain some water
all the year round extends

| Pabac. | $\begin{aligned} & \text { Population, } \\ & 1921 . \end{aligned}$ | Denslty per cquare mile. | Varintion per cent. 1811-91 |
| :---: | :---: | :---: | :---: |
| DISTRIET TOTAL ... ... | 1,389,484 | 828 | 2.7 |
| Sadar achbifvisfon | 556,834 | 706 | $7 \cdot 1$ |
| Pabna pollco-station $\quad \cdots \quad \cdots$ | 104.949 <br> 30,917 <br> 0.3 | 801 | , |
|  | 30, 302 | 744 |  |
|  | 75,583 | 830 819 | - 3.8 |
|  | \% 74.642 | ${ }^{807}$ | $0 \cdot 9$ |
|  | 78.037 83,609 | 1,1989 | - 11.7 |
| SIralgan sebilivialon -- | 882,880 | 937 | $+0.4$ |
| Shazadpur pollcostatiod ... | $\underset{\substack{169.345 \\ 34.859}}{ }$ | 1,145 1,371 | ) |
|  | 74.209 | 1.158 |  |
|  | 149,996 | 730 1.076 | )-0.5 |
|  | 13,048 157,063 | 1,1676 1,163 |  |
| Sirajgzoj Kazipur In | ${ }^{188,115}$ | $\mathrm{MH}^{\text {R4 }}$ |  |
|  | 81.058 33,880 | 814 | $\}+-8.1$ | south-eastward from the vicinity of Naogaon in Rajshahi into the centre of Pabna. There is, it is true, very little drainage from one to another, but the central portion of Pabna lies lower than Nator subdivision and such drainage as there is, is to the south-east into this waterlogged region. In Taras, Atgharia, Chatmohar, Faridpur and Santhia, which lie so low, there is a density of population very low compared with that under the police-stations along the Jamuna river, the eastern boundary of the district, and in the corner formed by the junction of the Jamuna and the Padma. The bad drainage of the interior has made Pabna an unhealthy district. The population increased

8.3 per cent. between 1872 and 1881, but the increase was reduced to 3.9 in 1881-91, 4.3 in 1891-1901 and 0.5 in 1901-11 and in the past decade there has been a decrease of $2 \cdot 7$ per cent. Sirajganj subdivision gained $9 \cdot 4$ per cent in 1891-1901 while the Sadar subdivision lost $2 \cdot 1$ per cent. The position was reversed in 1901-11 when the Sadar subdivision gained $2 \cdot 4$ per cent. and Sirajganj lost 0.6 per cent. During the past decade the relative position of the two has been reversed a second time. Sirajganj has gained 0.4 per cent. while the Sadar subdivision has lost $7 \cdot 1$ per cent. The greatest loss has been in the south-east corner, in the angle between the Jamuna and the Ganges. Malaria is the chief cause of mortality, for Pabna did not suffer, badly from the influenza epidemic. The birth-rate has been very low since 1915 and deaths recorded during the decade exceeded births by 18,466.

Pabna is the only district in North Bengal which has more emigrants than
 immigzants. Both increased in number between 1901 and 1911, emigrants faster than immigrants. During the past decade the number of immigrants has decreased and is now below the figure for 1901 while the number of emigrants has continued somewhat to increase. Migration to and from the neighbouring districts. Mymensingh, Faridpur and Nadia; depends mainly on the action of the two big rivers cutting one of the banks or the other and building land on the opposite side. The char population is used to shifting and moves as the river dictates. In this respect, Pabna district is now suffering more than its neighbours, but continues to receive a considerable number of immigrants from Nadia. Pabna people have gone north in considerable numbers to the eastern' part of Rangpur and more of them find their way to the neighbourhood of Calcutta than go there from other districts in North Bengal. The migration figures point to an increase of pressure of the population on the soil in spite of the fact that the total population of the district has grown little in the last 50 years. The increased pressure is partly due, no doubt, to reduction of area by diluvium. The great excess of males over females among the emigrants is eloquent of the fact that much more of the emigration is due to men having been driven to go elsewhere to seek a livelihood than to marriages and short moves across the border.
59. Maida district.-Malda consists of two distinct tracts. West of the
 Mahananda river is recent alluvium, while east of it is the Barind. The latter is only able to support a population with a density below 400 persons to the square mile. In the alluvial tract, the density except in the extreme north-west is over 600 and rises close to the - 14.8 Ganges to 800 : The district, especially the central part with its ruins of early Muhammadan civiization, is malarious, but the population has increased 45.8 per cent. since 1872. The greatest gains were 14.5 per cent. in 1881-91 and 13:9 per cent. in 1901-11. Part of these gains was due to immigration of Muhammadans from Murshidabad to the alluvial tract along the Ganges, and of the Sontals and other aborigines from the Rajmahal Hills, which lie only just across the Ganges, to the Barind. In the past decade the district has lost 1.8 per cent., a serious set-back after the rapid advance in the decade before. The cause it to be put down mainly to malaria which has been bad all over the district, but particularly so round the headquarters station where, on more than one occasion, it has assumed epidemic form.

Maida in the decade 1901-11 had a phenomenally high birth-rate. This remained higher than in other parts of the Province almost throughout the decade, but the death-rate for the first three years 1911-13 was higher than in any other district. It remained at the same level for the remander of the decade, but was surpassed in the districts of Western and Central Bengal which suffered such severe mortality in the latter half of it. Deaths recorded exceeded births in the decade by 8,031 .

The natural population which increased by 14.3 per cent. during the
 decade 1901 to 1911 has decreased during the last ten years by 0.8 per cent. The number of immigrants has decreased partly through the native-born children of settlers succeeding their fathers and partly to aboriginal immigrants from the Sontal Parganas having moved on to Rajshahi and Dinajpur and even as far as into the Nepal Terai, attracted by an offer of land at very low rates by the Nepal Durbar. Immigrants are mainly Sontals to the interior and west of the district and Muhammadans from Murshidabad to the alluvial lands along the Gianges. The number of emigrants has decidedly decreased, probably owing to the reduction of the population by disease at home. Emigrants have gone mostly to Dinajpur, Rajshahi and Murshidabad. Malda is remarkable in having a natural population in which females are considerably in excess of males.
60. Cooch Behar.-Although rivers as important as the Tista, the Jal——_ dhaka, the Torsa and the
 Raidhak cross Cooch Behar they give little assistance to the drainage of this lowlying tract of country. The rivers carry the drain-

Cooch Bohar polloe-statian
Cooch $\begin{aligned} & \text { Dinhak } \\ & \text { Mnthabb }\end{aligned}$
Mathabhans
Matiganj
Halflivari
Tufaugnaj
on either side of them at a level from which water cañot drain off into them except at the season of the year when they are at their lowest., This appears to be the explanation of the unhealthiness of the country and its slow development. The population is actually a little less than it was in 1881. The density is greater along the southern border than along the northern and shades off gradually from the one to the other. It is considerably higher than the density in the Western Duars to the north of it, but very much lower than in Ringpur to the south. The census of 1872 was taken by the Settlement Department over a period extending to 3 months, and the increase of $13 \cdot 2$ per cent. between 1872 and 1881 was probably not altogether a real one. The State lost 3.9 per cent. in 1881-91 and $2 \cdot 1$ per cent. in 1891-1901. It recovered somewhat during the next decade when there was an increase of 4.6 per cent. and there were signs of some relief from malaria During the last decade, the improvement showed signs of heing continued until the influenza epidemic took a heavy toll. Between. 1881 and 1901 Dinhata Cooch Behar itself and Mathabhanga seem to have been the most unhealthy parts. Latterly, Dinhata and Cooch Behar appear to have recovered somewhat and Mekilganj joined Mathabhanga. The main line of the Eastern Bengal Railway runs through Haldibari; where a quantity of jute is grown and between 1891 and 1901 this part of the State showed an increase of population of $9: 9$ per cent. when every other part was losing. During the nxet decade, the increase was reduced to 5.0 per cent. and in the last it was replaced by a loss of $2 \cdot 2$ per cent. Tufanganj in the north-east corner is the only area that has shown continued progress and even in it there was a slight loss in the decade 1891 to 1901, though it made up for it by an increase of $9: 1$ per cent. in 1901-11 and $3 \cdot 5$ per cent. in the last decade.

The number of immigrants to Cooch Behar which increased considerably
 between 1901 and 1911 has continued to increase during the last ten years through a new channel of migration from Mymensingh. The number of emigrants rose a little between 1901 and 1911, but during the last ten years has much decreased, especially the number. of emigiants to Jalpaiguri. The excess of immigrants over emigrants is more than 2$\}$ times as much as it was 20 year ago, indicating trat the State can well support a heavier population than it holds. The land revenue assesment is at a very much higher level than in British territory, but its weight does not apparently affect migration. Immigrants have come in large numbers from Rangpur and include a considerable number born in Jalpaiguri, for though the general direction of migration is northwards the people on the two sides of the border are closely related and intermarriages are frequent. There are few Sonthals in the State, but considerable numbers from United Provinces and many from the western parts of Bihar. . The great bulk of the emigrants has gone to Jalpaiguri and to adjoining parts of Goalpara in Assam. Males are in large excess in the natural population.

Eastern Bengal-Dacca Division.
61. Passing from the rest of the Province into Eastern Bengal, one sees
 no longer a rural population of; no very great density fighting what seems often to be a losing battle with economic forces and disease, but a teeming population which seems as it increases to succeed in getting ample support from the produce of the soil, to breed very freely; and to be comparatively free from the scourge of malaria. It is necessary to adopt a different schedule of shading to represent variations of density in diagram No. 28 for Dacca Division from that used in the corresponding maps given for Western, Central and Northern Bengal, and in Diagram No. 29, the map which shows, variations in population during the last decade, shading to represent a decrease hardly requires to be used. Statistics of Agriculture have been shown to indicate how it is possible that Eastern Bengal can support with apparent ease a density of population yery much greater than that in Western Bengal.

The contrast between the two in the matter of health seems to be connected with the fact that Eastern Bengal is a land of open drainage and active rivers while so much of the rest of the Province is characterised by a moribund river-system and obstructed drainage.
62. Dacca district.-In spite of the fact that over a quarter of Dacca district the density of population is below 500 to the square mile, the district has an average density of 1,148 . Even excluding the population of Dacca and Narainganj towns, the average density is 1,097 . The sparsely populat-
 wari, and until the "New Alluvium" is reached the density is not high. If Keraniganj, Nawabganj, Dohar, Damrai, most of which is New Alluvium, and Dacca City are excluded, the average density in the Sadar subdivision is 592 persons to the square mile. This is a great deal more than the "Old Alluvium' has been found to be able to support in Western and Northern Bengal. The greater rainfall in Dacca renders this possible; moreover there is no rock in the outcrop in Dacca as for instance in Midnapore and the soil retains its moisture better than the Old Alluvium of the Barind. Manikganj subdivision lies high and partakes somewhat of the character of Northern Bengal. It is less healthy than the rest of the district and the density of popilation is much lower than elsewhere on the New. Alluvium. In the south and east of the district the density of population is higher than in any other rural area in the world. Especially under Munshiganj, Tangibari, Sirajdikhan. Srinagar, Lohaganj and Dohar police-stations the agricultural pnpulation is swelled by the presence of numerous families of the higher castes. The bhadralok of Bikranmpur supplies a large proportion of the professional classes and of the clerks and landlords agents throughout Eastern Bengal and sends its most intelligent young men not only to other parts of the Province, but in considerable numbers all over Northern India. The ancestral property remains in the family and the less successful of the co-sharers commonly remain in the family homestead ostensibly in charge of the property, but in fact finding very little employment. while remittances sent nome by those who have gone out into the world to seek their fortunes help materially to support the family. The figures obtained from agricultural
statistics pointed to a heavy pressure of the population on the soil in Dacca district, but they did not of course take account of the additional support afforded in the most densely populated part of the district by money earned elsewhere and sent home to Bikrampur. The higher castes are numerous also in the southern part of Narayanganj subdivisions, and send recruits to earn their living outside the district. Even so the agricultural population in the south-eastern part of the district is considerably more dense than is found on land of no less remarkable fertility in Noakhali, Bakarganj, the parts of - Tippera near the Meghua and the eastern half of Faridpur.

Dacca district has gained 75.6 per cent. since. 1872, the proportionate increases in suc-
 cessive decades having been 14.4 per cent., 14.6 per cent., $10 \cdot 6$ per cent. 11.9 per cent. and 8.3 per cent. The possibility of so great an increase has been largely in the extension of the cultivation of jute, and Narayanganj subdivision where jute is most extensively grown has shown the greatest increase in population, $22 \cdot 0$ per cent. in 1881-91, 11 - 4 per cent. in 1891-1901, 18.0 per cent. in 1901-11 and 11.8 per cent. in the last decade. The proportionate increase has been as great on the Old Alluvitum in the Sadar subdivision where there has been much extension of cultivation, but it has not been so great on the New Alluvium. Munshiganj subdivision has gained steadily in spite of the phenomenally high density there. It gained 16.7 per cent. in 1881-91, 9.9 per cent. in 1891-1901, $9 \cdot 3$ per cent. in 1901-11 and $10 \cdot 3$ per cent. in the last decade. The greater increase in 1911-21 than in 1901-11 is very remarkable and seems to indicate that the irtelligence of the Bikrampuri enables him to struggle successfully against the economic pressure which has been felt so severely of late years by the middle class in the Province as a whole. Only Manikganj subdivision and the adjoining Nawabganj police-station in the Sadar subdivision have not maintained the same reputation for steady progress as the rest of the district. Manikganj subdivision at the beginning of the century showed signs of decaaence, suffered very much from malaria, and the increase in the population during the decade 1901-11 fell to $1 \cdot 3$ per cent. In the previous 20 years it had only been 9 per cent., but no part had shown a loss such as Harirampur showed in 1901-11, 5•8 per cent. During the last decade, there has been a considerable improvement dating from 1912 when floods seem to
have washed out some of the malaria. Even Harirampur has gained 0.9 per cent. and the subdivision as a whole 4.0 per cent.

The recorded birth-rate, though not as high in the early part of the decade às in Faridpur, Bakarganj, Noakhali and Ćhittagong, or in Murshidabad, Nadia, Birbhum or Bankura or in parts of Northern Bengal, was up to the average for the Province. It fell somewhat in 1914 and 1915 and again in 1919 and 1920, but was never below 30 per mille per annum. The death-rate was only $22 ; 8$ per mille in 1911, but rose till it reached $33 \cdot 2$ in 1914 . It was down again to $21 \cdot 5$ in 1916 and 1017 , rose to $33 \cdot 2$ in 1018, but was down again to 27.8 in 1919. The influenza epidemic caused considerable mortality in 1918, but later Dacca did not suffer severely. Recorded births during the decade exceeded deaths by $175,898,5 \cdot 94$ per cent. of the population of 1911.

Immigrants to Dacca increased considerably between 1901 and 1911, but during the last decade they bave somewhat decreased. There has been à

singh are slightly more numerous than males. This is not at all the case in respect of emigrants from Dacca to Mymensingh or immigrants to Dacca from Tippera and Faridpur. The balance of migration between Dacca, Mymensingh, Tippera, Faridpur and Pabna is adverse to Dacca in each case though the balance in the direction of Mymensingh is more even than in other direntions. Immigrants from beyond Bengal are well under 2 per cent. of the population and more than a third of them are found in Dacca City. Emigrants from Dacca are found all over Bengal in increasing numbers. That the number found in Calcutta in. 1911 was only about the same as in 1901 may be put down to the effect of the partition of Bengal. Since the Province has become one again the number has greatly increased. The steady growth in the number of emigrants and the fact that the number of immigrants has begun to decrease are undoubtedly to be read as indications that the pressure of the population on the soil is very heavy and is being increasingly felt.
63. Mymensingh district.-The Madhupur jungle on the outcrop of the Did Alluvium, which appears in Dacca district stretching northwards from Dacca City to the district boundary, continues north into Mymensingh district bending slightly towards the west as it crosses the houndary. That only three of the police-stations through whose jurisdiction it runs show a density

| Yymenulagb. |  | ponalt per | Pariston prat square mile, is due to the most 101-21. fact that the others include |
| :---: | :---: | :---: | :---: |
| omathiot total ... ... | 4,837,730 | 370 | some of the New as well as some of the Old Alluvium. |
| matpur subdiviolon | 885,096 | 727 | e density of population |
|  |  |  | the outcrop of the latter |
|  |  |  | is at the same level as in |
| Nokla ... |  |  | 2 Dacca district. The out- |
| mint | 为 |  | crop forms a watershed. |
| arrand .. |  |  | though it rises at its highest only a few feet |
| T | 085,583 | 818 | above the general level of |
| h.pput |  |  | the district. The Jamuna |
|  |  |  | and the old course of the |
| Kintall |  |  | Brahmaputra divide in |
|  |  | ciel | north-west corner |



Along the courses of .both as they proceed there is an increasing density of population which from the latitude of Mymensingh town southwards on both rivers is above 1,000 to the square mile. On the course of the old Brahmaputra in the south-east of the district a density more than 1,200 is reached under Karimganj, Hossainpur, • Kishorganj, Bhairab Bazár and Kuliarchar. East of the area of this high density there is an abrupt change in density. There wide stretches consist of huoas, a word which, in the slipshot tongue of those parts, is nothing more than a corruption of the Bengali Sagar, Sea. For four months of the year these are the grazing grounds for large herds of of cattle; for the remaining eight they are under water. The density of population in this low-lying tract falls as low as 269 to the square mile under Khaliajuri police-station. The northern part of the district stretches along the foot of the Garo Hills and all along the border rapid development is taking place. It is still far from complete and the density of population shades off towards the foot of the hills. Under the border policestations, it is well below 600 to the square mile. In the north-eastern extremity of the district under Kalamakanda-police-station it is only 364.

Mymensingh district has developed very rapidly. Its population has increasel by 105.4 per cent. since the first census in 1872, 29.9 per cent. in 1872-81, $13 \cdot 6$ per cent. in 1881-91, $12 \cdot 7$ per cent. in $1891-1901,15 \cdot 5$ per cent. in 1901-11 and 6.9 per cent. in the last decade. Fifty years ago, its average density of population was on a level with that of Bankura in Western Bengal and Malda aind Dinajpur in Northern Bengal. Now its density is double that in Bankura and nearly double that in Malda and Dinajpur, and with an average of $\mathbf{7 7 6}$ persons to the square mile it takes its place with the other Eastern Bengal districts in the most densely populated part of the Province. Progress has been steady and consistent all over the district. Not one of the subdivisions in any of the five decades between successive censuses has snown a decrease, and the record shows only one thana, Durgapur, which formerly included also Kalamakanda, which showed such a decrease $0: 6$ per cent. in 1881-91 and 1.2 per cent. again in 1891-1901. It has made up since with an increase of $11 \cdot 1$ per cent. in 1901-11 and $20 \cdot 7$ percent. in the last decade. The population has grown most rapidly in Jamalpur subdivision, $16 \cdot 2$ per cent., $16 \cdot 1$ per cent., $20 \cdot 2$ per cent. and $8 \cdot 8$ per cent. in the last four decades. Wholesale changes of jurisdiction for which an adjustment of the former census figures was not carried through somewhat spoil the record of variations of population during the last decade. Some 270 square miles of the Madhupur jungle area have been separated from the thanas of the Sadar subdivision and added to Tangail. The police jurisdiction in Tangail has been redistributed with little reference to the jurisdiction of the old thanas and as a result it is only possible to record that the population now covered by police-stations of the Tangail subdivision and those of the Sadar 'subdivision which were affected by the transfer, together, has increased by 4.0 per cent. In the other subdivisions also changes in police jurisdiction have been carried out with little reference to the jurisdiction of
revenue thanas, and this is the reason that it has been necessary to use so many brackets in the marginal table.

The recorded birth-rate in Mymensingh throughout the decade has been well below the average for Eastern Bengal. Only twice did the figure for Tippera prove lower than that for Mymensingh, and the figure for Mymensingh has every year been lower than that for any other district in the Hacea or Chittagong Division. In common with that for the Eastern Bengal districts the birth-rate for Mymensingh was less affected either by the first economic effects of the war in 1915 and 1918 or by the troubles of the last three years of the decade than the birth-rate for Western and Central Bengal. The recorded death-rate has also been well below the average for Eastern Bengal, and far below that for other parts of the Province. In six years out of the ten it has been below 22 per mille and the highest rates reached have been 29.0 in $1915,31.2$ in 1918 and 27.7 in 1919. During the decade recorded births exceeded recorded deaths by $309,207,6 \cdot 83$ per cent. of the population of 1911 , a proportion only surpassed in Tippera and Noakhali.

A great change has come over Mymensingh of recent years in respect of migration to and from the district. In 1901, immigrants exceeded emigrants by a considerable number. In 1911, the numbers of both had

increased by 10.2 per cent. during the last decade. This is considerably less than the 16.2 per cent. of the decade before, but the contrast is much less noticeable than that between the 6.9 per cent. increase in the actual population since 1911 and, the increase of $15 \cdot 2$ per cent. in 1901-1911. The natural increase of the Mymensingh people is still greater than that of the people of every part of the plains of Bengal except Tippera and Noakhali, but they seem suddenly to have felt the increase of pressure on thesoil. That the tendencies of migration should have turned so abruptly in response to this feeling is remarkable. The experience of other districts seems to have been that such tendencies change very slowly, that it is long before pressure of population begins to be adjusted by migration. The development of Mymensingh has, however, proceeded very fast, and the fact that. many families of agriculturists had not been rooted to the soil for generations. or even for many years may have rendered the population more mobile than. is usually found to be the case. This explanation receives some support from the large proportion of females among the emigrants. It might have been expected that the effect of increased pressure of the population on the soil would have driven males first to seek their livelihood elsewhere, but theemigration from Mymensingh must largely have been emigration of the wholefamilies. Those who have emigrated have not turned towards Dacca, Tippera, Pabna or Bogra for the number of emigrants to each of these from Mymensingh is less than it was in 1911. The number who have gone toRangpur has slightly increased, and 9,797 have gone to Cooch Behar against only 1,559 in 1911, but the greatest increase of emigration has been in thedirection of Assam. No less than 197,661 persons were returned in Assam as having been born in Mymensingh compared with but 58,368 ten years ago. The exodus has been mainly in the direction of the Assam Valley for the number of emigrants from Mymensingh to Sylhet has increased in the decade only from 17,216 to 19,144 and the number to the Garo Hills only from 4,249 to 5,521 . In contrast the number found in Goalpara who had been born in Mymensingh has risen from 34,171 to 77,932.
64. Faridpur District.-The north-western extremity of the great: length of Faridpur district partakes of much of the character of the
adjoining parts of Nadia and Jessore than of Eastern Bengal and is no more

| Peridgor. | Popsinetion. 831. | Denuity per -quare mile. | $\begin{aligned} & \text { Tariatioo par } \\ & \text { cetmin } 1 y 11-21 . \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| DISTRIET TOTAL - | 440,858 | 848 | +488 |
| Combare ambifutaton! | 828,219 | 728 | $1 \cdot 8$ |
| (ionlated poikemation - | 74.248 <br> 4.298 <br> 1.48 | ${ }_{6}^{639}$ | - 6.3 |
|  | Bi. 4.68 | -07 | + 7 |
|  | 120,8\% | 761 |  |
| Sadar auhilviolow | 821,801 | 818 | $\pm 78$ |
| Firdpar polvoseation ... -- | ${ }^{91.515}$ | 344 682 | $+100$ |
| Onar mbendican $\quad=-$ | 38,973 | ${ }_{7} 630$ | + 78 |
|  | ce. 8.263 | 8.13 884 | + 8 |
| Madhutbali" $\quad-\cdots$ - $-\cdots$ | 88.165 43.659 | $\begin{array}{r}685 \\ \hline 1.358\end{array}$ | -8.1 |
|  | 80,857 | ${ }^{1.386}$ | + 8.1 |
| comalgas ambitriaton' | 478,088 | 858 | + 5-7 |
| Makruipar pollcentation ... | 121.578 | 987 | + 83 |
| Easlanil $\quad \cdots \quad \cdots \quad=$ |  | ${ }_{8 i 3} 0$ | $\begin{array}{r}+8.9 \\ + \\ \hline\end{array}$ |
|  | 107,162 | 718 | - |
| Wadarlomp enbelvialon | 825,890 | 1,288 | $+5.1$ |
| Madiripar polloendetion m. | 143.937 | 1.381 | $)+4$ |
|  | \%9,268 |  | +44 |
|  | 99,988 |  |  |
|  | 71,079 98.781 |  | + ${ }^{71}$ |
| Bhadartad $\quad=\quad=$ |  |  |  |
|  |  |  | $\}+2 \cdot s$ |
|  | 6, 48,402 |  |  | progressive than they. The south western part Gopalganj subdivision

lies. very low, but the people are the same hardy race that inhabit the swamps across the border in Bakarganj district and the country has been greatly developed of recent years. Madaripur subdivision and the adjoining part of the Sadar subdivision have the character of the north of Bakarganj and the south-east of Dacca and are typical of the richness of Eastern Bengal. Goalundo subdivision is somewhat less densely populated than the adjoining Kushtia subdivision in Nadia and a like density is found over the Sadar - subdivision except in Bhanga and Sadarpur adjoining Madaripur subdivision. The
density in Kotalipara, the part of Gopalganj subdivision which lies lowest, is over 700, a high density for a population which must needs lead almost an amphibious life. The number per square mile approaches the Munshiganj figure in the dentre of Madaripur subdivision, where, as in Bikrampur, high caste families are numerous, but decreases considerably as the Padma and the Meghna rivers are reached. This is due to the fact that for more than a century these rivers have tended to move north and east washing land away from their left banks and building new formations on the Faridpur side. Though these are cultivated almost as soon as they show above water, it is years before they are covered as densely with homesteads as the old land.

The population of Faridpur district has grown $44 \cdot 2$ per cent. since 1872, 8.5 per cent., 9.9 per cent., 6.2 per cent., $8: 6$ per cent. and 4.8 per cent. in successive decades. Its growth has not been up to the Eastern Bengal standard mainly because the western part of the district has not subscribed to it. The Goalundo subdivision gained $9 \cdot 0$ per cent. in 1881-91, but it lost $9 \cdot 2$ per cent. during the next decade; its population was stationary from 1901 to 1911 and in 1911-21, it has lost 1.3 per cent. The figures for Bhusna with Madhukhali in the Sadar subdivision showed successive losses of 4.9 per cent., 6.5 per cent. and 6.2 per cent. between 1881 and 1911, although during the past decade there has been some increase. Progress has been steady in the rest of the Sadar subdivision and round the headquarters staton there has been an unexpected increase during the last ten years. The population of Gopalganj subdivision has grown fast, 16 per vent. in 1881-91, 15 per cent. in 1891-1901 and $9 \cdot 2$ per cent. in 1901-11, but the increase during 1911-21 has been reduced to $5 \cdot 7$ per cent., and that of Madaripur subdivision equally fast. The two subdivisions were one till after the end of last century. Together their population grew 13.0 per cent. in 1881-91 and 12.5 per cent. in 1891-1901. That of Madaripur alone grew $15 \cdot 0$ per cent. in 1901-11, but no more than $5 \cdot 1$ per cent. in the last desade.

Faridpur has had a high recorded birth-rate. It reached 40 per mille in 1917 and fell only $30 \cdot 1$ in 1919 and $28 \cdot 2$ in 1920. But the death-rate has been higher than in other Eastern Bengal districts except at the time of the influenza epidemic when Noakhali and Chittagong suffered more severely and
the death-rate in both Dacca and Bakarganj passed that in Faridpir. In Faridpur, the death-rate for $1914,33 \cdot 6$ per mille was higher than in 1918, 32.6. There was an unexpectedly high rate of $36 \cdot 2$ per mille in 1920 , when the rate everywhere else in the Province was falling. During the derade recorded births in the district exceeded deaths by $88,690,4 \cdot 18$ per cent. of the population of 1911.

The balance of migration in and out of Faridpur has been remarkatly even. The slight increase in the number of emigrants and decrease in that of immigrants in the last ten years is a sign that the pressure of the population on the soil is heavy, but its effect on migration has not been great. The general direction of migration is into Faridpur from Dacca, Pabna and Nadia and to a less extent from Jessore and out of Faridpur into Bakarganj, Tippera and Khulna. Migration from Faridpur to Calcutta has increased since Bengal has been once more united in the same Province. The number of immigrants from beyond Bengal is proportionately very much smaller than in the case of Dacca and Mymensingh. Among both immigrants and emigrants there is a large excess of males over females, but it is greater among emigrants than among immigrants, as might be exepected in the case of a district where the pressure of the population on the soil is heavy and workers. must go elsewhere in search of work to assist in the maintenance of the natural population.
65. Bakarganj district.-Bakarganj is the district which, of thoseforming the fringe of the Delta, contains the largest new formations. Since the rivers west of the Haringhata have ceased to be active distributaries of

the Ganges called the Arial Khan River is now of moderate size and the estuary between Dakshin Shabazpur and the Bakarganj mainland which was onee twenty-five miles wide is now barely 5 , while on both sides of it there have been extensive new formations pushed out into the sea. To the west of the estuary, the Sundarban forest was totally uninhabited as far north as Bakarganj itself when the British first came to administer Bengal. The inhabitants of such clearings as had been made had been wiped out by the ravages of the Arracenese who had been at war with Moghul authority at Dacca on and off for three centuries. Far more of the Sundarbans has now been cleared than in Khulna, but the density of population under the southern police-stations is still low. In the north-west of the district is a low-lying tract similar to that adjoining it in Gopalganj subdivision of Faridpur. It has developed very much within the last 50 years and supports a large population of Namasudras, 1,049 persons to the square mile under Uzirpur police-station, who seem to live almost as much on water as on land. The centre of the district is higher and is very rich country indeed. Nature looks after its sanitation, for every little creek is flushed twice a day by the tide, and it supplies a rich harvest of rice and betel-nuts. The density of population is generally well over 1,000 to the square mile, in Babuganj 1,117, Barisal 1,064, Jhalakati 1,410, Ranaripara 1,549, Swarupkati 1,161, Rajapur 1,088, Pirojpur 1,263. Bhandaria 1,032, Nalchiti 1,000 and Bakarganj 1,014. The density is much less in the north-east where a large proportion of the area of Mehendiganj, Badartuni and Muladi is new formation. Miles of oountry on the eastern side of Dakshin Shabazpur have been washed away. The western and southern part of the island is comparatively new and as yet is but incompletely developed.

Considering the district's advantages and the low pressure of its population on the soil it is surprising that its population has increased no more than $39 \cdot 2$ per cent. since 1872 . That there is room for a very much greater increase the statistics of Agriculture (vide supra sections 10,11 et seq.) very clearly show. The district suffered, however, very severely from a great cyclone and storm-wave in 1876 when 75,000 persons were-estimated to have been drowned and 50,000 to have died in the cholera epidemic which followed. There have been repetitions since on a smaller scale, such as the cyclones of June 1896, and of October 1909, and these have helped to keep alive the memory of the great storm-wave. Persons from inland continue to refuse to go to live on the islands and accretions which would suffer from a repetition of the great calamity, and will not marry their daughters to those who live in these exposed localities. The evil reputation for criminality of the Bakarganj people, no doubt, also tends to discourage immigration and the very complicated land system with its subinfendation run mad also renders self in security on the it would otherwise be for a newcomer to establish him-

After the cyclone of 1876, Dads to cultivate. increase of $21 \cdot 7$ per cent. in 1881 -91 -1901, but has risen again, to $17 \cdot 8$. It was reduced to 4.6 per cent. in 1891 in the last decade. The Sundarban area has steadily progress 4 per cent.
 As the marginal table shows, the progress of the last decade has been an improvement on that of the two decades before. - Colonization
 19, when no new settlements were made throughout the decade colonists were established with made. From 1911-12 to 1919-20, 3,616 of the colonists are Maghs from Chitt average, $17 \frac{1}{2}$ acres each. Many Baufal, Patuakhali with Bagati and Ming and Arracan. Next inland, Pirojpur with Kowkhali, and Bakarganj have had mixed forturia Kathalia,
shown little net increase since 1891. The rest of the district and ex.aperialiy the north has progressed more favourably. In successsive decostes since 1.0 , Gournadi with Uzirpur and Mularli has shown incereases of 12.9 per rent., 14.8 per cent., 10.3 per cent. and 5.8 per cent., and Mehendiganj with Jadartuni 7.0 per cent., $6 \cdot 2$ per cent., $5 \cdot 1$ per cent. and $4 \cdot 8$ per cent. Dakarganj is one of the only two districts in the Province whose propulation has shown better progress in 1911-21 than in 1901-11. The recorded birth-rate for the first six years of the decade was higher than in the other districts of the Dacea Division, but not so high as in Noakhali and Chittagong or as in Murshidabad. During the last four years it was almost the same as in Dacca and Faridpur. The recorded death-rate has been rather above the average for the Dacca Division, but in the early part of the decade was, at least, considerably lower than in Faridpur. Bakarganj did not escape as light|y as the other districts of the Division in the influenza epidemic and the deathrate rose to $33 \cdot 1$ per mille in 1918 , and $34 \cdot 7$ per mille in 1919. During the decade recorded births exceeded recorded deaths by $161,4999,4 \cdot 6 \overline{5}$ per cent. of the population of 1911.

That the numbers both of immigrants and emigrants to Bakarganj is comparatively small is due to its isolation. On the south is the sea and on the eat the great estuary of

| Hakargan/. | 1031. |  |  | $\frac{1081 .}{\substack{\text { noten } \\ \text { wexere. }}}$ | $\underset{\substack{\text { moel. } \\ k \times 0.0}}{1001 .}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males. | Temate. | Total. |  |  |
|  | $\begin{array}{r} 1.341 .108 \\ 43867 \\ 34.094 \\ 1.814 .404 \end{array}$ |  |  | 2.447,782 |  |
|  |  |  |  |  |  | the Meghiua. Thus on one side there is no possibility of intermarriage and short moves for other purposes across the border which contribute so much to the migration in and out of other districts and on another very little possibility of it. The small number of immigrants at once controverts the common misconception that the uncultivated parts of the district form an outlet of the surplus population of the interior of Bengal. The development of the southern part of the district goes on, but mainly at the hands of Bakarganj people. If immigration went on much faster in the past it must have been sometime ago and the original settlers must, by 1901, have been replaced by their native-born descendants. The numbers of emigrants from Barisal to the neighbourhood of Calcutta have increased of late years and the balance of migration between Bakarganj and Khulna is very decidedly in favour of the latter. The number of immigrants from beyond Bengal is very small indeed. There is an excess of males both among immigrants and emigrants, but it is much larger in the case of the former than of the latter. This is in contrast with the case of Faridpur district for Bakarganj is a district where the pressure of the population on the soil is light and the population can afford to call in and pay workers from outside.

## Chittagong Division.

66. The estuary of the Meghna is no more than 40 miles from the first ranges of hills which mark the limit of the Delta on the east. Further north, where the Surma valley opens out, the hills fall back eastward, but the plains district of Sylhet is in the Province of Assam and the plains within Chittagong Division are nowhere wider than 50 miles from east to west. They taper to twenty miles wide in the north of Tippera and in Chittagong district hills come right down to the coast. In respect of the density and ethnolagy of the population there is a very marked contrast between the plains and the hills. The plains-folk are Bengalis, and the soil,which is as rich on the esist as on the west of the estuary, is able to support a density of population at the same level as in Dacca Division. The hill-folk are of Thibeto-Burmese origin akin to the hill tribes of the Assam-Burma frontier and maintain themselves by the primitive methods of agriculture common to such tribes. The hill ranges run north and south, very seldom rising to 1,500 feet and are covered for miles
with ontouched forest. The average population is barely over 50 persons
 to the square mile. khali districts end at the foot hills. Chittagong includes one wide valley behind the Sitakund Range of hills, while further inland lie the Chittagong Hill Tracts and to the north of them bordering Tippera and Noakhali districts is Tripura State.
67. Tippera district.-The south-west of the district with its betel-nut gardens and its valuable jute and chilli crops in addition to its rice, is agriculturally very rich indeed. Chandpur, Faridganj and Matlabbazar can


inland through Hajiganj, Kachua and Chandina police-stations to Laksam, Chauddagram and Comilla one reaches a lorality where jute is not at all grown. The staple crop, and a good one, is winter rice and is supplemented by summer rice, but the density of population falls below 1,000 to the square mile. Baradakhat Pargana with the house of the family of the late zamindars at Thorla in Muradnagar is an ancient centre of high density dating from Moghul times. It extends over most of Homna, Bancharampur, Rasullabad and Nabinagar and into Daudakandi. The growing of jute has enabled the high level of population to remain and increase. Burichang and Kasba are rice-growing areas. Brahmanbaria, Sarail and especially Nabinagar include wide stretches of low-land similar to that found across the Meghna in the east of Mymensingh district. The density of population falls in Nasirnagar to below 750 to the square mile and the country seems unable to sustain a heavier density.

The population of Tippera has increased by no less than 89.5 per cent.
 since $1872,7.9$ per cent. in 1872-81, 17.7 per cent. in 1881-91, 18.8 per cent. in 1891-1901, 14.7 per cent. in 1901-11 and $9 \cdot 7$ per cent. in 1911-21. All parts of the district have not contributed equally to the growth which has taken place. There is evidence that early in last century the south-western part of the district lost population, land went out of cultivation, many estates fell into Government's hands, and this, which is now the richest part of the district, was in 1830 the least densely populated. The increase of population in. Chandpur subdivision has been very. great indeed within the fifty years since 1881. The increase at successive decades has been 30.8 per cent., 36.8 per cent., 18.8 per cent. and 17.1 per cent. There is no other subdivision in the plains of Bengal which has shown such remarkable progress. In
the same successive decades, the population of the-Sadar subdivision has increased 16.7 per cent., 16.6 per cent., 14.8 per cent. and 9.1 per cent. The increase has generally been more moderate in Chakla Rasnabad, the estate of the Maharaja of Tripara State in British territory, which covers most of i hauddagram, Comilla and Burichang, than further to the west, and Dandkandi, Homna, Chandina and Laksam have shown the greatest increase. During the last decade, Daudkandi and Homna have fallen back somewhat. Brahmanbaria subdivision has made somewhat slower progress, 11.9 per cent. in 1881-91, 14:7 per cent. in 1891-1901, 11.8 per cent. in 1901-11 and 4.7 per cent. in the last decade, during which the low-lying parts have suffered twice very seriously from floods which have come down the Meghna and overland across the Sylhet border. Brahmanbaria, Sarail, Nasirnagar and one end of Kasba are the areas affected and in these three thanas the increase has been less than 3 per cent.

The recorded birth-rate in Tippera was about 31 per mille for the first three vears of last decade. It then rose till it reached $35-3$ per mille in 1918. In 1919, it was 27.8 and in 1920, 28.0 . The average death-rate over the decade was $23 \cdot 62$ per mille per annum, the lowest in the province. It rose to $24 \cdot 4$ in 1914, but fell again the next year and in 1917 was $19 \cdot 9$ the lowest figure touched in any district during the ten vears except the 24-Parganas in the same healthy year. Tippera suffered considerably in the influenza epidemic for, the death-rate rose to 30.3 in 1918 and $29 \cdot 4$ in 1919, but the rate fin 1918 was lower than anywhere else with the exception again of the 24-Parganas which, however, suffered worse the next year and in 1920. Recorded births in Tippera daring the decade exceeded recorded deaths by $200,889,8 \cdot 27$ per cent. of the popolation, a proportion which was surpassed only in Noabhali.

Immigrants to Tippera increased somewhat between 1901 and 1911 and
 have decreased somewhat more noticeably during the last decade. Between 1901 and 1911 emigrants increased greatly but during the. last ten years there has been a slight decrease. A change in the district boundary has, however, to be allowed for before conclusions are drawn from the figures. The main stream of the Meghna between Tippera and Dacca had shifted gradually towards the Dacca side, the process taking half a century. This left a considerable area of Dacca on the Tippera side of the big river which has been transferred to Tippera during the decade. The boundary at this point now follows the wide river and, naturally, intermarriage and short moves across the border are less frequent than they were ten and twenty years ago when this was not the case. It is the st ream of migration into Tripura State, which, however, is decreasing in force, that puts the balance of migration against Tippera. Between Tippera and Noakhali, the balance is in favour of Tippera as also between Tippera and districts west of the Meghna.
$6{ }^{6}$. Noakhali district- Tnlike that of Bakarganj on the opposite side of the Meghna. the mainland of Noakhali is not intersected by any river of importance, and as most of the accretions formed within the last century have
 been washed away again the mainland, as it exists at present, is one block of comparatively old country fully developed. The average density of the population over the mainland is 1,202 persons per square mile. It falls be-- low the average only in Raipor and Companyganj, which are newer

than the rest, and in Feni subdivision where betelnut plantations do not flourish as well as in the rest of the district and where jute is not grown. The marginal table shows the density in Noakhali and Companyganj thanas as falling below 1,000 per square mile, but this is explained by the fact that both include some islands and Noakhali a large area separated from the mainland. These islands are being brought under cultivation, but have few or no permanent inhabitants. The people of Noakhali district have only recently taken to the cultivation of jute. They have a source of ready money in the produce of the betel-nut plantations, but the increase of population has been so great of recent years, that the spread of jute cultivation has been heartily welcomed and is likely to extend further. The density is much less in Bakarganj and in that district the time has not yet come when the Bakarganj cultivator will take eagerly to jute-growing. A feature of Noakhali mainland is the number and size of its tanks. Many of these are overgrown and useless but the cultivators prefer to dig small new ones adjoining their homesteads rather than clean out the old ones which are further afield and much larger. The result is that hollows next to the houses not fit to be called tanks with the large tanks which are older and ditches appropriate no less than $5 \frac{1}{2}$ per cent. of the total area which would otherwise be available for cultivation. In view of the high pressure of the population on the soil this is a serious reduction of the cultivated area, and an example of what might happen elsewhere if tenants were allowed to excavate as they liked without reference to their landlords. Sandwip is an old island though much reduced in size. Twothirds of what now exists must be several centuries old and the population it supports is almost up to the standard of density on the mainland. The Hatia islands, continually eroded on the east and built up on the west, have progressed steadily westward. The Hatia of 150 years ago has now entirely disappeared. The southern formations under Hatia police-station are still only in process of development and parts in the extreme south are covered with Sundarban jungle. The northern part of Ramgati has all been brought under cultivation, but it is still so new that permanent inhabitants are few. Many of the cultivators come over from the mainland only at the season for transplanting the rice crop and for the harvest. These are the explanations for the low density, 407 persons per square mile in Hatia and 261 in Ramgati.

The population of Noakhali has increased $75 \cdot 1$ per cent. since 1872. There was a.loss of $2 \cdot 3$ per cent. between 1872 and 1881 occasioned by the great cyclone and storm-wave of 1876. The storm-wave topped the banks of tanks and their water was further polluted by innumerable dead bodies of cattle with the result that an epidemic of cholera following the disaster took a heavier toll of human life in the district than the cyclone itself. The population of the Hatia islands was reduced by a quarter betweeen 1872 and 1881 and that of Sandwip by a sixth while the villages along the coast of the mainland suffered as severely: Since 1881, the population of Noakhali has increased in successive decades by 23.0 per cent., 13.1 per cent., 14.0 per cent. and $13 \cdot 0$ per cent. The greatest increase has been in Lakshimpur with Raipur. Ramganj and Begumganj with Senbagh, for Companvganj lost heavily by diluvion between 1891 and 1911, and Noakhali from 1881 to the present day, though the effect on the population has been greatest of recent years when the sea has been cutting back into the old formation having previously devoured the accretions. Lakshimpur, Ramganj and Begumganj have each produced an increase of population amounting practicallv to 2 per cent. per annum for the last 40 years. That Begumganj with Senbagh have heen able to maintain this increase during the last decade is to be put down in the main to the spread of jute cultivation in this area. The increase in Sandwip is so small on account of diluvium. The large increase in Hatia is due in part to
colonization from Sandwip. The area under Feni police-station has progressed steadily although not quite at the phenomenal-rate shown in the westera part of the district. Chhagalnaya and Pashuram, sheltered from intrusion by the little range of hills dividing them from what is now Tippera district and onder the protection of the Raja of Tripura, formed an ancient centre of dense population which escaped the alarums of the wars between the Moghuls and the Arracanese. Their density of population was as high as 875 per square mile even in 1872 , and the soil being by no means as rich as that of the rest of the district it is not surprising that the rate of increase has theen moderate, falling to $2 \cdot 2$ per cent. in 1901-11 and $5 \cdot 2$ per cent. in 191121. The area has suffered somewhat severely from floods coming down the Muhuri river from the hills more than once of recent years.

The record of vital statistics for Noakhali district show a higher birthrate taken on the population of 1911 than in any district in Bengal. The average for the decade is 39.91 per mille per annum, Murshidabad coming second with an average of $38 \cdot 30$. But Murshidabad has lost 8 per cent. of its population during the decade while Noakhali has gained 12 per cent. so that the average birth-rate taken on the basis of the population as it was in each year must have been rather higher in Murshidabad than in Noakhali. The birth-rate arrived at on the basis of the census of 1911 fell in Noakhali only to 32.8 in 1919 and rose again to 36.9 per cent. in 1920. The rate in the last year taken on the basis of the population of 1921 is 32.6 instead of 36.9 , and it appears, therefore. that the published figures considerably disguise the fall in the birth-rate which took place towards the end of the decade. The death-rate which was about the average for Eastern Bengal at the beginning of the decade rose considerably at the end, although the figure calculated on the basis of population of 1911 which was $42 \cdot 8$ per mille in 1918 exaggerates the true state of affairs. The population having increased during the first seven years of the decade by some 10 per cent., the death-rate calculated on the basis of the actual population in 1918 mast have been about 39 instead of $42 \cdot 8$. Even such a figure is much higher than was reached in any of the districts of the Dacca Division or in Tippera and there is little doubt that Noakhali suffered in the influenza epidemic more severely than any of them although by'no means so severly as did Chittagong. In spite of this the births recorded in the district during the decade exceeded the deaths by $150 ; 842,11.58$ per cent. of the population of 1911, a proportion considerably larger than in any other district of Bengal for which vital statistics are kept.

Migration in and out of Noakhali district is less than in the case of any
 other district in Bengal. This is mainly due to its isolated position, but it is also noticeable of Noakhali people that they are inclined to be intolerant of strangers. There are very few indeed from Western, Central or Northern Bengal, even fewer than in Tippera, and whereas Tippera has a considerable number from beyond Bengal, the number in Noakhali, is infinitesimal. The balance of migration between Noakhali and Tippera is distinctly in favour of the latter and that between Noakhali and Chittagong and Bakarganj is also in favour of these two, while there is some emigration from Noakhali to Tripura State. Noakhali people are found employed on steamers and boats in other parts and in the Port of Calcutta and a certain number go to Burma. Emigration is increasing, but the number of immigrants is much the same as it was 20 years ago.

- 69. Chittagong district.-Chittagong district offers very different scenery from that seen in the districts of Eastern Bengal to which reference
has hitherto been made. Only the island of Kutubdia, a small
 occupied by Maghs the first of whom took refuge there in the latter years of the eighteenth century when the Burmese conquered Arracan. Chittagong itself is a large and flourishing town and a port of some importance especially since the Assam-Bengal Railway has been opened. Leaving aside Calcutta and its suburbs it is, after Dacca, Bhatpara and Titagarh, the fourth town in the Province in point of size. Round it and further up the valley of the Larnafuli river lies the most densely populated part of the district. North of it a range of hills reaching their highest point at Sitakund comes close down to the coast and the population is confined to.a narrow coastwise strip and the valley beyond the hills. Mirsarai in the north-west takes much of same character as Feni subdivision of Noakhali district. The southern part of the district is still only partially developed. 22.9 per cent. of the total area of the district is forest and only some 45 per cent. is fit for cultivation, so that the density per square mile of cultivable area in the district as a whole is as great as on the mainland of Noakhali.

The population of Chittagong district has increased by $42 \cdot 9$ per cent. since 1872. The low-lying litoral and the islands of Kutubdia and Mohiskhali suffered very severely in the cyclone of 1876 and the cholera ${ }^{\circ}$ epidemic which followed in its wake and the population of the district increased only by 0.4 per cent. between 1872 and 1881. During the next decade the parts which had suffered so severely showed a great increase, Chittagong with Double Moorings and Panchalais, $19 \cdot 3$ per cent., Banskbali with Anwara $25 \cdot 4$ per cent. Mohiskhali with Kutubdia $29 \cdot 5$ per cent., Chakaria $20 \cdot 3$ per cent.. and the district as a whole 13.9 per cent. In 1897 came ancther cyelone which in Chittagong did almost as much damage as that of 1876 though it did comparatively much less harm in Noakhali and Bakarganj. Between 1891 and 1901 Mohiskhali and Kutubdia lost 7.3 per cent. and the district as a whole gained only $4 \cdot 9$ per cent. The decade 1901-11 was a repetition of 1881 .-91. Mohiskhali and Kutubdia put on 37.4 per cent. Chakaria 29.7 per cent. and Banskhali with Anwara 18:8 per cent., while the district population increased by 11:5 per cent. There has been no further disaster on the coast and the increases of the last decade in the several quarters of the district have followed the lines of the increases of the decade before, but their extent has generally been reduced almost by half. Mohiskhali, Kutuhdia and Chakaria have again showed the greatest increase followed by Teknaf and Ukhya in the south, Banskhali Anwara and the environs of Chittagong town in the centre and Mirsaraj in the extreme north. Hathazari, Fatikchari, Raojan Rangania and Sitakund form as they have done for many years, the part of district which shows least progress. Much extension of cultivation is impossible and the country is somewhat unhealthy.

The recorded birth-rate during the decade has been on the average 37.7 per mille per annum, well above the Eastern Bengal average but considerably lower than that for Noakhali. Its variations have followed those of the average for Eastern Bengal very closely. The recorded death-rate has been consistently about 2 per mille per annum higher than in Noakhali and the district suffered very severely at the time of the influenza epidemic. The rate rose to $44 \cdot 1$ per mille in 1918 and was as high 41.4 in 1919. Births recorded during the decade exceeded deaths by $100,616,6.67$ per cent. of the population of 1911 .

The people of Chittagong have had intercourse with the outside world for several centuries, and seem to be the more adventurous on that account.

| Caluerous. |  | 1921. |  |  | 191. <br> Both <br> cerel | 1001. <br> Both <br> saxel. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Kale | Pen | Total |  |  |
| Actual popolation Immikravia <br> Nalural popalation | $\begin{aligned} & \because \\ & \cdots \\ & \hline \end{aligned}$ |  |  |  |  | $\begin{array}{r} 1.388 .550 \\ 11.339 \\ 106,037 \\ 1,447,948 \end{array}$ | grants to it than any other districts in Bengal except the Chittagong Hill Tracts, mainly on account of its isolated position, but emigrants are many. It adjoins Noakhali along a length of a few miles only and at its southern end there can be little traffic by land. The direction of emigration is mainly towards Burma, though Chittagonians like the people of Noakhali are found on steamers and boats on all the big rivers of the Province and in the Port of Calcutta. There is a slight excess of females over males in the actual population of Bankura, Birbhum and Murshidabad, but it is far more noticeable in Chittagong, and Chittagong is the only district of the Province which holds many more females than males. The proportion of females to males among emigrants from Chittagong is very small indeed, only one female to every eight males. The proportion of the sexes in the natural population is normal.

70. Chittagong Hill Tracts.-The Chittagong Hill Tracts, which are 180 miles long and only 45 miles wide in the widest part, consist of parallel ranges of low hills running north and south with narrow valleys between.

| Chltagrog hiul Tracts. | Popalation. 1921. | Demxity per square malle. | Farration per cent. 191t-2: |
| :---: | :---: | :---: | :---: |
| Disthtot toral ... .-. | 178,248 | 84 | $\div 12.8$ |
| Eadar aubifriaton - | 84,817 | 84 | $+8.8$ |
|  | 31.097 11.888 94,046 17.797 | 49 87 78 89 | $+\quad 98$ |
| Remgarh ambilivialon | 85,652 | 51 | +28-1 |
|  | $\begin{gathered} : 6.633 \\ 19,019 \end{gathered}$ | 54 | $\pm 20.1$ |
| Buayarban aubstricioa | 52,774 | 27 | + 7*8 |
|  | 24.191 9.519 12,767 8.297 | 50 80 80 16 38 | + 76 | The drainage cuts across the western. ranges in three places by means of the Karnafuli, Sonkho and Mamori rivers. The district was formerly three circles, largely controlled by three chiefs, the Bhomong Circle in the south, the Chakma Circle in the centre, and the Mong Circle in the northwest. Towards the end of the last decade the system of administration has been revised. The three circles have become three subdivisions. The

Chakma Circle forms Sadar subdivision, the Bhomong Circle the Bandarban subdivision and the Mong Circle the Ramgarh subdivision. Boundaries have been defined and police-stations established. The Bandarban subdivision is mainly inhabited by Maghs, who came in after Arracan was overrun by the Burmese at thee nd of the eighteenth century, the Sadar subdivision by Chakmas, the indigenous trible of the locality, and the Ramgarh subdivision by Tiparas. Only 10 per cent: of the district is cultivated. In the valleys adjoining Chittagong district the plough is regularly used, but the indigenous tribes prefer jhuming. That is, they clear a patch of jungle and burn the softened by rain they sow mixed they have cut down; when the ground has been put in together. After two or three years when the fertilizing men, etc., all put in together. After two or three years when the fertilizing effect of the
ashes of the burning has/worn off or the patch is choked with weeds they leave it and start the same process in another spot. The revenue is by a capitation tax, but with the change of administration the regular lease of land by Government is being introduced and permanent cultivation encouraged. Communications are difficult and distances are very great. The average density of population is only 34 persons to the square mile being greatest, although nowhere as much as 100 per square mile over any considerable area, in the valleys adjoining Chittagong district, and becoming less further to the east, north-east and south.

The population according to the census figures bas increased by 149 per cent. since $1872,46 \cdot 0$ per cent., 56 per cent., 16.3 per cent., $23 \cdot 3$ per cent. and 12.6 per cent in successive decades. There has always been some doubt about the accuracy of the census. The revenue realized by the chiefs has been per head of the population and the quota realized from them has been determined on the same basis, so that there has always been an inducement to conceal the true population. That the last census has not shown a greater increase would seem to indicate that the doubts regarding former enumerations were unfounded. The great irregularity of the increases and decreases between the three circles at former censuses was put down in part to uncertainty as to the exact boundaries between them. In the last decade there has been a large increase in the Ramgarh subdivision corresponding to the Mong Circle and only a moderate increase in the other subdivisions. Vital occurrences are not officially recorded nor vital statistics maintained in the district, but there is ample evidence that the indigenous tribes suffered very severely in the influenza epidemic.

There is a remarkable contrast between the extent of immigration into

| , | mm. |  |  | Bu. | mol. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | noma | nomed | Tan. | ${ }_{\text {matam }}$ | mate |
|  | "ta |  |  | cay | "exa we | Che Chittagong Hill Tracts and into Tripura State. The number of immigrants found in the latter at the last census was almost fifteen times as great as the number found in the former. The explanation does not lie in artificial restrictions to the movement into either, but to the fact that, while the hills to the south come close down to the sea and Chittagong district comprises most of the land which lies low and is easily broken to the plough, there is much of Tripura State which is very little raised above the level of the plains and is attractive to the plains people of Bengal, who shun the forest clad slopes of Chittagong Hill Tracts. There are, moreover, many wide open valleys in Tripura State especially at its northern end, whereas the hills to the south are more abrupt and the valleys narrow. They run north to south moreover and have few openings towards the plains inviting the plains-men to enter. It is for these reasons that the Chittagong Hill Tracts are still in the main the preserve of the indigenous races. The unattractiveness of the Hill Tracts to settlers from the plains is brought out by the very low propor. tion of females among the immigrants.

71. Tripura State.-A great part of Tripura State is covered with

| Tripura State. |  |  |  | Population. 108. | Denalty per muare trite. |  | Fariation per cens. 1911-91. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STATE TOTAL | ... | $\cdots$ | . | 304,487 | 74 |  | $+82.8$ |
| gamar divivione | ... | ... | ... | 86.903 | ${ }_{188}^{183}$ | \} | + 380 |
| Risalag- | $\cdots$ |  | $\ldots$ | 24, 4,44 37,335 | 18 | , | 60.0 |
| Kamalpur: $\ddot{\square}$ | $\ldots$ | ... | $\ldots$ | 13,419 | 48 | , |  |
| K wal. ${ }^{\text {c, }}$ | $\cdots$ |  |  | 18,917 <br> 13,357 | 88 | \} | $+\quad 33 \cdot 5$ |
| Kniyanpur ${ }_{\text {Dharamigarar, }}$ | ... | $\cdots$ | $\ldots$ | 13,357 30,453 | 111 |  | $+610$ |
| Sonamura " | $\cdots$ | $\cdots$ | $\ldots$ | 92, ${ }^{\text {and }}$ | 110 | ) | + 27.7 |
| Dialpur) " | $\ldots$ | $\cdots$ | $\cdots$ |  | 393189 | 1\} | 237 |
| Amarpur | $\ldots$ | $\cdots$ | $\ldots$ | $\underset{\substack{21.988 \\ 18.898}}{ }$ | 38 67 |  | $+3.3$ |
| Sobrum "̈ |  | $\cdots$ |  | 11,094 | 41 |  | $+1010$ | forest and resembles the Chittagong Hill Tracts. The indigenous race of Tiparas live by Jhum cultivatipn, but the valleys widen in the northern part of the State and in the parts against the Noakhali and Tippera district boundaries, and in them there are numerous Bengali settlers and a good deal of regular cultivation. The density of

population is on the average more than double that in the Chittagong Hill Tracts. It is highest in the north-west corner of the State and in Dharamnagar and Sonamura divisions, which reach rather further south than Comilla, and decreases almost to the same low level as in the Chittagong Hill Tracts as the borders of the Lushai Hills and the Chittagong Hill Tracts are reached.

According to the census figures the population of the State is $8 \frac{1}{2}$ times what it was in 1872. There is no doubt, however, that some of the increase is due to improved enumeration especially much of the apparent increase of 171 per cent. between 1872 and 1881. The increase at successive enumerations since 1881 has been 43.7 per cent. $26 \cdot 1$ per cent., $32 \cdot 5$ per cent. and 32.6 per cent. Proportionate increase during the last two decades has been more conspicuous in the least densely populated parts of the State, though Dharamnagar division has made itself an exception to this rule. The least progressive part of the State is Belonia division which borders on Noakhali district.

Very nearly one-third of the population of the State was born outside it.
 The natural population has increased during the last ten years by as much as 39.6 per cent. The indigenous population must have grown fast, but the natural population, it is to be remembered, includes the native born children of immigrants. The reasons for the contrast between the extent of immigration into the State and into the Chittagong Hill Tracts have already been explained. Immigrants have mainly been Bengali Muhammadans from Tippera district and Sylhet. During the last decade, immigration from Tippera has decidedly decreased, the number of immigrants having been reduced from 35,302 to 25,685 , but the number from Sylhet has increased from 25,549 to 33,929 . The numbers from further afield are large compared with the corresponding number in Chittagong Hill Tracts. The numbers from the Central Provinces, Madras and Chota Nagpur are very much higher than in the neighbouring plains districts of Bengal. The proportion of females to males among the immigrants which in the case of Chittagóng Hill Tracts was very small indeed, is in the case of Tripura State not very unequal, indicating that.the State offers large attractions to permanent settlers.
72. Sikkim.-Considering the physical configuration of the country, it is not surprising to find no more than 29 persons per square mile living in Sikkim. From 15,000 feet and upwards there is a mass of snowcapped peaks and ridges, treeless and uninhabited, the heads of the valleys penetrating the mountain mass being filled with great glaciers. From 11,000 to 15,000 feet the ridges and slopes are clothed with coniferous forests with occasional grassy plateaux and small lakes to which cattle are driven for pasturage in the summer. Hill slopes from 7,000 to 11,000 feet are very steep and usually covered with virgin forest, but scattered settlements of Bhutia graziers now begin to appear. Cultivation is confined to lower levels, and usually below 5,000 feet. Here the country has been largely denuded of forest and the slopes utilized for the growth of maize, millet and pulse, the people living in smaller homesteads surrounded by their patches of cultivation. In the bottom of the valleys rice is grown, and terraced rice-fields ingeniously irrigated from the numerous streams rise sometimes to 2,000 and 3,000 feet up the hill sides. The Nepali immigrants have a genius for the elaborate engineering by which these terraces are prepared. A stream let on to the topmost of a long series of terraces three or four feet above one another and sometimes no wider than this, filters and falls from one to the other, and the rich soil in which rice is transplanted yields an abundant harvest. \& The south-eastern part below, the Chola range which forms the Thibetan boundary, perhaps a quarter of the whole area of the State, has few points rising over 6,000 feet, and the valleys of the Tista and the streams flowing into it from the castward are the most densely populated parts. There is also considerable cultivation in the valleys which come down into the Great Rangeet. Though the
majority of the population is now Hindu and of Nepalese origin, the State religion is Buddhist and it is a feature of the country that monasteries are so frequently to be seen. A conspicuous site usually near the top of a hill is chosen and the direction of such paths as there are has usually been determined rather by the position of the monasteries than by following the valleys.

By the treaty of Tiralya in 1817, the independence of Sikkim which had begun to be menaced by the Nepalese was guaranteed by, the British aud the settlement of Nepalese tribesmen in Sikkim was prevented until 1889. In that year the aggression of the Tibetans led to war which was succeeded by the more active intervention of the British Government. A Political Officer was appointed, communications were greatly improved by the construction of roads and bridges and the settlement of Nepalese was permitted in certain parts of the State. These measures were followed by a rapid development of the country. The census of 1891 showed a population of 30,458 persons and that of $1901,59,014$. Part of the increase of $93 \cdot 7$ per cent. must, however, be put down to the fact that the census of 1891 coming so soon after the changes of administration which had taken place was admittedly incomplete. The census of 1911 showed a population of 87,920 and a further increase of $49: 0$ per ent. The arrangements for the census of such a country as Sikkim with so sparse a population, where distances are so great and movement from place to place so arduous and so difficult a matter, offer a very different problem from the census of a plains district in Bengal. No attempt was made to complete a return in a single night or day The enumerators were allowed a month to complete their schedules and instructions for a simultaneous enumeration were issued only in respect of a few market places. The census of 1911 was undoubtedly as accurate an enumeration as was possible. The same arrangements were made in 1921 as in 1911. The result showed a population of 81,721 persons and a decrease of $7 \cdot 1$ per cent. During the decade there had been a withdrawal of the detachment of British troops from Gangtok, the capital of the State, the administration had passed entirely into the hands of the Sikkimese themselves and the Political officer was away on a mission to Thibet when the arrangements for the census was made, but it does not appear that the enumeration was less carefully carried out than before. The reduction of the population is to be put down mainly to the ravages of the influenza epidemic, and of local epidemics of "relapsing fever." The State suffered continually from both these scourges during the last three years of the decade. When either scourge fell upon a particular valley, the rate of mortality was often very high indeed and the stricken population for the time being deserted their homes and fled up the hill-side into the forest.

That the number of immigrants to Sikkim has fallen off considerably is due to the fact that the tide of immigration from Nepal is not so strong as

| Stikxım. |  | 1931. |  |  | $\frac{1911 .}{\substack{\text { Both } \\ \text { sexes. }}}$ | 1901. <br> Botil <br> sex.rs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Males. | Femates. | Total. |  |  |
| Actual mppulaton | ... | 41,492 | 40, 299 | 81.79 | 88.890 | 89.044 |
| Impigruits ... | ... | 13,910 | 9,164 | 92.978 | -9 338 |  |
| ${ }_{\text {Emisrants }}^{\text {Nataral }}$ population | $\ldots$ | 1,903 | 2, 191 |  |  |  |
| Natiral population | ... | 20,398 | 33,332 |  | 61.538 | 36.125 | formerly and that native born children of the original settlers are gradually taking their place. The halance of migration between Sikkim and Darjeeling district, which is about even, accounts for practically all the emigrants while very nearly all the rest of the immigrants come from Nepal. Few indeed come from Thibet, Bhutan and China or from other parts of India. Too much weight must not be given to the excess of females in the natural population for we have no account of migration into Tibet and Bhutan which may have drawn off a considerable number of males.

Houses and Families.
73. Definition of a house.-Table $I$ in the Census Tables Volume includes statistics of the number of houses in the Province and in each district and State within it, figures for the number of houses within the jurisdiction
of each police-station are to be found in Provincial Table I at the end of the Volume, and figures for the number of houses in each mauza, the unit which, as is explained in the next chapter, corresponds in Bengal to the village unit in other parts of India, are given in the Mauza Tables which have been handed over in manuscript to District Officers. It is'necessary before, referring to such figures to explain in what sense the word house was used by those who carried out the enumeration and what meaning is to be attached to it when the statistics are put into use. In the vernacular there are two words with a widely different significance which can be used as translations of the English " houses." One is bari which is more properly rendered into English as homestead, and the other is ghar which means hut. The bari consists of a number of huts built on raised plinths round a courtyard (Uthan) itself well above the level of the fields, and the term includes not only the huts but the courtyard outhouses and the raised land outside which is commonly planted with fruit and other trees and shuts the actual habitation almost completely from view. The bari ordinarily contains a hut on each of the four sides of the courtyard, two huts being living rooms, one a cookshed and dining room and one a baitakhana or sitting room where visitors are received and the men sit and smoke. Cowsheds are sometimes built on the courtyard but are more often outside the circle of the other huts. The bari is a perfectly definite unit but is not suitable for census purposes, for it frequently happens that as a family multiplies the bari is enlarged so that it accommodates several families closely related to one another but each drawing against a separate domestic budget. Very commonly the co-sharers of a holding each with a family have partitioned the cultivated land between them, but have kept the bari their joint property. In other cases where brothers have been unable to live amicably in the family homestead, one or another has made himself a separate bari on a convenient piece of the family property which has fallen to his share. For census purposes statistics are required of the separate family units. The limit of commensality in Bengal indicates the extent of a family with a separate domestic economy of its own, and for census purpose the habitation of a commensal family was used as the unit and adopted as the definition of a house. This definition has been used at each consecutive census everywhere except in Calcutta, where, as is explained in the Report on the Census of Calcutta, different definitions have been in use at different times.. The census units in rural areas corresponds with the units hitherto employed for the purpose of assessment of the Chaukidari Tax and likely to be used in the assessment of all forms of local taxation at the hands of the newly constituted Union Boards.
74. Persons per house and houses per square mile.-The total number of houses in Bengal is $9,342,819$ which gives just over 5 persons per house and 114 houses per square mile. The corresponding figures for each district in the Province at each successive census since 1881 is given in Subsidiary Table VII printed at the end of the chapter. The size of the average family in Bengal is very slightly larger than in India generally and is distinctly larger in Eastern than in Western Bengal. It will, however, be noticed that generally speaking there is a close correlation between the size of the family in each district and the rate of growth of the population of the district of recent years, which points to the conclusion that it is variations in the rate of natural fecundity and the number of children per family that is responsible for variations in its average size, rather than any definite tendency for families to break up more easily in Western than in Eastern Bengal. The figures show that there was a decided tendency between 1881 and 1891 towards the disruption of families, but the fact that figures for almost every district indicate the same thing while the figures of subsequent censuses show very little change, indicates that a possible explanation is that a somewhat different interpretation of the meaning of house was used in 1881 from that used subsequently. The conclusion to be drawn from the figures for subsequent censuses is that there has been little or no tendency in the Province as a whole for families' to break up. Such changes in the average size of the family in a district as have taken place can generally be accounted for by variations in the birth-rate and in the number of children. The rise in
the average in so many districts in 1811 was due to the fact that the population had moreased fast in the decade previous to the census and the corresponding fall in 1921 was due to a corresponding decrease in its rate of growth. The fact that the size of the average family is greater in Eastern than Western Bengal means that the number ot houses per square mile in the Eastern Bengal districts is not proportionately so much bigher than in the Western Bengal districts as is the number of persons per square mile. Over the Province as a whole there are 5.78 acres per house, and if houses were situated at equal intervals over the face of the whole countryside the distance between each would be 178 yards. This would be reduced to 131 yards in Dacca and increased to 198 yards in Bankura and Cooch Behar. If there are on an average $2 \frac{1}{2}$ commensal families per bari which is a reasonable estimate the average distance from one bari to the next over the Province would be roughiy 260 yards.
subsidiary table I.-Density, water-supply and crops of Districts.


SUBSIDIARY TABLE II.-Distributiox or the


Note-The proportion per ceat. Whlch the area and popalotion of each group bear to the total
population classified according to Density.


[^1]SUBSIDIARY table ili.-Variation in belation to density mince 1 fite.

sUBSIDIARY TabLE IV.-Variation in natural population.


[^2]sCbsidiary table V.-Compahison with Vital statistics.

sdbsidiary table .VI-Varlation by Police tanas classified according to density.
(a) Actual variation.

| Mategal difisioy. | Decade. | Fariation in police thanag with a popdlation pler aquare mile at COMMENCEMEMT OF DECADE OH- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Eusior 150. | 150-300. | 300-150. | 450-600. | 600-780. | 750-900. | 000-1,050. | 1,050 and over. |
| 1 | 2 | 3 | 4 | 3 | 6 | 7 | $\theta$ | 9 | 10 |
| Aencal | 1001-1911 | + 383,718 | + 188.005 | + 513.455 | + $\mathbf{9 6 0 , 3 7 9}$ | + 283,814 | +215,916 | + 159,469 | + 317,889 |
|  | 1911-1081 | + 166.980 | +. 21.253 | - 78,785 | - 190,191 | + 80,345 | +323,986 | + 161,280 | +831,023 |
| VFet Beogal | 1001-1911 | $\cdots$ | + 10,309 | + 88.874 | + 97,347 | + 8,170 | + 25,003 | - 1.148 | +101.453 |
|  | 1011-1981 | $\cdots$ | - 18,603 | , - 923,018 | - 189,033 | $\therefore 48.118$ | - 93,968 | - 428 | +88,689 |
| Onntral Benka - $\quad-$. | 1901-1011 | + 128,034 | + 33,022 | $+19,658$ | - 37,853 | + 10,082 | + 42,280 | - 20.717 | $+73.975$ |
|  | 1911-1991 | + 41.489 | $\cdots$ | + 12139 | - 138,997 | + 17,594 | - 31.80\% | + 13,333 | + 121,254 |
| Xiorth bengal ${ }^{\text {a }}$ - | 1901-1911 | + 91.257 | + 40,120 | + 237,093 | + 110.644 | + ${ }^{123.836}$ | + 58,700 | - 28832 | - 5,560 |
|  | 1011-1831 | + 10.378 | + 36,339 | + 204 | + 14,680 | + 833 | + 69,178 | + 50,298 | - 14,360 |
| i Bat Benial . . . $\{$ | 1801-1911 | + 01.208 | + 100.539 | + 902,933 | + 180,240 | + 107,416 | + 01,033 | + 177,458 | + 149,221 |
|  | 1911-1931 | + 21.237 | + 6.510 | + 133,925 | + 33.383 | + 89,016 | + 314,88s | + 92. 147 | + 637,400 |

SUBSIDIARY TABLe VI.-Variation by police thanas classified according to density.
(b) Proportional Variation.

| Satoral Diflios. | Desalt. | Fabution in podiot teanas wita a population ple szoabe yile at COMYENCEXGYT OR DEGADE OF- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Cnde: 150. | 130-300. | 3)0-430. | 430-500. | 600-750. | 850-800. | 200-1,050. | 1,050 and ovec. |
| 1 | 2 | 3 | 4 | 8 | 6 | 7 | 8 | 8 | 10 |
|  | 1901-1911 | + 920 | + 130 | $+104$ | $+3.3$ | + 2.4 | + 3.6 | $+\quad 37$ | + 7.8 |
| ! | 1911-1991 | + $36 \cdot 4$ | + $2 \cdot 8$ | - 1.3 | - $2 \cdot 2$ | $\pm 10$ | $+3 \cdot 3$ | + 42 | + 7.9 |
| $\text { ret Beagal } \quad \cdots \quad \cdots\{$ | 1901-1011 | $\cdots$ | $+\quad 18$ | $+2 \cdot \dot{5}$ | $+12$ | $+0.8$ | + 96 | - 0.3 | + 88. |
| . | 1911-1991 | - | + $4 \cdot 4$ | $+11 \cdot 3$ | $\pm \quad 9.4$ | - 43 | + 2.4 | $=\quad 0 \div I$ | $+\quad 8.7$ |
| titral Beagel - - $-\{$ | 1901-1911 | $+143$ | + 119 | + 7\% | - 20 | - 1.0 | + 533 | 29 | $\pm 119$ |
| $1$ | 1011-1931 | + 34.3 | .. | $+1.1$ | - $\quad 17$ | + 111 | - $\quad$ •1 | + 23 | +112 $+\quad 89$ |
| Ortb B'ag - - - it | 1801-1911 | + 4-9 | $+\quad 1$ | + 11\% | $+8.8$ | $+1.4$ | + 4.7 | - 144 | - 2.1 |
|  | 1011-1981 | + 314 | + + $\cdot 3$ | + 00 | + 1.3 | $+000$ | $+3-9$ | $1 \%$ $+\quad 98$ | $-\quad 1 \cdot 8^{\circ}$ |
| -t Beogal - - \{ | 1801-1911 | + 28.7 | + 307 | + 17.3 | + $\quad 11.4$ | + 3.6 | $+3 \cdot 1$ | + 3-9 |  |
| — | 1911-1921 | + 8 - ${ }^{\text {¢ }}$ | + 10.0 | + 18.s | + 1297 | + 62 | + 80 | + 40 | +80 $+\quad 80$ |

SUBSIDIARY TABLE VII.-Persons per house and houseb lebl square mile.


## CHAPTER 11.

## The population of Cities, Towns and Villages.

75. Introductory.-This chapter deals mainly with the figures contained by the Imperial Census Tables III, IV and V.. The figures for urban and rural population are separated in columns $9,10,12,13,15$ and 16 of Imperial Table I In Table MI the population is divided according to the size of the city town or village in which it resides. In Table IV towns are classified according to the size of their population and the figures for the Census of 1921 are compared with those for previous censuses. In Table $V$ the population of the towns is distributed according to religion and the towns arranged territorially. Four subsidiary tables prepared from the Imperial Tables appear at the end of the chapter and set forth :-
I.-The distribution of the population between towns and villages.
II.-The number per mille of the total population and of each religion who live in towns.
III.-Towns classified by population and their growth.
IV.-Cities and their growth.
76. The urban population.-There are 122 Municipalities in Bengal which carry out the Local Administration for populations ranging from the 885,815 persons in Calcutta to less than 1,500 . Only 13 of them have a population less than 5,000, but Municipal Government has been very freely extended and it is but a small population which can be said to be urban in character that has not a municipal form of Government. For census purposes it was considered necessary to add to the list of municipalities, only 13 places to be treated as towns. It is a feature of a number of municipalities that their boundaries are widely extended so that they include a great deal of agricultural land. Local sentiment approved of the extension of the municipal system, and local authoritsei were tempted to exaggerate the size of a proposed municipality by extending its boundaries. In some cases boundaries have been drawn in since the municipality was formed, but the population of the municipalities in the Province and of these 13 other places treated as towns is probably rather greater than less than the population that is truly urban in character. In spite of this the urban population of the Province as given in.Imperial Table IV is only 3,211,304, no more than 67 per mille of the total population of the proviace. Calcutta with its suburbs, Cossipore-Chitpore, Maniktola, Tollygunge, the South Suburbs, Garden Reach and Howrah supplies $1,327,547$, so that leaving Calcutta and its suburbs aside, in the rest of the Province the urban population is only 4 per cent. of the total. The proportion is very much lower than in India as a whole for which the urban population is nearly 10 per cent. of the total. In the Central Provinces the proportion is 90 per mille, in Burma 98, in the United Provinces 105, in the Punjab 103, in Madras 123 and in Bombay 210. No census figures perhaps bring out more remarkably the contrast between East and West than a comparison of the proportion of the total population which is urban in India and in England. The number per mille who live in towns in England and Wales is no less than 793, the rural population being only 207 per mille of the total. The proportion which the urban pupulation bears to the whole is about 12 times as great in England and Wales as in Bengal, and $19 \frac{1}{2}$ times as great when Calcutta and its suburbs are left out of consideration.'

The proportion of the population which is urban varies considerably in different parts of the province. The urban population per mille of the total is 84 in Burdwan Division and 188 in the Presidency Division, but only 23 in North Bengal. and 27 in East Bengal ( 30 in the Dacca Division and 19 in the Chittagong Division). Industrial development in the neighbourhood of

Calcutta is mainly responsible for the contrast between the centre and sonthwestern part of the province and the rest, but does not completely account for it. The western districts, even away from the Hooghly and the factories which line its banks, approach in character the other great provinces in India more nearly than Eastern Bengal, and a greater proportion of their people live in towns.
77. The growth of the urban population.-Thegrowth of the urban population in Bengal is disclosed by the following figures obtained at successive censuses:-

|  |  |  | Orbat population. | Actual focreace in the decade | Increneo per cent | Urban onpalation Ha peroentage of the whole Dopolition. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1872 | -..* | ... | 1,857,504 | $\ldots$ |  | $5 \cdot 35$ |
| . 1881 | ... | ... | 1,991,832 | 131,327 | $7 \cdot 2$ | $5 \cdot 38$ |
| 1891 | ... | ... | 2,223,378 | 231,546 | $11 \%$ | $5 \cdot 58$ |
| 1901 | ... | ... | 2,590,158 | 375,780 | 16.1 | 6.06 |
| 1911 | ... | ... | 2,968,247 | 369,082 | $14 \cdot 2$ | 6. 52 |
| 1921 | ... | ... | 3,211,304 | 243,064 | 882 | $6 \cdot 75$ |

The urban population has increased by 72.9 per cent. since 1872 , but a considerable proportion of this growth is due to fresh areas having become urban or come to be treated as urban from time to time. The population of the towns which existed as towns in 1872, has increased only $42 \cdot 4$ per cent. Some of the new towns, such industrial towns as Asansol, Titagarh, Kamarhati, Saidpur and Kharagpur, have grown up in what were rural areas in 1872, but on the other hand a number of municipalities have appeared since 1872 where small towns actually existed at the time of the first census. Nawabganj in Malda, Chandpur in Tippera, Sherpur in Bogra and Kharar in Midnapore are examples. Other towns, for example, Khulna, Gaibandha and Kurigram in Rangpur and Pirojpur and Patuakhali in Bakarganj, have acquired importance from having been chosen as centres of administration since 1872. At that date there may have been small urban areas where they now stand, but they must have been so small that they would not have obtained recognition as towns by the standards of the present day. The variations of the town population at successive decades, calculated from the population at the beginning

| Decade. | Variation in <br> urban population. |  |  |
| :---: | :---: | :---: | :---: | | Variation in |
| :---: |
| total population. | and end of each decade in towns which existed as towns at the beginning of it, are given in the margin, and against them for convenience of comparison are placed the variations in the total population of the Province. It will be seen that since 1881 there has been a steady growth in the town population and the rate of it has been closely related to the rate of increase in the whole population though it has generally been some 4 per cent. greater in the towns. Too much weight must not be given to the fact that the Census of 1881 showed nearly all the towns in the Province smaller than in 1872. The methods of enumeration used in 1872 involved the inclusion of number of persons in the town population who had merely come into a town for the day and would not have been included by the methods of enumeration which have been used on subsequent occasions. The figures in the fifth column of the table given above indicate that there has been some increase in the proportion which the urban population bears to the population of the province as a whole, but the fact that there are instances of localities now recognized and treated as urban which existed in very much their present state in 1872 but did not then obtain recognition, makes the progress in this direction somewhat less than the figures indicate.

The small urban population found in Bengal contains a large proportion of foreigners. The people of Bengal do not take kindly to town life and there is none of that rush to the town which has been the characteristic of the
movement of population in England in the last century. The contrast is brought out by the following figures, and by Diagram No. 32 :-

Pbrcbetage of the total.
Population mhice was

| Bengal. | England and Wales: |
| :---: | :---: |
| 5:35. | 61.8 |
| $5 \cdot 38$ | $62 \cdot 9$ |
| 5.58 | 72.0 |
| 6 -06 | 77.0 |
| 6.52 | $78 \cdot 1$ |
| 6.7 | $79 \cdot 3$ |

The distribution of the urban population according to the size of the towns it lived in at the time of successive census enumerations is a matter of some interest. The figures are given in the following table for the last four censuses:-

|  | 1021. ${ }^{\circ}$ |  | 1911. |  | 1001. |  | 1801. |  | PER OEXT. OP TOTAL POPULATIOR. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. of places. | Population. | No of pleces. | Popalation. | No. of places. | Popalation. | Na of places | Population. | 1081. | 1911. | 1801. | 1891. |
| TOTAL population of ermal. |  | 47,592,462 | $\cdots$ | 48,305,170 | $\cdots$ | 42,881,359 |  | 30,005,527 |  | $\cdots$ | $\cdots$ | $\cdots$ |
| URBA ${ }^{\text {a }}$ TERRETTORY ... | . 138. | 3,211,304 | . 124 | 2,968,247 | 122 | 2,599,158 | 108. | 2,223,378 | $8 \cdot 7$ | B\% | $8 \cdot 1$ | $8 \cdot 6$ |
| 1. Towns of 100.000 | 8 | 1.72t. 802 | 3 | 1,583,084 | 2 | 1,005,893 | 5 | 798,911 | $2 \cdot 8$ |  | 93 | 27 |
| 11. Towns of 30,000 to | 4 | 241.908 | 2 | 104.141 | 1 | 80,733 | $r$ | 81,385 | 3 | -2 | -2 | - 9 |
| III. Towes of 20,000 to | 13 | 888,774 | 48 | 793.958 | 18 | 504,384 | 16 | 460.686 | 1.9 | 17 | 10 | $1 \cdot 2$ |
| IV. Towns of 10,000 to | 87 | 517,688 | 40 | 840,883 | 47 | 689.186 | 41 | 1 574.878 ${ }^{\text {i }}$ | 1*1 |  | .1'6 | 1.4 |
| v. Towis of B.Ow to 10,000. | 40 | 284, 0 :3 | 34 | 251,116 | 37 | 970,020 | 34 | 265,186 | * 8 | -8 | $\cdot 8$ | -7 |
| V1. Towns onder 8,000 | 18 | 57.301 | 17 | 61.133 | 17 | 46,365 | 18 | 49,196 | $\cdot 1$ | $\cdot 1$ | ${ }^{1} 1$ | - |
| Rural Territory ... ... | $\cdots$ | 44.381,158 | $\cdots$ | 43,336,9!3 | ..* | 40,288,201 | - ... | 35,582,149 | 23.3 | 03.6 | 98:9 | N•4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

That a greater proportion of the urban population of Bengal, 732 per mille, live in towns with over 20,000 inhabitants than is the case in India generally, is due mainly to the great size of Calcutta, but it is also true that there are not many very small towns in Bengal. Less than 11 per cent- of the urban population in Bengal live in towns with less than 10,000 while in India as a whole no less than a quarter live in towns as small as this. The small proportion living in little towns in Bengal is accounted for by the manner of life of the rural population. As it is explained towards the end of this chapter, the Bengali cultivators do not live congregated in villages, as the term village is generally understood. Consequently there are no overgrown villages which have come to be treated as towns. In other Provinces it is often difficult to draw the Iine between an important village and a town. In Bengal there is no such difficulty. The little towns have little in common with the rural area about them. They have appeared as something distinct from the places of habitation in rural areas. They are many of them centres of administration and all to some extent centres of trade and widely separated from their nearest neighbours that bear the same character. While the proportion of urban to rural population has been very slowly growing, the proportion of the total population living in towns with less than 10,000 inhabitants has remained remarkably level. The proportion living in towns with more than 100,000 has increased only at the same rate as the proportion of the urban population as a whole to that of the province. Among towns of more moderate size there seems to have been a decided tendency towards congregation of the population in towns with more than 20,000 in preference to towns with between 10,000 and 20,000 . One must, however, be careful to avoid drawing conclusions in such a matter as this without fully appreciating what the
figures really mean. figures really mean.

The figures given in the table above are those of the various classes of grows, it may pass from one class to another and indeed much of the vanatuon grows, it may pass from one class to another and indeed much of the variation shown in the total population in each class from census to census is due to towns having so passed. For instance, the population in towns with bet ween 50,000 and 100,000 has increased by 150 per cent. since 1911 partly because Maniktola and Bhatpara have grown, but mainly because Cossipore-chitpore and Titagarh have passed up out of the class with between 20,000 and 50,000 inhabitants.

In Subsidiary Table III printed a the end of this chapter an attempt is made to indicate the variations which have taken place between successive censuses in the numbers inhabiting towns classified according to size. The figures in columns 5, 6, 7, 8 and 9 show the proportionate variation during each intercensal period in the population of groups of towns which fell into certain classes according to size at the time of the Census of 1911. Every column does not, however, deal with precisely the same towns as the other columns for figures for towns new within a decade or newly treated as towns for the purposes of the census at the end of it, have been excluded from the figures of that census before comparison was made with the figures of the census before. The variations in every case represent real quantities, namely, the variation of population of certain groups of towns. Similarly the figures in column 10 represent the variations in real quantities, the population of certain towns which existed in 1872 and are classified according to their size at the Census of 1872 . The figures in column 11 do not, however, represent variations in the population of any definite localities. They are, in a sense therefore, unreal variations and are of interest only in giving a certain insight into changes in the proportion of the urban population which prefers to live in towns of various sizes, and even in such a connection they must be used with care. The limits chosen for the purpose of classificaton of towns by size are necessarily arbitrary. The character of a town does not change appreciably when a few score added to its population transfers it from one class to another. The proportion of the urban population which prefer: to live in towns of a certain size changes throughout the intercensal period, but can only be measured at each census. By comparing the proportion at two censuses, one is led into comparing the population of somewhat different localities. Enquiry is being made to discover the relationship between the strength of a tendency for towns to grow and their size, but the characteristics of the population of localities included at one time and excluded at another, though it inay be small compared with the total population dealt with, may so far affect the results as to hide the true relationship. It is necessary, therefore, for the sake of such an enquiry in respect of two censuses to classify the towns according to their size either at one census or at the other and use that classification in arranging the figures of both censuses before comparing them. The following table shows the population of the towns placed in six classes according to their population in 1921, and gives a comparison with the population of the same towns in 1911 classified in the same way:-


The figures in the last column are comparable with those in column 6 of Subsidary Table III for the variation between 1901 and 1911 in the population of towns classified according to their size in 1911, i.e., at the end of that intercensal period. In both decades, 1901-11 and 1911-21, it was the towns with 50,000 to $100 ; 000$ inhabitants which were growing fastest; next the towns with 20,000 to 50,000 . In 1901-11 towns with 10,000 to 20,000 followed; but during the last decade these have fallen behind the towns with 5,000 to 10,000 and the largest towns with over 100,000 .
78. Cities: Calcutta.-Census statistics for Calcutta with its five suburban municipalities in the 24-Parganas, Cossipore-Chitpore, Maniktola, Tollygunge, the South Suburbs and Garden Reach, and Howrah across the Hooghly, have been compiled and published in a volume separate from the volume of Tables for Bengal, and a separate report has been published dealing with them. To these two volumes the reader is referred for a fuller account of Calcutta's population than is to be found here and in the Census Tables for Bengal. The population of the City and Suburbs in 1872 was 800,697 without Tollygunge and the South Suburbs which had not yet become municipalities and for which, therefore, figures are not availble. The population of the City and its Suburbs at successive census enumerations after 1872 has been as given in the margin. The City itself lost $5 \cdot 6$ per cent. between 1872 and 1881, though the difference may be accounted for in part by differences in the manner in which the first envmeration and subsequent enumerations were carried out. It gained $\mathbf{1 2 . 5}$ per cent. in 1881-91 and $24 \cdot 7$ per cent. in 1891-1901. In these two decades
 Since 1901, however, the City has had little room for expansion, and improvements have been undertaken at public expense which have aimed at remonng congestion. Especially during the last decade large areas have been acquired and cleared, new roads have been opened, existing roads widened, re-housing schemes undertaken and small open spaces provided both by the Corporation and at the hands of the Improvement Trust. Ultimately, when the building of the frontage on such important thoroughfares as the new Central Avenue, widened Park Street, the Maniktola Spur, etc., have been finished, the acquisitions for the Improvement Trust will be found to have increased rather than diminished the housing accommodation of the city, as it has certainly done in the case of the Trust's first scheme in Surtibagan, but at the time of the Census of 1921 no new buildings on the frontage of Central Avenue had yet been occupied and few on the sites of other improvement schemes. The result has been that since 1901 the tendency has been for Calcutta to overflow into its suburbs. The increase in the city itself was $6: 3$ per cent. in 1901-11 and 2.8 per cent. in 1911--21, while the suburbs in the 24 -Parganas grew by 40.3 per cent. and 13.8 per cent. The acquisition and clearing of a wide area for the new King George Dock has helped to keep down the population of the south-western Wards of Calcutta itself and that of Garden Reach, which gained no less than 60 per cent. in 1901-11, but during the last decade less than 1 per cent. A remarkable feature of the progress of Calcutta of recent years has been the increase in the suburban passenger traffic in and out of it. The number of season ticket holders to the termini of the railways was 103,227 in 1910 and had increased by 1920 to 291,483 . Nearly all these persons come into Calcutta daily, and the figures, therefore, indicate that the Calcutta popslation is regularly supplemented to the extent of more than 20 per cent. by daily passengers by rail. Up to the end of last century Howrah grew with even greater rapidity than Calcutta itself: 28.4 per cent. between 1881 and 1891 and $35 \cdot 2$ per cent. between 1891 and 1901. . In the
last 20 years, as in the case of Calcutta, the increase has been considerably less, 13.8 per cent. in $1901-11$ and 9.1 per cent. in $1911-21$. The bealth of Calcutta has improved very much of late years, but that of the suburbs has apparently deteriorated. The average recorded death-rate in them for the last decade is double what it was for the decade before, and conditions in them show signs of becoming a grave menace to the health of the city itself. Calcutta and its suburbs with $1,327,547$ inhabitants dwarfs every other city in India but Bombay with its $1,175,914$ and is the second city in the Empire. It is nearly half as large again as Birmingham the second city in England, and considerably larger than Glasgow. The cities of the world which are nearest it in size are Osaka in Japan with $1,252,972$ inhubitants and Hankow in China with $1,443,050$.

Howrah Municipality has a population of 195,301, Maniktola 67,372 and Cossipore-Chitpore 56,474, and each, if it stood alone, is large enongh to be called a city. Outside Calcutta and its suburbs Dacca alone deserves the appellation. Bhatpara Municipality on the Hooghly in Barrackpore subdivision has a population of 65,609 and Titagarh close to it 52,451 , but both are modern and neith.r has any importance as a centre for the area adjoining nor any of the traditions of a city. It has bappened only that these two municipalities cover larger areas than others of the same character side by side with them and include numbers of large jute mills with their great

> Dacca
labour population. Dacca as a city is certainly
three centuries older than Calcutta, and was perhaps as large as it is now hefore Calcutta was more than a collection of rural villages. It was the Moghul capital of the Subah of Bengal, the cantonment of a considerable military force, the base of the Navy formed by Shaista Khan which even more than the Army was the mainstay of Moghul power in the province, the centre of thriving cotton industry and the great mart of Eastern India. With the removal of the Viceroy's headquarters to Murshidabad that he might be nearer to the point from which danger threatened in the 18th century, his south-western frontier, and the decadence of the cotton industry. Dacca entered a period of decline. Since the first Census of $18: 2$, however, its population has increased by $74 \cdot 1$ per cent. and it has now 119,450 persons living in an area of 3,762 acres. The increase is to be attributed to the great increase of population of Eastern Bengal of which Dacca is the metropolis rather than Calcutta. The increase in the city was as much as 21.0 per cent. between 1901-11 during which period Dacca became once more a provincial capital and the seat of the Government of Eastern Bengal and Assam. It was a heavy blow for Dacca when the partition of Bengal was set aside, and in 1912 the city lost its position as a provincial capital after enjoying it for only seven years. But it is the centre of the most prosperous agricultural part of Bengal, is comparatively a healthy town and has continued to develop as an educational centre. The increase during the last decade has been only !alf that of the decade before, but it is still 10 per cent., considerably more than the increase common to the country towns of Bengal Eight hundred and forty per mille of its inhabitants were born in Dacca district and the number of females per thousind males is as much as 774. Well over half the population appears to consist of the people whose home is Dacca City, and it seems to be of a good healthy stock, about half being Muhammadan. Among the cities of India l)acea comes twenty-eighth. The others nearest it in size are ${ }^{5}$ Aeerut 122,609, Jaipur 120 207, Trichinopoly 120,422, Patna 119,976, Shol? pur 119,581 and Surat 117,434. Dacca is not quite half as large as Lucknow, and rather less than half as large as Bangalore, including the cantonments in both cases. It is not quite so large as Norwich in England, 120,653, rather larger than Amoy in China, 114,000 , and about the same size as Nancy in France was in 1911, 119, 949.

- There are seven Wards in Dacca Municipality. The population of each in 1911 and in 1921 is given in the
 the marginal table along with the density per acre in 1921. All parts of the town have shared in the increase of population. The density is greatest in Wards 5 and 2 which lie wholly in the old town. In this quarter many of the houses are threestoried and are very closely packed. Wards 1, 4, 7, and 3 follow in order of density and each of them extends to the less closely packed outskirts, as well as including portions of the town proper. Ward 6, the least densely populated, does not extend into the congested part of the town. The Ramna civil station with its large open space containing the race course is by far the least densly populated part of the city. It is not included in any of the seven Municipal Wards. Hindus aré 57.9 per cent. of the total population. Three Wards are predominantly Hindu; in Ward 2 the proportion is $\mathbf{7 6 . 1}$ per cent., in Ward 3 it is $75 ; 9$ per cent. and in Ward $1,68 \cdot 8$ per cent. Two Wards are about equally divided between Hindus and Muhammadans; Hindus form 52.4 per cent. in Ward 7 and 50.0 per cent. in Ward 5. Muhammadans predominate in Ward 4 where Hindus are only 31.4 per cent. and in Ward 6 where they are 36.8 per cent. Christians are 710 in all. The greatest number are found in Ward 1. Those of other religions are no more than 279 altogether.

79. Two classes of towns.-The other towns of the province vary considerably in character, hut can be divided into two classes. . On the one hand there are the sleepy country towns with no organised industry and only local importance in trade. serving the country round in distributing cloth, salt. kerosine oil and other commodities which the rural population requires and cannot obtain from the hand. To this category belong most of the headcuarters of districts and subdivisions, and places old in history like Murshidabad, Old Malda, Nadia (Nabadwip) and others less famous. On the other hand, there are fowns which have sprung up as the homes of industry and commerce, such as the mill municipalities up and down the Hooghly, the railway centres and the centres of jute collecting trade.
80. The Industrial and Commercial towns.-To obtain statistics to represent the character of the population and the growth of the typical industrial or commercial town figures have been collected for the following :-
Cossipore-Chitpore.
Maniktola.
Garden Reach.
Howrah.
Bhatpara.
Titagarh.
Baidyabati.
Champdani.
Bhadreswar.
Serampore.
Rishra-Konnagore.
Halisahar.
Naihati.
Kamarhati.
Khardah.
Baranagar.
South Dum-Dum.
Garulia.
Budge-Badge.
Ottarpara.
$\quad$ Jhalakati.

Bally. Kharagpar. Kanchrapara. Saidpur. Asangol. Raniganj. Narayanganj. Madaripur. Chandpur. Chittagong.

The first four are the inumediate suburbs of Calcutta. The next seventeen are the mill municipalities. Then come four railway centres and Raniganj, the three most important centres of the jute-collecting trade, the port of Chittagong, and Jhalakati, one of the most important commercial centres in Eastern Bengal and the centre of the betelnut trade.
81. The country towns.-Similar statistics have been collected for the following country towns:-

| Arambagh. | Faridpur. | Midnapore. |
| :---: | :---: | :---: |
| Azimganj. | Ghatal. | Murbhidalasi. |
| Bajitpur. | Gobardanga. | Nadia. |
| Bankura. | Hookhly-(\%insura. | Nator. |
| Tansburia. | Salpaiguri. | Noakhali. |
| Barisal. | Jamalpur. | Old Malds. |
| Morhampore. | Jaynagar. | Pabna. |
| Bishnupur. | Jessore. | Ramjibanpar. |
| Bogra. | Kalna. | Rampur-bualia. |
| Brahmaubaria. | Kandi. | Ranaghat. |
| Burdwan. | Katwa, | Rangpar. |
| Chakda. | Kirpai. | Santipur. |
| Chandrakona. | Kishoreganj. | Satkhira. |
| Comilla. | Kotchandpur. | Sherpur (Mymunaingh). |
| Cooch Behar. | Krishnagar. | Suri. |
| Dainhut. | Kumarkhali. | Taki. |
| Dinajpar. | Kushtia. | 'Iamluk. |
| English Bazar | Meherpur. | Tangail. |

Such towns as were not nunicipalities at the time and for which figures are not therefore available from the figures of the Census of 1872 have not been included, nor such a town as Mymensingh which is of considerable importance in the jute trade. The statistics obtained from the figures for these towns may fairly be taken as representing the characteristic of the average country town.
82. Comparison between the two classes.-The size and growth of the average town of each class is shown by the following figures:-

|  | Population. |  |  |  |  |  | leghgntane vahiation. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| . | 1021. | 1911. | 1001. | 1891. | 1981. | 1875. | 1911-51. | 1001-11. | 131-1003 | 1881-81. | 1878-81. |
| The ararnke Country Town ... | 18.880 | 18,887 | 18,084 | 18.030 | 18,708 | 12,528 | $+20$ | +47 | 0 | +1'6 | -8.3 |
| Tho arernge Induatrial or (:ommerchal Town. | 30,848 | 28,888 | 28,199 | 20,003 | 17,233 | 18.742 | +8*8 | +3011 | +109 | +16. | -8.1 |

The figures of 1872 are not of much value for, as has already been mentioned, they are not.safely comparable with the figures of subsequeut censuses. The average country town has hardly grown at all in half a century and is much smaller and far more widely separated from others than the average town which is its nearest counterpart in Europe. The typical industrial and commercial centre is more than twice as large as the average country town in Bengal and has grown rapidly since 1881. It was not possible to exclude towns, which had appeared since 1872, from the list of industrial and commercial towns, as was done in the case of country towns, and still keep it representative. Many of the industrial centres have become towns since 1872 and though the ayerage population at each census is the average only for the towns in existence at the time, the towns which have been added from time to time were small when they were first given municipal status, and each addition therefore brought down the average. The average has been brought further down by the formation of Halisabar as a separate town out of part of Naihati in the decade before last, and by carving Champdani, Rishra-Konnagar and Khardah out of existing municipalities in the last decade. If these separations had not bew carried out, the average industrial town would have increased
33.4 per cent. instead of 29.0 per cent. in 1901-1911 and 16.9 per cent. instead of 6.3 per cent. in 1911-1921. In spite of the fact that the average industrial and commercial town has grown 71 per cent. since 1881 and the population inhabiting such towns has more than doubled, the average town of the sort is still small compared with its European counterpart.
83. Proportion of the sexes in towns.-Much insight into the character of the population of towns is obtained from the figures giving the proportion of the sexes. In the following table the number of females per thousand males at each successive census in the average country town and the average industrial and commercial town is compared with the number in Calcutta city and in the Province as a whole :-

FEMALES PER HOOMALES AT SUCCESSIVE CENSUSES.


|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1872 | 1881. | 1891. | 1801. | 1911. | 1031. |
| The average country town -. -. ... | 967 | 971 | $0 \times 3$ | 863 | 841 | 816 |
| The avernge ladutrial or commerctal town | . 788 | 767 | 88 | 008 | 582 | 537 |
| Calcuttes City $\quad-\infty \quad .-\infty$ | *s | 658 | 525 | 807 | 475 | 470 |
| Bengal $-\cdots-\infty$ | cos | 04 | 073 | 960 | 945 | 939 |

84. Industrial or commercial towns.-There is more immigration inte Bengal from other provinces than formerly and the number of females jer thousand males has steadily decreased, although the disparity shown is a deficiency of only 68 females against every thousand males. The census of towns included more people in 1872 than did subsequent censuses who had come in for the day and these were mostly men. The number of females per thousand males has gone down steadily at every census since 1881 not only in Calcutta and the average industrial or commercial town but also in the average country town. In Calcutta City males outnumber females by distinctly more than two to one, but the change in this respect since' 1881 is by no means so remarkable as the corresponding change in the average industrial or commercial town. In 1872 the proportion of the sexes in the latter was much as it is in the average country town to-day. Now the proportion is not far different from the proportion in Calcutta. The influx of male labourers many of whom have come for comparatively short periods and left their womenfolk behind has steadily increased. As in Calcutta where there are only 374 married females per 1,000 married males and only

47 per cent. of the women were returned as married, the great predominance of males involves a great increase in sexual immorality, and its presence in turn tends to discourage men from bringing their wives to the towns with them. The great change in this respect which has come over the average industrial or commercial town is a matter of serious import, not only when the welfare of the labouring classes is concerned, but from the point of view of the employer. The disparity between the sexes is more marked in a number of towns even than in Calcutta. The number of females per thousand males is:-
421 in Chandpor,
434 in Champdani,
436 in Titaghar,
438 in Budge-Budge,
439 in Kanchrapara,
494 in Chittagong,

421 in Chandpar,
$4: 36$ in Titaghar,
438 in Budge-Budge, 494 in Chittagong,

> 506 in Naibati,
> 520 in Howrah, 520 in Bally,
> 521 in Bhadreswar,
> 538 in Kamarhati,
> 547 in Rishra-Konnagore, and 574 in Narayanganj.

The male labourers being nearly all married, each with a wife of his own somewhere, this disparity means that most of the workers are leading an unnatural existence, missing the comforts of home life, exposed to the greatest temptation towards intemperance, and ambitious, so far as they have any ambitions, only to earn enough to take them home. It is not surprising that their employers find they have little heart in their work, and that they are notoriously unsteady. In Chandpur, Chittagong and Narayanganj there are no female labourers while there is employment for a certain number of females in the mills near Calcutta. The railway centres (except Kanchrapara) show less disparity between sexes than the mill towns. The proportion is 668 females per thousand males in Kharagpur and 713 in Asansol. The reason seems to be that a large proportion of the employees in railway workshops are skilled men who serve continuously for longer periods than the mill hands and have brought their wives to live with them. The comparatively slow rate at which the sex proportion in Calcutta has changed of recent years seems to indicate either that the improvements which are being made in the city are checking the reduction of the number of females or that a limit is about to be reached. There is little indication that there is an approach to a limit in the industrial and commercial towns outside.
85. In country towns.-l'o many the decrease in the proportion of females in the average country town at more than double the rate of decrease in the province as a whole and two and a half times the rate in rural areas may come as a surprise. Some would have expected signs to show that the advantages of municipal conservancy, a good water supply, and the other amenities which town life affords were beginning to be appreciated and to attract families to the towns. The reverse seems to be the case. The number of men who are able to find employment in towns whether professionally in the law, in medicine and in the lower grades of administrative service, or as shopkeepers and servants, has increased. The male population of the average country town has increased, but an increasing proportion leaves its women-folk behind in the country and the total population is almost stationary. Town life is not the normal life of any section of the Bengalis. They dislike it and do not seem to get over their dislike. The pleader, the clerk, the school master and the shop-keeper whose work is in the town each has a house of his own or belonging to his family somewhere in the country. There his family can live far more cheaply than in the town and the practice of keeping up two establishments seems to be on the increase. Partly this is due to the difficulty of obtaining accommodation in towns especially by Muhammadans, for the landlords are commonly Hindus who object to a Muhammadian tenant, but mainly it is to be put down to the purdah system. A small section of the upper classes is beginning to relax its rigour, but there is no sign of such relaxation among the middle classes, and the lower classes in imitation of the habits of their speriors are enforcing it among themselves more rigorously than formerly. The decade from 1911 to 1921 is the first in which the population of the average town has increased faster than the population of Bengal as a whole. The increasing disparity between the
sexas however proves that this is no indication that town life is becoming more popular. A filtered water supply has been installed in 15 towns in Bengal in the decade and there are good groands for believing that the generad health oi towns compared with the country has improved, althongh the rital statistics of municipal areas are so unreliable as to be useless as evidence on the point.

If further evidence is required of the unpopularity of town life among the people of Bengal it is to be found in the decadence of almost every town which is not an industrial centre, and has not been made a centre of administration. Almost every such town in the province has lost population at almost every successive census. The following are examples:-


Towns of this class are also remarkable for their high proportion of

## Suriper.


دамерipor.
Socmanti.
Datiun (Nursbidebai).
Tati (24-Prgean)
Danint (BRodime),
Girpei
Yinaper (Jesocre). women. There are only nine towns in Bengal with more females than males. Their names are given in the margin. Only one of them, Jangipur, is a subdirisional headquarters and none are the headquarters of districts. As might be expected in the old towns, which are inclined to decadence, there are few immigrants, the more promising of the youth of the old families seek employment elsewhere. and the proportion of females among those who are left is as high or higher than in rural areas.
86. Age constitution of the urban population.-Although the census tables referring to age were not separately prepared for the orban and rural population of the province, certain large towns, those with more than some twentr-five thonsand inhabitants each, were treated as separate onits when abstraction and compilation for Imperial Table VII was undertaken. For the towns mentioned on the margin figures in the form of Table VII were thus available and though they have not been printed with those for Calcutta, its suburbs in the 24 -Parganas, Howrah and Dacca in Table VII, Part C, they have been made over to the Director of Public
 Health in manuscript. The figures have been prepared direct from the census returns, which showed all the vagaries, the preference for ages given in ronnd numbers, for multiples of five and for figures ending with 2, exaggertion in certain age periods and nuderstatement in others and so on, which are to be found in age returns at an Indian census and are described in Chapter $V$ of this report. These however affected the figures for all towns as well as for rural areas in much the same manner, and the crude figures are therefore of value in comparing the age constitution of the population of one town with that of others and with that in rural areas. The following table shows the distribution of males and females in a series of age periods for Caicutta and its suburis. for the four mill towns, Bhatpara, Serampore, Titaghar and

Bhadreswar, for four country towns Burdwan, Berhampore, Santipur and Midnapore, and for the Province as a whole:-

|  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - |  | Onbuite and alluarim. | Mill Lownt. | Country towns, | Provincenes 4 wlusk. | Cantenth: and | Y 111 comn. |  |  |
| 0-6 | $\ldots$ | bb8 | 528 | 804 | 1,209 | 1,049 | 46 | 981 | 1,37! |
| 6-10 | ... | 661 | $68:$ | 1,022 | 1,54t | 1,1:2 | 1,070 | 1, 15,4 | 1, 616 |
| 10-15 | $\cdots$ | 801 | 889 | 1.108 | 1,247 | 698 | $8 \times 1$ | 954 | 1,11:1 |
| 16-\% | ... | 924 | 991 | 9177 | 896 | 931 | 841 | 1,1:17 | 1.1937 |
| 20-819 | ..' | 4,646 | 2,635 | 2,1776 | 1,739 | 2,098 | 2,244 | 1,920 | 1,9:4 |
| 30-40 | ... | 2,184 | 2,29! | 1,753 | 1,4 $\mathrm{BL}^{\text {d }}$ | 1,647 | 1,799 | 1,551 | 1.24: |
| 40-50 | ... | 1,303 | 1,430 | 1,2114 | 961 | 1,036 | 1,1077 | 1,118 | H11 |
| 60-60 | ..0 | 865 | 491 | 621 | 816 | 638 | 620 | 715 | 1!5 |
| 60 and over | $\bullet$ | 364 | 252 | 385 | 4193 | 557 | 4 E 2 | 023 | 430 |

The diagram printed on this page is designed to illustrate these figures and to indicate not merely the age distribution in each sex, but also the sex proportion in each case. Thus the lengths of rectangles on the rigth hand side of the dagram represent the number of females in the several age periods, according to the tables above, reduced in the proportion of the number of females per thousand males, i.e., in the case of Calcutta and its suburbs by ${ }^{3}, 0 \%$ in garh, Serampore and Bhadreswar there are 482 females per thousand males,
 Midnapore and Santipur there are 875 females per 1,000 males and in the case of the Province as a whole by $T .0^{\circ \prime \prime \prime 0}$

> AGE DISTAIBUTION OF OCOOMALEE ARO THE COAP.ESPONDNG NUMBER OF FEMALES
> IH CALCUTTA, THE NOLLTOWHS, THECOUNTRYTOWHIS AND THE PGOVINCE ASA WHOLE

olagram nezs.
The figures show at once that the age distribution of females in towns is by no means so abuormal as that of males. The explanation is that there are very many fewer females than males, and a mucu larger proportion of such females are members of families living in the towns as family units, than the corresponding proportion in the case of males. The next point to notice is that though the age constitution of the population of Calcutta and its suburbs is very far from normal, that of the population of the mill towns is even more so. The population of the country towns has most of the veculiar characteristics shown in Calcutta and the mill towns, but in a far less marked degree.

To consider first the age distribution of males, Calcutta and its suburbs have less than half the normal proportion of male children. Only $12 \cdot 19$ per cent. of its male population is below the age of 10 against 27.53 in the Province as a whole. The proportion in the mill towns is only $11 \cdot 13$ per cent., while in this matter the country towns with 18.86 per cent. fall about haif way between Calcutta and the normal. In the age period $10-15$ the mill towns have a larger proportion than Calcutta, for mill towns afford more seope for employment of children of this age than Calcutta does. The proportion between 15 and 20 rises in Calcutta just above normal, and somewhat higher in the mill towns. In the country towns the proportion in the age period 10-15 approaches the normal and passes it in the period 15-20. The explanation is to be found in the educational facilities offered in such towns. Many boys of the better class are sent in from the country either to live with
relatives or in hostels and to attend schools and colleges. In the ages from 20 to 40 the proportion both in Calcutta and in the mill towns is even further from normal than it was in the ages of childhood, but the divergence is in the opposite direction. No less than $48 \cdot 34$ per cent of the males in Calcutta are hetween $20-40$ against only $32 \cdot 24$ per cent. in the Province as a whole. The mill towns with $49 \cdot 34$ per cent. of their male population between 20 and 40 again show themselves further from the normal than Calcutta, while the country towns with $38 \cdot 29$ per cent. again appear about half way, rather iess than half way, in their divergence between Calcutta and the Province as a whole. The excess of males in middle age in the towns shows itself again in the age period $40-50$. Males over 50 are only $7 \cdot 43$ per cent. in the mill towns, against the normal $9 \cdot 19$ per cent., but they are just as many in Calcutta as in the Province as a whole, and are decidedly more, 11.06 per cent., in the country towns. The old man is not wanted in the mill towns, but he does not appear to find himself driven from Calcutta, and he lives on in the country town rather than return to rural areas.

Small girls seem only a little less numerous in towns generally than small boys, but among the much smaller numbers of females than of males they form much larger proportion of the female papulation than the small boys form of the male population. The mill towns and the country towns have much the same proportion of their female population in the age period $0-10,20 \cdot 67$ per cent and 20.92 per cent. respectively. The normal is 29.75 and Calcutta with 22.01 is nearer to it than either of them. There is not much sign of withdrawal of girls between 15 and 20 either from. Calcutta or the mill towns for the drop in the figures for the ages between 10 and 20 below :he figures for the earlier ages is no more considerable than in the Province as a whole, and the figures seem to show an ingress of girls of this age into the country towns. The drawing of conclusions from the figures is, however, complicated by the universal understatement of the age of girls who are growing up but whose fathers have not been able to marry them, and of girls who are married but are still living with their parents. People living in towns are commonly better off and may be expected to have less difficulty in marrying their daughters than people living in rural areas. Moreover, the age $10-20$ for wives corresponds to $20-30$ for husbands, and at the age 20-30 there is a disproportionately large continent of males in the towns. The larger proportion of girls from $10-20$ in the country towns than in Calcutta is explained by the fact that it is easier for men from $20-30$ to take their wives to such towns than to the Metropolis. Women between 20 and 40 form a higher proportion of the females in mill towns than they form in Calcutta and in the country towns. Again the figure for the country town is about half way between that for Calcutta and the normal. In the case of the country towns the proportion is not higher than in the Province as a whole than would be accounted for by the low figures for little girls in them. In the mill towns the females of this age are supplemented by the women from other provinces whose customs do not prevent them from going out to work, ant who find employment in certain factory processes, sometimes to the exclusion of men. The proportion above 50 years old is high among the wornen in the country towns and in Calcutta, but in mill towns not much higher than the normal.
87. Birtinplace of the urban population.-The remarks which have been made regarding the birthplace statistics in Chapter II of the Census Report for Calcutta and its suburbs show that its population is made up of people from many different places, and some from great distances. Taking Calcutta
 and its suburbs together 471 per mille of the inhabitants were born either in the City itself, or in one of the two neighbouring districts, the 24-Parganas and Howrah, 167 in other parts of Bengal and 362 outside the Province. The figures in the marginal table may be compared with these. They have been compiled for four mill towns, Serampore,
Bhadreswar, Titagarb and Bhatpara and for four country towns, Burdwan,

Midnapore, Santipur and Berhampore. The bulk of the population of the country towns was born either in the towns themselves or in the adjoining district. Rather less than half the population of Calcutta was born as clows to its present residence. In the case of the mill towns the proportion is reduced almost to one-fifth. Immigrants from more distant parts of the Province are slightly more numerous in proportion in the country towns than in the mill towns and considerably more numerous in Calcutta than in either. Only 8 per cent. of the people of the country towns were born outside Bengal. The proportion in the case of Calcutta is about one-third, but in the case of the mill towns it is considerably over two-thirds. This extraordinary proportion is exceeded in Titagarh where no less than 00 per cent. of the inhabitants were born outside Bengal and in Bhadreswar where the proportion is 79 per cent. The figures are remarkable as showing to how great an extent industrial development in Bengal, as shown by the growth if these towns, is the work of the up-country people and not of the Bengalis at all. These towns are no more than colonies of up-country men and even though industrial progress has been going on for several decades the population still remains immigrant. A few workers have children with them who were born since they immigrated, but practically none have settled down and brougin up their families to maturity to swell the number of the native born. It is therefore too much to describe the towns as colonies of up-country men. They are no more than their temporary habitations. It is interesting to note how large a proportion of the population of these mill towns comes from a closely circumscribed area on the borders of Bihar and the United Provinces. No less than 14,350 persons found in Titagarh, 27.3 per cent. of the population of the town were born in the six adjoining districts, Patna, Gaya and Shahabad in Bihar, and Ballia, Ghazipur and Benares in the United Provinces. 12,842 persons in Bhatpara, 22:7 per cent. of the population come from the same six districts; 4,330 persons in Bhadreswar, 19:6 per cent. of the population come from the same parts. Those from the same parts in Serampore are fewer but amount to 6.6 per cent. of the population. Another $12 \cdot 3$ per cent. of the inhabitants of Titagarh, $7 \cdot 1$ per cent. of those of Bhatpara, $7 \cdot 3$ per cent. of those of Serampore and $6 \cdot 7$ per cent. of those of Bhadreswar come from Cuttack and Balasore in Orissa.
88. Constitution of the population of industrial towns in Bengal and in England compared.-In England employment in industry is not of a temporary character as in Bengal, nor is the industrial population immigrant. There are still instances of young men from rural areas migrating to the town in search of work, but the time when industry was manned chiefly by recruits from the country is long past, and even at the beginning of the nimetcenth century the state of things did not approach the conditions in Bengal at present. There is very little sign now-a-days of a predominance of males in industrial centres in England. The predominance of females is less in rural areas than in urban in which according to the Census of 1921 there are 1,025 females per thousand males against 1,101 in the country as a whole. Watering-places such as Bournemouth, Hastings, Eastbourne and Bath are the towns with highest number of females, but such industrial centres as Halifax, Huddersfield, Blackburn and Rochdale are among the towns where teinales greatly predominate. The proportion of London's inhabitants who were born there is as many as 682 per thousand and the proportion is steadily increasing. Of the other large towns in England, Stoke-onTrent, Sunderland, Dudley, St. Helens and Sheffield were those which in 1911 registered the largest proportion of native born inhabitants. Alk are industrial centres. Trise which registered the lowest proportion of native born were not industrial trowns. They were again the watering-places, Bath, Brighton, Hastings, Sounthport, some outlying parts of London and certain towns in the centre of rural arens, Canterbury, Reading and Swindon. Industry in England therefore by no means spells the breaking up the workman's family life or his removal from the place of his birth as in Bengal, though. to those familiar with Indian "onditions only, these are often felt to be necessary corrollaries to the development of industry, and the disturbance of family life which industry in this country has come to involve is one of the reasons which tave in some sense set people against it .
89. Religion in towns.-More than two-thirds of the urban population of Bengal is Hindu by religion while
 the proportion of Hindus in the whole population of the Province is. considerably less than half. The marginal table shows the proportion of the urban population which is Hindu, Muhammadan or of other religions in the several quarters of the province set in juxiaposition for purposes of comparison with the corresponding figures for urban and rural population together. It seems to be a general proposition worth making that minorities are proportionately more numerous in towns than in the country. This is the experience all over India, but an exception must be made in the case of Animists who shun the towns. Animists account for the fact that " other religions" appear less numerous in the towns than in the country in Western and Northern Bengal. Muhammadans are proportionately more numerous in towns than in rural areas only in Western Bengal, where they are in small minority. Christians are proportionately far more numerous in the towns than in the country, and few Jains, Parsis; Sikhs, Brahmos, etc., are found in Bengal except in urban areas.

In Calcutta and its suburbs Hindus are 709 per mille, Muhammadans 245, and Christians 33. The proportion of Muhammadans in Calcutta has been decreasing steadily for some time and in the last decade there has been a decrease in their actual number. Dacca is historically a Muhammadan city but it now contains a majority of Hindus,. 579 per mille, against 413 Muhammadans. The proportion of Muhammadans here, too, is decreasing. 'Twenty years ago Hindus were 535 per mille and Muhammadans 457. The proportion of Hindus in urban areas generally is increasing. It was 671 per mille 20 years ago and is now 694 . There are very few towns indeed in which Muhammadans outnumber Hindus. They are Comilla, Chittagong, Kishorganj, Jamalpur and Sherpur in Mymensingh, Nawabganj in Malda, Sirajganj, and Dhulian in Murshidabad.

The statistics for the average industrial or commercial towns and the typical country town of paragraphs 80 and 81 above show that the proportion of the population in them which belongs to the Hindu, Muhammadan, Christian and other religious compares with the proportion in Calcutta and the Province as a whole as follows:-


The proportion of Hindus in the average industrial and commercial town is slightly higher than in Calcutta. The up-country mill hands are Hindu almost to a man and such towns as Serampore, with 851 Hindus per mille; Baidyabati with 935, Rishra-Konnagar and Champdani with 747 and Titagarh with 725 bring up the average, while the Eastern Bengal commercial towns bring it down. The proportion of Hindus in the average country town is a little lower than in Calcutta, but in urbanareas generally it is very much higher than in the Province as a whole, and the proportion of Muhammadans very much lower. Christians are attracted to the industrial centres in much greater numbers than to the country towns, but even in the latter they form a much larger proportion than in rural areas. Calcutta
has three times as high a proportion of Christians as the average industrial town which has twice as many in proportion to the population as the average ccuntry town, while even in the latter the proportion is ten times as great as in rural areas. Those of other religions in Calcutta are Jews, Jains, Brahmos, Confucians, etc., who are seldom met with outside the city and a few Buddhists. In the Province as a whole the bulk of those of "other religions" are Animists who do not venture to the towns.
90. Proportion of each religion who live in towns.-It is interesting to examine the census figures from another aspect. Subsidiary Table II printed at the end of this chapter gives the proportion of the people in the province of each religion who live in towns, and similar proportions for each division and district. The proportion in the case of Animists is less than 1 per mille. In the case of Muhammadan it is only 35 per mille, just less than one-third of the proportion in the case of Hindus. Rather less than half the Christians 431 per mille live in towns, nearly two-thirds of the Jains and almost all the Parsis. The figures of this table bring out again the preference of minorities for towns. In Burdwan Division where they form a small minority 108 Muhammadans per mille live in towns. The corresponding proportions in Rajshahi, Dacca and Chittagong Divisions are no more than 14, 19 and 12, respectively.
91. The towns of Western Bengal.-There are 33 towns in the Burdwan Division, all municipalities except Kharagpur,

|  | Inhabitants. |  |
| :--- | :---: | :---: |
| Burdwan | $\ldots$ | $\mathbf{3 3 , 3 4 5}$ |
| Serampore | $\ldots$ | 33,197 |
| Honghly.Cllinanra | $\ldots$ | 29,938 |
| Midnapore | $\ldots$ | 28,965 |
| Asansol | $\ldots$ | 26,499 |
| Bankura | $\ldots$ | 25,412 |
| Kharagpur | $\ldots$ | 25,289 |
| Champdani | $\ldots$ | 24,652 |
| Rishra-Kounagar | $\ldots$ | 23,259 |
| Bally | $\ldots$ | 23,209 |
| Bhadreswar | $\ldots$ | 22,081 |
| Bishnupur | $\ldots$ | 19,298 |
| Baidyabati | $\ldots$ | 16,471 |
| Raniganj | $\ldots$ | 14,536 | the railway centre in Midnapore district, and Rampur Hât and Bolpur in Birbhum. After Howrah the largest are those mentioned in the margin. Burdwan owes its importance to being the headquarters of the Burdwan Raj and a district headquarters. It is also of some importance as a railway junction, but it has no industries to attract labour from outside. It has suffered severely from malaria for the last 40 years and has grown little. There has been a decrease of population in the past decade as there would have been also in the decade before but for an extension of the municipal limits. Serampore a subdivisional headquarters in Hooghly district on the banks of the river, is an old Danish Settlement, but it owes its importance in recent times to the jute industry. But for the fact that RishraKonnagar has been carved out of it during the decade and made a separate municipality it would have had a population of $56,456,13 \cdot 8$ per cent. more than in 1911 and considerably more than twice its population in 1872. HooghlyChinsura, the headquarters of the district, was originally a Dutch Settlement. It had a reputation as a health resort and visitors from Calcutta used it as such a century ago, but for the last 50 years it has been malarious. It has no industries of importance, though there are jute mills close to it. and its population has declined since 1872. There has, however, been an increase by 1,022 persons during the last decade. The population of Midnapore was almost stationary from 1872 until 1911, but has lost 3,775 persons during the last decade. Had it been on the other side of the river it might have become the important railway centre that Kharagpur now is, and added to its population the 25,280 persons which Kharagpur contains. But it now appears to be definitely on the decline, since the railway has robbed the Trunk Road into Orissa of its importance as a pilgrims' way as well as a traffic route. Kharagpur is nothing but a railway centre, but it is the largest on the Bengal Nagpur System and has grown very fast. .It was intended as the headquarters of a new district of Hijli to be carved out of Midnapore, but the plan has had to be dropped. Asansol is a railway centre on the East Indian System and the centre of the Raniganj coal field. The headquarters of the subdivision were removed there from Raniganj in 1906, and its population has almost doubled during the last 20 years. Raniganj is a small compact town with Burn and Company's pottery works within its limits, but they are closely circumscribed and the population is about what it was 30 years ago. In the last decade it has declined by 961 . For the sparsely populated

country in which it stands Bankura is a large town. It is healthy and has grown steadily in size of recent years, but part of the increase is due to the extension of municipal limits. Bishnupur, the headquarters of the outlying subdivision of the district, was formerly the larger and more important town; but it lies on the western edge of the unhealthy stretch of country fringing the Old Alluvium, and has grown little since 1872. During the last decade its population has lost rather over 5 per cent. Champdani has been formed out of parts of Biadyabati and Bhadreswar, mill towns on the Hooghly, during the last decade. The population of the three together is greater by. 18,335 than that of Baidyabati and Bhadreswar in 1911, an increase of 40.9 per cent. The two had a population of 23,718 in 1881, barely a third of the present population. Bally is very close to Howrah and was formerly part of the same municipality. It shares in the influx of immigrants to Howrah, and since it is within easy reach of Calcutta, a considerable number of persons whose work is in Calcutta reside there. It grew steadily from 1872 to 1911 hy 63.3 per cent., but during the last decade its progress has been slower and the increase only 3.6 per cent. Uttarpara, just north of it in Hooghly district, is much smaller, but it has grown steadily; and its population has doubled since 1872. Suri, the headquarters of Birbhum, and Rampurhat, Kalna, Katwa, Ghatal, Tamluk and Arambagh, subdivisional headquarters; are not towns of importance. They have not grown much in the last 50 years and have generally lost somewhat in the last decade. Such towns as Dainhat. Snnamukhi, Kotrang, Bansbaria and especially Chandrakhona, Kirpai and Kharar which are not centres of administration are decidely decadent and the last three are rapidly being extinguished.
92. The towns of Central Bengal.-There are 50 municipalities in Central Bengal and one town besides, Beldanga' in

| Bhatpara | Inhahitants. |  |
| :---: | :---: | :---: |
|  | ... | 65,609 |
| Titagarh | -.. | 52.451 |
| Baranagar | ... | 32,084 |
| Borbampore | ... | 26670 |
| Budge-Budge | ... | 25.723 |
| Santipore | ... | 24,792 |
| Naihati | ... | 23.296 |
| Kamarhati | ** | 23.018 |
| Barrackpore | ... | 22,460 |
| Krishnagar | ... | 22,309 |
| Bnairhat | ... | 19.267 |
| Khulas | ... | 16,049 |
| Nadin | ... | 15.584 |
| North Barrackpore | ... | 15.433 |
| Baduris | ** | 14,057 |
| South Dum-Dam | ... | 14.030 |
| Garalia | ... | 13.096 |
| Kandi | ... | 11,787 |
| Rajpur | .** | 11.417 |
| Azionganj * | ... | 10.770 |
| Jangipur | $\cdots$ | 10.739 |
| Murshidatad | ... | 10.669 |
| Kanchrapara | ... | 10,332 |
| Satkhirs | $\ldots$ | 10.299 |
| Panihati | ... | 10.161 |
| Jamare | ... | 10,139 | Murshidabad district. Outside Calcutta and its suburbs the largest are mentioned in the margin in order of their size with the number of inhabitants of each. Of the towns along the Hooghly in the 24-Parganas those which are mill towns have grown very fast. Bhatpara is more than $4 \frac{1}{2}$ times as large as it was 30 vears ago and has increased $30 \cdot 1$ per cent. in the last decade. Titagarh and Budge-Budge have grown from practically nothing since 1891, and by 16.1 per cent. and 43.1 per per cent. in the last decade. Garulia has doubled its population since 1881 and increased $13 \cdot 1$ per cent. in 1911-1921. Baranagar, Naihati and Kamarhati are a little older, but they have grown almost as fast. During the last decade Baranagar has grown ${ }^{-12: 4}$ per cent., and Naihati and Kamarhati 12.8 per cent. each. Kanchrapara, the site of the workshod for the broad gauge system of the Eastern Bengal Railway, has been separated from Halishar during the decade just passed. The population of the two is greater by

31.5 per cent. than it was 1911. Barrackpore is a residential locality rather than an industrial. There have been changes in municibal boundaries during the last decade and new municipality named Khardah has been formed. The nopulation of the area now included in Barrackpore, Khardah and North Rarrackpore has grown comparatively little since 1872 but in the last decade there has been an increase of 9.9 per cent. Panihati, too, is residential rather than industrial. It has lost $8 \cdot 6$ per cent. sidee 1911. North and South Dum-Dum stand back from the river. North Dum-Dum is inclined to be unhealthy and has lost population in the last ten years. South Dum-Dum which contains snme factories has gained 9 per cent. The towns in the $24-$ Parganas which lie further away from the Hooghly are not industrial towns. Basirhat. Baduria and Gobardanca in the north-east, of the district bave grown slightly, but the others; Rajpur, Jaynagar, Taki, Baruipur, have lost since 1911 .

Berhampore, the headquarters station of Murshidabad district. had formerly a cantonment of some importance. It has a small bell metal
industry and the remains of an industry in ivory curving, which has however almost disappeared and can never have employed large numbers. The population has increased but little since 1881 and in the past decade by 2 per cent. Murshidabad and Azimganj just north of it were places of great importance a century and a half ago but their decay has been rapid. Jangipur and Kandi the headqaurters of outlying subdivisions in the same district were growing slowly but during the last decade both bave lost a little. Dhulian and Beldanga are towns of rather over 8,000 in the same district. Santipur, an old centre of the hand-weaving industry, is the largest town in Nadia district, but it is now losing population. It has lost 7.2 per cent. during the decade, while Krishnagar the headquarters of the district is malarious and also is losing. The loss during 1911-21 has been 5.0 per cent. Nadia Nabadwip) is reverenced especially by Baisnabs as having been the birthplace of Chaitanya, and it is a centre of Sanskrit learning and a place of pilgrimage. The increase of 3,104 shown by the Census of 1921 is partly accounted for by the fact that the census was taken on a date nearer to the annual religious festival there than in 1911 and 1901. Meherpur and Ranaghat, headquarters of two of the - subdivisions, have shown slight decreases, but Kushtia the headquarters of the fourth has grown considerably. The tir town of Birnagar is steadily declining. Jessore after being stationary for 40 years has at this census shown an increase of $11 \cdot 4$ per cent. Kotchandpur and Mahespur the other two municipal towns in the district are declining. Khulna has doubled its population in the last 30 years. The district of which it. is the headquarters is being steadily developed, and it is the terminus of the railway to which much of the boat and steamer traffic from Eastern Bengal converges. During the last decade its population has increased by 23:5 per cent. Satkhira the headquarters of the north-western subdivision of the district grew considerably between 1901 and 1911 after losing slowly for-30 years, but during the last decade it has again lost slightly. Debhata southwest of it on the stream that forms the boundary between the district and the 24 -Parganas is half its size and has hardly grown since 1881.
93. The towns of North Bengal.-North Bengal contains 18 municipal towns and five others, not including the small cantonment at Buxa Duar in Jalpaiguri district. Only eleven of these, however,

|  | Inluebitants. |  |
| :---: | :---: | :---: |
| Sirajennj | *** | 25.519 |
| Rampur-Boalia | ... | 24.598 |
| Darjeeling | ... | 29258 |
| Jabue | *- | 19.343 |
| Rangpur | ... | 19075 |
| Dinajpur | ... | 18.025 |
| Jalpaiguri | ... | 14.520 |
| Enclielı Bazar | ... | 14,057 |
| Saidjur | $\ldots$ | 13.479 |
| Nawahganj | ... | 12.683 |
| Bogra | ... | 12,322 |
| Cooch Bchar | ... | 11,461 | have more than 10,000 inhabitants. Their names with their population are given in the margin in the order of their size. Though they are small they are generally growing towns. Sirajganj tans the jute trade of the country lving along the Jamuna River. It suffered up till four years ago the disadvantage of having no railway connection. Since the completion of the Sara Bridge a broad gauge extension of the Eastern Bengal Railway has been carried direct to Sirajganj and has greatly facilitated the export of jute. The town has grown steadily although not fast since 1872 in spite of the disability which has iust been removed. The increase during the last decade was 741 persons. Rampur-Boalia, the headquarters of the Rajshahi district, is 23 miles from Nator, its railway station. It is on the Ganges and connected by steamer with the railway at Lalgola Ghât, but has undoubtedly suffered from being so.far from a railway. Its population was stationary at the end of last century when it seemed that the main course of the Ganges was deserting the north hank of the river on which it stood, but the tendency has changed. So much so that there has been some erosion of the town and the danger of further erosion in the future threatens. During the last 20 years the population has increased again, in the last decade br $5 \cdot 1$ per cent. The threat of erosion has stopped the growth of Pabna, and it also suffers the disadvantage of having no railway station near. Rangpur is a long straggling town with the railway station at one end of it and the courts nearly three miles away at the other end. It has some export trade in tobacco and jute and has grown ravidly, by $16 \cdot 1$ ner cent. during the last decade. Dinajpur too is growing. $T t$ is nearly half as large again as it was 30 years ago and has gained 13.0 per eent. since 1911. Jalpaiguri has grown still faster since 1901. Although it was almost stationary from 1891 to 1901 , its population increased by $22: 5$ per

cent. in 1901-1911 and by 26.6 per cent. during the last decade. English Bazar, the headquarters of Malda, has lost somewhat during the last ten years. It has suffered severely from malaria especially at the beginning of the decade and has had more than one fire which has done great damage. The apparent reduction, almost by half, in the population of Nawabganj in Malda district is due to restriction of the municipal limits. The town is essentially a Muhammadan colony and has a considerable trade by boat. Old Malda is falling rapidly into decay. Bogra has grown very fast since it has had the advantage of a connection by rail with the main line of the Eastern Bengal Railway. The district is the most flourishing in Northern Bengal and the headquarters station has grown by $35 \cdot 2$ per cent. since 1911. Saidpur in Rangpur district is the site of the workshops for the metre-gauge system of the Eastern Bengal Railway. It is not a municipality but is governed by the Railway Authorities, and its population consists almost entirely of railway employees. It has grown up from nothing in the last thirty years, and now has a population of 13,479 persons, $62 \cdot 6$ per cent. more than in 1911. Nator, the headquarters of one of the subdivisions of Rajshahi district, stands on a stream which is part of a now defunct drainage system and is extremely malarious. It has been slowly losing population since 1891. Gaibandha, Kurigram and Nilphamari, the headquarters of the three outlying subdivisions of Rangpur district, are small towns which have not vet become municipalities, but they are growing fast. Domar in the same district is a tiny but a growing town. Cooch Behar, the capital of the Cooch Behar State and the seat of the Maharaja, is a town of 11.461 inhabitants which has increased onlv by 620 during the last ten years. The State includes three other municipalities, Dinhata, Mathabhanga and Haldibari, but they are very small indeed, having less than 6,000 inhabitants between them.
94. Darjeeling.-Darjeeling was founded mainly as a hill station. It has become the headquarters of Darieeling district and has a large bazar but the trade with Tibet passes it by and comes down via Kalimpong. Darjeeling is not even the natiral centre for the tea industry of the district. for all the gardens are at a lower level, and most of them well to the south of it. But in size and importance it is. after Simla. the second hill station in India, and as a sanitorium is freauented by large numbers of Europeans and to a considerable extent liy Indians also during the hot weather. Two small cantonments adjoin the town. Jalapahar on the upper part of the ridge on which Darjeeling stands and Lebong on a spur below it. In 1872. before the railway was built. along the older Cart Road up from the plains, Darjeeling was a very small place with only 3.157 inhabitants. It doubled its population by 1881 and doubled it again by 1891. Since that date its rate of progress has been much more moderate. mainly by reason of the fart that it stands upon a ridge with precipitous sides and the space available for building is limited. The increase between 1891 and 1901 was $19 \cdot 6$ ner cent. The population of both town and cantonments is liable to considerable seasonal variation. The census synchmnous all over India has on each occasion been carried out towards the end of the cold weather and has disclosed the nopulation of Darjeeling at that time. To discover the extent of the seasonal fluctuation supplementary census enumerations have heen taken in September 1900, in September 1911 and in Sentember 1921. The results of these enumerations are shown and compared with those of the cold weather census in the following table:-


The cold weather population is thus shown to have increased by 12.3 per cent. in 1901-1911 and by 11.7 per cent. in 1911-1921, but some aualification of these figures is necessary. The Census of 1901 came on March 1st, in 1911 it came on March 10th. and in 1921 nn March 18th. Though few visitors arrive in Darieeling before the end of March. a certain number of persons come up earlier to make preparations for receiving them. The schools, of
which there are two large ones for boys and two for girls and some smaller ones, open early in March, and a number of hill men come into the town with the intention of seeking employment as domestic servants, syces, etc. As the March Census has come later, it has included on each of the last two occasions something more than the normal winter population of the town, and the increase in the normal winter population has therefore been rather less than the figures of the last two March Censuses have disclosed. The two cantonments were found much reduced in population between 1911 and 1921. In March both are denuded of troops, for troops are not sent up until the beginning of April. During the war the establishments were reduced, and since 1920 in the effort which has been made towards economy the cantonments have been sparingly used, smaller detachments of European troops being sent up from the plains for shorter periods than formerly. Lebong and Jalapahar in March 1921 contained considerably less than half the population counted in them in March 1911, and in September 1921, when troops.were in them, 527 less than in September 1911.

Darjeeling is fullest in May and June and again in September and October, the two periods being those in which the climate in the plains is the most trytng. It is by no means easy to say which of these two periods is the height of the Darjeeling season, but in Bengal at least persons employed in the pailns find it easier to take a holiday in the latter of the two. The "Puja holidays", when offices in Bengal are shut for ten days, come generally in the last week of September or in October and numbers of people come up on a short visit at the time. The Summer Census on each occasion has been arranged to miss the "Puja rush." It has generally been taken as it was in 1921 about a week before the holidays. The variation between March and September in 1900-1901 was $6,928,40 \cdot 9$ per cent., in 1911, 5,691, 29.9 per cent., and in $10214,955,22 \cdot 3$ per cent. The number of visitors has not decreased to the extent which these figures show for the reason that the March Census has come later in the month each time, but there seems to be little doubt that Darjeeling now suffers more than formerly by competition with Shillong and with hill stations further west along the Himalayas, and that the reason is that it is inordinately expensive. The figures in the

|  |  | Darlonilas Lown. | Onnton. znents. |
| :---: | :---: | :---: | :---: |
| Enropeans | ... | 2,080 | 1,094 |
| Anglo-Indiame | ... | \%24 | 4 |
| Hillmen- | $\ldots$ | 16.415 | 1,014 |
| Plainamen | - 0 | 6,588. | 494 | marginal table show the distribution of the population of the town by race according to the Summer Census of 1921. The health of Darjeeling, since the provision of an excellent water supply in 1897, has been good, but it did not by any means escape the ravages of the influenza epidemic which hung about these hills until the end of the decade. Kurseong, a smaller hill station on the way up to Darjeeling, is a subdivisional headquarters and is administered as a municipality. It has grown considerably since 1891. In that year it had only 3,522 inhabitants, in 1901 it had 4.469, in 1911, 5,574, and in 1921 6,445. No Summer Census was taken as in Darjeeling for the place does not empty itself in the cold weather to the same extent as Darjeeling does. The site of a new hill sanitorium has been laid out.at Kalimpong, and there is a large market there, for wool and other merchandise from Tibet is brought so far by mule transport over the passes by the Tibetans themselves, and there changes hands and is sent down to Calcutta. The place is, however, still in its infancy and financial stringency has' given a set-back to its development.

95. The towns of Eastern Bengal:-Dacca Division.-Besides Dacca

| Naraynoganj | Inhabitunts |  |
| :---: | :---: | :---: |
| Barinal | ... | 26.744 |
| Medaripar | -.. | 25,297 |
| Mymonsingh | a. | 25,287 |
| Jamalpur | .... | 23.113 |
| , Kishorgauj | ... | 19.518 |
| , Sherpur | [s. | 17.818 |
| Faridpur | - 0 | 14.503 |
| Tangnil' | . | 14.305 |
| Pirojpar | . 6 | 13.841 |
| Bajitpur | ... | 11,958 | Clty thene are seventeen municipal towns and two other towns in the Dacca Division. The eleven of them mentioned in the margin have more than 10.000 inhabitants. Narayanganj, 9 miles from Dacca. is the largest collecting centre for jute in the Province. A number of export firms have agencies there and some of them presses for making up. "pucca " bales, i.e., bales ready for shinment overseas. The town lies on hoth banks of the Lakshia river and is two and half times the

size it was in 1881. The increase during the last decade has been 9.8 per cent. Barisal has been the headquarters of Bakarganj district for a century and is an important focus of the steamer and boat tratic of the Lower Delta. The tide carries out its sanitation and a filtered water supply has recently been installed. It is healthy and has a pleasant climate. Its population has doubled in the last forty years and the increase during the last decade has been 19.0 per cent. Madaripur is another jute centre, but it is not so well built or so well laid out and administered as Narayanganj. It has reaped great advantage of recent years from the opening of the "Beel Route," a canalized water-way affording a short-cut for steamer and boat traffic towards Calcutta. The widening of this channel at the hands of Government has not jet been completed, but it has been open for traffic during the whole decade and Madaripur at the ond of it has grown by almost a third, $32 \cdot 6$ per cent. since 1911. Mymensingh as the headquarters of the largest district in the Province and the district whose population has grown most during the last half century would be expected to have increased in importance. Its development as a jute centre has assisted, as well as the completion during the last decade of the railway extension radiating from it to the eastern subdivisions. It has grown very fast since 1901 and during the last decade its population has increased by 27.4 per cent. Jamalpore and Kishorganj, the headquarters of the two subdivisions in the district, are growing towns. They have increased by 9.5 per cent. and 8.3 per cent. in the last ten years. Tangail the headquarters of the third subdivision, suffers from lack of railway facilities and its population is decreasing. It has lost 12.6 per cent. since 1911. The apparent heavy loss of Netrokona, the headquarters of the fourth subdivision, is due to the restriction of the municipal boundaries. Sherpur, Bajitpur and Muktagacha, the three remaining towns in Mymensingh district, are all growing steadily. Faridpur grew very slowly from 1872 to 1901 but has grown faster since the beginning of this century. Ten years ago it seemed likely that the Padma river would either wash away Faridpur railway station or permit it to take the place of Goalundo as the railway terminus and the point of embarkation onto steamers for Eastern Bengal, buto the river has turned away again. The town has increased by 10.4 per cent. in the last decade. Rajbari and Gopalganj are subdivisional headquarters, the former with 7,275 inhabitants and ${ }^{\text {rthe }}$ latter 3,478 . Neither are municipalities and neither was treated as a town for census purposes ten years ago. The headquarters stations of the three outlying subdivisions of Bakarganj district are municipalities. Pirojpur was one of those whose boundaries extended far into the rural area adjoining. They were drawn in somewhat at the beginning of this century but they still extend far beyond the limits of what can be called the urban area. The development of the Sundarbans is contributing to the importance of the subdivision and the population within the municipality has grown 15.4 per cent. since 1911. Patuakhali with 6,984 inhabitants and Bhola with 4,525 are much smaller, but both are growing. Bhola became a municipal town only in 1920.
96. Chittagong Division and Tripura State.-Chittagong Division has six towns in it, and there is one in Tripura State. Four out of the six have more than 10,000 inhabitants, Chittagong 36,030 , Comilla 25,914 , Brahmanbaria 23,414 and Chandpur 15,118. Chittagong is a very old town and was an important seaport even before the time of Akbar. It has almost doubled its population since 1872. The completion of the Assam Bengal Railway has increased its trade, for tea now comes down from Assam and is exported from Chittagong to Europe by the Clan Line of Steamers which maintain a regular service, while mineral oil comes up from Burma in bulk, is put up in tins in Chittagong and distributed by rail to Tippera and Noakhali districts and the Surma Valley in Assam. Forest produce from the Hill Tracts comes down the Karnafuli river to Chittagong and adds to the trade of the town. The population increased $29: \theta$ per cent. between 1901 and 1911 and $25 \cdot 2$ per cent. between 1911 and 1921. Comilla, the headquarters of Tippera district, has also grown fast of late years. During the past decade its population has increased 14;2 per cent. It lies several feet below the flood level of the Gumnti river on which it stands and though the embankments have been breached -several timesg of recent years the damage has not been done opposite the town
which has been fortunate to escape flooding. No other town of the size of Comilla is without a filtered water supply. The municipality of Brahmanharia covers a considerable area which is not urban. Its population has increased 5.0 per cent. since 1911. Chandpur, the headquarters of the remaining subdivision of Tippera, is a jute centre, the terminus of a branch of the Assam Bengal Railway and is connected by steamer with Goalundo, Narayanganj and Barisal. It stands on an artificial cut opened 50 years ago to improve boat communication between the Meghna and the interior of Tippera district. The old town is south of this cut, the railway terminus and a new town the north. Chandpur existed 150 years ago but its importance dates from the opening of the Assam Bengal Railway. Its population has increased by 61.5 per cent. since 1901 and by 18.9 per cent. in tie last decade. Noakhali stood 11 miles from the coast in 1881, but that 11 miles of the land has now been diluviated and the erosion of the town has begun. It is a very small place for a district headquarters in so densely populated an area, for it has only 7,715 inhabitants which in spite of the erosion which has taken place is 10 per cent. more than the population in 1911. Agartala, the capital of Tripura State, is about the same size, 7,743 inbabitants; it has grown by 13 per cent. since 1911.
97. Villages.-The word village in the sense in which it is ordinarily understood in India, and indeed in all parts of the world, should not be used without qualification in respect of rural Bengal. The picture which the word conjures up in the mind is that of a close collection of houses belonging to the cultivators and agricultural labourers employed on the land for two or three iniles around, the village watchmen and the other village servants, a money-lender and a few shop-keepers and artizans, potter, cobbler, tinsmith. etc., a more pretentious house belonging to a landlord or middlemen, some sort of common meeting place frequented by the villagers and a place of public worship, a temple in a Hindu village or a mosque in a Muhammadan village. Such villages are not to be found in Bengal except in parts of 1 Burdwan Division. They owe their origin partly to the gregarious instincts of mankind, partly to the convenience to the cultivators in living close to those who administer to the needs which their land alone does not supply and partly to the necessity for protection, in former days from predatory bands, and still in most parts of India, for cattle, if not for human beings, from the wild animals infesting the uncleared spaces which come right down to the ellge of the cultivated lands. $\cdot$ The village grew up in some conveniently situated spot in a clearing, in a defensible position and near a supply of water. In Bengal the whole country side except what is actually required for residential purposes has been brought under cultivation and the cultivators have no need to herd together for protection. The strictness of the purdah system, which does not permit his women-folk from being seen at all in public and prohibits the Bengali from visiting the houses of other than near relations, has almost killed his gregarious instincts. The cultivator uses very little indeed which his own land cannot supply. A water supply can be obtained by sinking a well or digging a tank equally well in almost any spot. The property of a landlord or middleman is usually far stretched and interspersed with the properties of others, and labourers who have not land of their own are very few indeed. In these circumstances it is not surprising to find the homesteads scattered over the whole face of the country side. Each cultivator has selected a suitable spot for a homestead on his own land, dug a tank, or made untidy irregular excavations to obtain earth to raise a site, and built houses on it. The process is still going on. When the family grows too big for the homestead, or family quarrels ensue, one of the brothers will make a new homestead on a convenient part of the family land which has fallen to his share a little removed from the old homestead. Shops are almost non-existent in rural Bengal and the houses of landlords and the few artisans who are not partially agriculturists are interspersed among the other homesteads. Cultivators' homesteads are, it is true, found very closely packed together in some localities, for example among the swamps that stretch across Brahmanbaria subdivision and the eastern part of Mymensingh; but this is owing to the necessity for using to the full for residential purposes the. little available high ground. Close collections of houses in these parts are looked upon
as uncomfortable places to live in, there is no corporate village life in them and the house sites do not tend to lie in compact blocks but rather in long strips by the side of streatms, which by the deposit of their silt have raised their banks above the dead level of the rice fields. For administrative purposes in Bengal a survey unit takes the place of the village unit elsewhere. The vernacular expression is mauza and it is often translated " village," sometimes which confusing results.f A century ago the word signified a parcel of land belongoing to one estate, and the Revenue Surveyors seventy years ago used it in this sense in Bihar where they began work and where estates are not closely interiocked as in most parts of Bengal. Coming down into Bengal they used it with a significance altered to mean a parcel of land convenient for their survey in one block, whether only one estate was included or several. Commonly their blocks were units locally recognised and treated as such, and even when they were not the landlords found it convenient to adopt them for their own purposes and the cultivators necessarily followed suit. The Revenue Survey having been made the basis of Revenue and other Administration and the foundation of all the maps used for half a century, the mauzas have become for all purposes the generally accepted units into which the country side is divided. That the Settlement Department, which has up to the present prepared a record of rights for half the Province, has made use of the same units with very few changes, has further contributed to the crystallization of the mauza system. The census followed the same system and the figures for the number and population of villages given in Imperial Tables I and III refer to mauzas, though the word "village" has been used in the headings to bring the tables for Bengal into line with those for other Provinces.

In Subsidiary Table I printed at the end of this Chapter in Columns 10 - 13 the proportion of the rural population living in " villages " divided into four classes according to the size of their population are given. Here as in the Tables Volume the " village "' is the mauza, and it.would be a mistake to build upon the figures in these columns a conception of the numbers joined in any form of communal life. It is true that the " mauza '" is the villages for the purposes of the law which determines that a settled raiyat of a village shall have an occupancy right in all land which he holds as a raiyat in the village, but it is very common for a cultivator to have land in more than one mauza, and instances are common in which a man has most of his land in one mauza, which happens to be a lowlying stretch of rice field with no high laxd in it suitable for residential purposes, and his homestead in another. Since the mauza was originally a unit of a size suitable for survey and since the whole country is a level plain, it might be expected that the area of the average mauza would be much the same everywhere, and that the population of the average mauza would vary according to the density of population. This is generally the case. But the Revenue Survey was done gradually. The survey parties, which came over from Bihar into the Bengal districts adjoining, only gradually gave up the attempt to survey as a separate mauza each parcel belonging to a separate estate. Consequently there are many very small mauzas to be found in Dinajpur, Malda, Rajshahi, the parts of Bogra, Pabna and Rangpur away from the Jamuna river, in Burdwan, Birbhum, Bankura, Midnapore, Hooghly and Jessore, and this in addition to the comparatively low density of population accounts for the high proportion of rural population which is found in these districts to live in villages with less than 500 inhabitants. In Eastern Bengal where estates are minutely divided and are fitted together like the small pieces in a jigshaw puzzle, the Revenue Surveyors did not hesitate to include lands of any number of estates in the same block for the purposes of survey. Here the mauzas are very much of a size as far as area is concerned. There are no very small mauzas, the density is high and the average population of a mauza is high also. The population of the average mauza is great in Jalpaiguri 1,280, Khulna 708, Bakarganj 857, Noakhali 853 and Chittagong 1,810, because Government is the proprietor of much land in those districts, land recently developed and originally surveved in large blocks without the necessity for any reference to the rights or boundaries of private landlords. The census "village" was a real village only in Darjeeling, Sikkim, Chittagong Hill Tracts and Tripura

State which have not been systematically surveyed for Revenue purposes, and where the inhahitants do live in close contact with one another toth for pros tection and convenience and do not maintain the purdah system as in the plains.

The absence of villages in the ordinary sense in the Province has brought to rural Bengal a number of advantages not the least of which is its heauty. " Each family lives within its own holding digging a moat round an ample piece of land and planting a garden of fruit trees to enclose the homestead. The homestead itself is a collection of mat and thatch huts on high mud plinths all built on well raised ground surrounding a courtyard. Nearby within the moat is a muddy tank. The homestead is usually entirely concealed by trees so that at first sight it appears as if all the cultivated land was a clearing in a forest: The khola (opens) in which crops are grown are always kept delightfully green by the unfailing moisture of rain and flood, and the eye is never tired by the weary miles of dust which is the common habit of an upcountry landscape " $\dagger$. The description fits much of Eastern Bengal except that beyond Bakarganj a complete moat round the homestead is not usually found. Missing the many unsightlinesses of the up-country village rural Bengal misses also the disadvantages of overcrowding. Each family has plenty of space to live in and its own water supply, which, though it leaves much to be desired, is a far better one than is available in rural parts of other provinces. In Eastern Bengal it is ample and in most parts would be sufficient for the population if a relaxation of the purdah system permitted full use to be made of it. The water of a dirty hole in the ground from which earth was dug to raise the homestead site is used, however, to save the trouble and the exposure of the women to the public gaze in going a few hundred yards to obtain a better supply. That the water supply is sometimes a source of disease and danger is due to ignorance of the necessity to conserve it, and to the prevalence of habits of life which lead to its contamination. In some parts at least it is rather the multitude of small excavations full of water than lack of water supply that has bred unhealthiness and caused the spread of malaria.

The absence of villages on the other hand means the absence of the germs of corporate life. To develop any form of Local Government in rural areas something more is necessary than to stimulate village organizations already in existence and endow village officials with increased powers. A Local Authority has to be constituted where nothing of the sort existed before, and, what is a matter of greater difficulty, a sense of public duty, a will to subordinate private wishes to public advantage, has to be grafted where it is in a wide sense a novelty.

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\dagger \text { J. C. Jack. Settlement Roport of Bukarganj. }
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SUBSIDI.IRY TABLE I.-Distribution of population between towns and villages

sUBSIDIARY 'I'ABLE IL. -Number per milde of ter total popidation and of each main beligion who live in towns.


SUBSIDLARY TABLE III.-TOWNS CLASSIFIED BY POPULATION AND THEIR GROWTH.


SUBSIDIARY TABLE IV.-Cities and their geowth.

| OHj. |  |  |  |  | Percentege of vaciation. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1811-1001. | 1001-1911. | 1991-1801. | 1881-1892. | 1872-1881. | 1878-1821. |
| : | 2 | \% | 4 | 5 | 6 | . 7 | t | 2 | 10 | 12 |
| Onkeutia milu mbarts | 1,287,547 | 21,419 | 500 | 69 | + 43 | + 110 | + 298 | + 195 | - | $\cdots$ |
| Cakotim - - | -207,831 | 43,531 | 470 | 64 | + 1-3 | $+371$ | + 313 | + 11\% | - 3-3 | +43:3 |
| Selurito in the 54 Prysion. | 294.235 | 7.380 | 814 | 532 | + 158 | + 203 | $+53$ | + 6-9 | - | $\cdots$ |
| Eotral - - | 183.301 | 12.60 | 480 | 309 | + 81 | + 185 | +854 | + 28.4 | $+80$ | +1384 |
| Drece - - .- | 118.40 | 17484 | 73 | 80 | 4. 100 | 4910 | $+100$ | + | +142 | + 753 |

## CHAPTER III.

## Birthplace.

98. Introductory.-This chapter deals with the figures given in the Census Table XI, which shows the population of the districts and States of Bengal distributed according to birthplace, the district or State of birth if this took place in India and the country if outside, and the figures in the corresponding tables for other provinces which indicate the whereabouts of persons who were born in Bengal, but had emigrated to other parts. Four supplementary tables, printed at the end of the Chapter, summarize the statistics of:-
I. Immigration to Bengal.
II. Emigration from Bengal
III. Migration between natural divisions.
IV. Migration between the Province and other parts of India.

Statistics of birthplace are of importance from two points of veiw. In the first place, they enable the natural growth of the population of the Province and the several parts of it to be ascertained, and in the second place they show the extent to which people move from one part of the country to another. They supply a means of ascertaining the 'natural population" the variations in which have already been examined in Paragraph 24 supra and in respect of the several districts in setting forth the changes of population in each of them towards the latter part of Chapter I. This chapter is to review the statistics of birthplace in so far as they show the direction and extent of migration both in and out of the Province and between one part of Bengal and another.
99. Types of migration.-Five several types of migration may be distinguished-
(1) Casual migration due to short moves which are continually taking place between adjacent villages, but only affect the birthplace figures for the Province or a district when such adjacent villages happen to lie on opposite sides of the provincial or district boundary. In this type of the migration, females commonly predominate, for a large proportion of such short moves are made in contracting marriages. Casual migration is increased moreover on account of the fact that it is a common practice for young married womes to be sent to their parents' house for their first confinement, so that firstborn children often appear as natives of their maternal grandparents' villages.
(2) Temporary migration due to journeys undertaken on business, to visit a place of pilgrimage, and the like.
(3) Periodic migration which often takes place in connection with the harvests and on account of seasonal movements by pastrol nomads, who are however few or none on the plains of Bengal.
(4) Semi-permanent migration, as when natives of one place reside and earn their living in another, but retain "their connection with their own homes where they leave their families and to which they return in their old age and at more or less regular intervals in the meantime.
(5) Permanent migration, as when economic pressure or social ostracism or some other cause drives a man to take his family and settle at a distance from his home.
The census figures do not of course distinguish between different types of migration for they give only the numbers of persons found in one part who
had been born in another, but in the examination of the census figures it is important to keep the distinctions between the different forms of migration in view. Though casual migration commonly affects more females than males, in a country like Bengal on the other hand, where the purdah system is in force among almost all classes, temporary and periodic migration affects very few but males and semi-permanent migration affects a great many more males than females. Only permanent migration affects the numbers of both sexes more or less equally, but even in its case the bachelor or widower is more easily uprooted from his native place than the man with a wife and family. The census was taken on the 18th of March 1921, a little later than on former occasions, but still approximately at the same season of the year. In Bengal, the winter rice harvest that prompts the annual periodic migration of labourers to engage in reaping it, is over two months earlier, and most of those who were caught up in movements connected with it have gone back to their homes by March. The dry season, the season in which earth-work, the digging of tanks, and the raising and repair of roads and embankments, can be carried out, continues however beyond March, and there is no doubt that the census caught a number of labourers in Bengal from Chota Nagpur and Bihar still engaged in such undertakings on March 18th, though possibly their number may have been fewer than in 1911 when the census day was March 10th and 1901 when it was March lst, as it certainly caught a number who had not yet returned from Burma to their homes in the Chittagong Division. The measure of temporary migration for purpose of business it is impossible to take, but it may be noted that the census date was chosen so as to avoid festivals as far as possible, and that Bengal has very few places which attract pilgrims from outside the Province. A few may come to Navadwip but they are lost in the great body of immigration to Bengal, and we may take it that the attractions of pilgrimage do not practically affect migration to Bengal at all. They do, however, somewhat affect the figures for emigration from Bengal, for as many as 4,186 persons born in Bengal were found at Benares city, though very few were found at Puri and probably few at places of pilgrimage elsewhere.
100. Casual Migration.-It is possible to gauge roughly the effect of casual migration and it is with this object that the form of Subsidiary Tables I and II have been devised to give figures for migration between contiguous districts separate from those for migration over greater distances. In the case of a rural district in Bengal for which the number of immigrants from contiguous districts is approximately equal to the number of emigrants to it, it is probable that casual migration forms a large proportion of the total migration. This is not always the case for there are instances in which a district receives a regular stream of immigrants from one side and sends out a regular stream on the other. Faridpur is an example of such a one, for it is regularly recruited from Dacca and feeds Bakarganj and Khulna. Tippera, too, receives recruits from Dacca and sends on others into Tripura State. If however for each district we take whichever is the less of the figures against it in column 5 of Subsidiary Table I and Subsidiary Table II printed at the end of this chapter, multiply it by two and add the resultant figures for all the districts, we shall get a rough measure of the extent of casual migration from district to district within the Province. The figures obtained in this way is $1,838,000$. Because there is some permanent migration from one district to another which is balanced by an equal amount of permanent migration in the opposite direction, because there is also temporary migration between contiguous districts and because there are districts like Faridpur and Tippera which are recruited on one side and bled from another, this rough measure will err on the side of exaggerating the effect of casual migration, but it is worth giving and is unexceptionable if it is given as a measure beyond which migration from district to district is not made up by casual migration. The total number of immigrants and emigrants for all the districts of the Province is some $5,992,000$, and casual migration therefore accounts for something less than $30 \cdot 7$ per cent. of all the migration in
and out of the several districts. The bare census figures do not permit us $t$, go much further in classifying migration, though another and a closser estimate of the extent to which casual migration accounts for the movement of the population in and out of a particular district may be obtained by balancing the numbers of emigrants and immigrants to and from each contiguous district separately, and accounting each equal exchange as being done in the main to casual migration. This estimate will still err on the side of exaggerating the extent of casual migration for it must necessarily include, as did the first, temporary migration between contiguous districts and some exchange of permanent or semi-permanent migration.
101. Migration between Bengal and other parts.-The number of immigrants to Bengal from other parts of India and the numbers of emigrants from Bengal to other parts are given in detail in Subsidiary Tables III and IV printed at the end of the chapter and the figures are illustrated by Diagram No. 35 on this page. The area of each square is proportionate to the number of migrants, white squares representing immigrants and shaded squares emigrants. The number of recruits to the population of Bengal from other parts placed in the order of the number they send are given in the following table in which are also given the numbers born in Bengal who were found in each of them:-


Other parts than those for which figures are given above, supply a smaller number of immigrants. The total number is $1,929,641$ so that the above figures account for all but 15,601, well under one per cent. of the total. Bihar and Orissa supplies $66 \cdot 1$ per cent. of those who have come in from outside,
thé United Province 17.8 per cent., Nepal 4.5 per cent., Assam 3.6 per cent., the Central Provinces 2.8 per cent., Rajputana Agency 2.5 per cent., Madras 1.7 per cent. and other parts each less than one per cent. Ninety-six per cent. of the immigration to the Province comes eastward. The total number born in Bengal, but found in other parts of India, was 686,195, so that the figures given above for emigrants account for all but 5,592 of those who have left Bengal for other parts of the country. It is not possible to give the numbers who have left India, but the figures given account for more than 99 per cent. of the emigrants from this province to other provinces and other States in India. 54.7 per cent. have gone to Assam, 21.3 per cent. to Burma, 17.0 per cent. to Bihar and Orissa, 2.7 per cent. to the United Provinces, 1.2 per cent. to Bombay and less than one per cent. each to other parts. Not quite one-quarter of the emigration from Bengal has gone westward.

The streams of migration from Bihar, the United Provinces, and Orissa to the industrial area round Calcutta, and from Chota Nagpur to the tea gardens of Jalpaiguri as well as the overflow from the Santal Parganas into Birbhum and Murshidabad and across the Ganges into North Bengal will be examined separately later on. More than 80 per cent. of those who come into Bengal from the Central Provinces were born in three districts, Bilaspur 10,353 , and Raipur 5,142 , to the east, and Nagpur 7,095, towards the west. Similarly, two districts in the Madras Presidency, Ganjam which sends 6,462 and Vizagapatam which sends 2,363 account for half of the immigrants from that direction, while most of the rest, 4,822, come from Madras City. The bulk of the immigrants from Rajputana are Marwari traders from Jaipur and Bikanir. No less than 12,507 born in Bikanir and 10,316 born in Jaipur were found in Calcutta City which means that as many as 17 in every thousand born in Bikanir and four in every thousand born in Jaipur have found their way thither.
102. Changes since 1911.-The numbers of immigrants and emigrants disclosed by the Census of 1911 and the Census of 1921 as having come into the Province from other parts of India or gone to other parts from Bengal are shown in Subsidiary Table IV at the end of this chapter. Immigrants from other parts of India have decreased by $1-15$ per cent. from $1,839,016$ to 1,817,775 since 1911, but emigrants have increased from 552,587 to 686,195 by $24 \cdot 2$ per cent. The following table shows, in a more compact form and in round numbers, the same statistics as are given at the end of this chapter for the parts from or to which migration is considerable :-


Hoth immigration and emigration in almost every direction in and out of Bengal increased in volume between 1901 and 1011. The last ten years have shown a very decided decrease in immigration from. Bihar and Orissa, the United Provinces and Nepal, but an increase in that from Rajputana, Madras, Bombay and especially the Central Provincen. 'They have shown a distinet decrease in emigration from Bengal to Bihar and Orisaa, the United Provinces, the Central Provinces and Madras, but a slight increase in that to the Punjab and Bombay, a decided increase in that to Burma and a very great increase in that to Assam. Migration from Bihar and Orissa and the United Provinces to Calcutta has fallen off to a certain extent as also that from the United Provinces to the industrial area round Calcutta, but the reduction in the numbers from these parts has taken place mainly in the parts of Bengal which have not been touched by organized industry. Those who come are labourers, artizans and domestic servants, but they do not take an important part in agriculture and are not permitted by the Bengalis to acquire rights in the lands of the plains. The flow of up-country men who come into Bengal to find employment as coolies or as cobblers, milkmen, carters, boatmen, cooks, durwans, peons and so on, is a very great one, but there are signs that the tide reached its high water-mark and has turned since 1911. The case is different with the mercantile classes who account for most of the immigrants from Rajputana and Bombay. The increase from the Central Provinces is partly due to the rapid opening up of that part of India and to the direct action of the tea industry in indenting to the Central Provinces for labour, but it is also true that immigrants from the Central Provinces include a considerable number engaged in trade as do also the immigrants from the Punjab. There is clear indication as will be found to have been explained in the Census Report for Calcutta that upcountry mercantile classes are taking a larger and larger part in the City's trade and it seems that they are doing the same outside the City also. The slight increase in emigration to Bombay may, perhaps, be a sign that the tendency is reciprocal between Bombay and Bengal, but on the other hand, there has been so distinct a decrease in the emigration from Bengal to Bihar and Orissa, the United Provinces, the Central Provinces and Madras that it would seem the demand for the services of Bengalis in these parts, where they find employment most commonly as clerks and professional men, is very much less than itu was, probably owing to the fact that education has now developed sufficiently to supply the demand from local sources. The separation of the Province of Bihar and Orissa from Bengal has been by no means without effect on the employment of Bengalis in Bihar, for there was mucb jealously in regard to it before the separation, and since it took place the Local Government has led the way in an effort to employ more Biharis and fewer Bengalis in offices in Bihar. The fact that emigration to the United Provinces, to the Central Provinces and to Madras has also decreased, though none of them has been under the same administration as Bengal within recent times, shows however that the partition of 1912 has not been the only factor reducing emigration to Bihar. There has been a tendency to close ministerial employment to Bengalis in Assam also, but its effect has been swamped by the great increase in migration of agriculturists to the Assam Valley.
103. Proportion of Immigrants in districts.-Before turning to the examination of the strength and direction of the various streams of migration by which Bengal and the several parts of it are affected, it is interesting to notice the proportion of immigrants to the total population of each district.

The figures are as follows and are illustrated in the map in Diagram No. 36 .


|  |  |  |  or inviotacti. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | From rontignoom diatrlota. | Fiom othate plecm. | Total. |
| Rangpur | -* |  | ... | 22 | 45 | 67 |
| Bogra | - 0 | -•• | 26 | 32 | 57 |
| Pabna | $\because$ | .. | 19 | 14 | 33 |
| Malde | *** | -* | 79. | 24 | 103 |
| Oooch Behar | ... | . $*$ | 39 | 62 | 101 |
| East Bongal | ... | ** | 6 | 7 | 13 |
| Dacen Divirion * | - | -•• | 9 | 8 | 17 |
| Dacca | - 0 | ** | 21 | 11 | 32 |
| Mymorsingh | ** | ** | 14 | 14 | 28 |
| Faridpur | *** | *** | 34 | 6 | 40 |
| Bakargadj | ... | ... | 15 | 8 | 23 |
| Ohittagong Division | $\cdots$ | ...* | 7 | 3 | 10 |
| Tippera | *** | * ... | 13 | 4 | 17 |
| Nookhali | . 0 | -. | 11 | 2 | 13 |
| Chittagong | - | -." | 3 | 9 | 12 |
| Chittagong lill Tr |  | -. | 32 | 6 | 38 |
| Tripura Stato | . ${ }^{+}$ | -** | 253 | 64 | 317 |
| Sikim |  | - 0 | 19 | 262 | 281 |

After Calcutta, the greatest proportion of the population is composed of immigrants in Jalpaiguri for which the import of coolies to the tea-gardens is largely, although not entirely, responsible. Next come Darjeeling and Sikkim which have been peopled by Napalese within recent memory and Tripura State which is being rapidly opened up by people from adjoining districts in the plains. The districts which follow are those round Calcutta which have been touched by the hand of organised industry, Hooghly, Howrah and the 24-Parganas, then Burdwan an attraction to which is the coal mines of Asansol. Next in order is the group of districts into which the large surplus population of the Santal Parganas has overflowed, Malda, Dinajpur, Rajshahi, Birbhum and less conspicuously Murshidabad. The East Bengal districts show a very much lower proportion especially of immgrants from further afield than contiguous districts. Generally speaking, it is to be noticed that Northern Bengal people move more freely from district to district than Eastern Bengal people, and that Bankura, Midnapore and Jessore receive hardly more immigrants than the Eastern Bengal districts. The contrast between the progress in opening up the Chittagong Hill Tracts and Tripura State has already been noticed.

The attraction, or otherwise, of a district to migration is to be measured rather by the excess of immigration over emigration than by the proportion of immigrants among the population. It is the proportion which the excess of immigrants over emigrants bears to the total number of persons born in each district which is to be considered in relation to economic pressure. In the following table the districts are arranged in order of the density of population in each and figures are given showing the number of persons to the square mile and the excess of immigrants over emigrants per cent. of the natural population.

The latter proportion is illustrated in the map in Diagram No. 37:-



The industrial districts Howrah, Hooghly and the 24-Parganas, Calcutta, Burdwan with its coal-field and Jalpaiguri and Darjeeling with their tea-gardens stand out as attractive to migration. In respect of the rest it is seen that the inverse correlation between density of population and attractiveness to migration can hardly be said to exist at all, the fact being that, as was pointed out in the last chapter, the pressure of the population on the soil is not to be measured at all by the density per square mile, for the capabilities of the soil vary so widely from one part of the Province to another. Neither is there any inverse correlation between the attraction towards migration and the increase in the natural population during the last ten years, as given in the last column of the Subsidiary Table IV printed at the ond of Chapter I; there is little sign that the migration is chiefly employed in making up recent losses in the natural population, and in fact the tendencies to migrate are generally tendencies much older than the last 10 years, and have continued to react during this decade in spite of changes in the natural population which might have been calculated to check them. The direct correlation between the attraction to migrate and increase in natural population is more noticeable than the inverse correlation. Increase of natural population has been the more pronounced where there has been much continued immigration for the children of immigrants have gone to swell the numbers of the native born. The parts of the Province which have attracted immigrants in former decades continue to do so, and the study of migration is best made by examining the direction, strength and changes in intensity in the case of each separate stream. Before leaving these figures, it is interesting to remark how little attraction Khulna and Bakarganj with their wide unoccupied spaces seem to offer, and how little the Chittagong Hill Tracts offer in comparison with Tripura State.
104. Migration within the Province.-The total number of persons born in Bengal who were found outside their birth districts is a measure of the "" viscosity of the population," if such an expression may be permitted. It is an interesting measure, for it gives an impression of the extent to which an originally stay-at-home people, who have been given the advantage of much improved means of communication, have taken to the use of them. The following table affords a comparison between the figures given in Subsidiary Table II for the number of emigrants from each district to contigunus districts and to other districts in the Province and the figures given in the corresponding Subsidiary Table in the Census Report for 1911 :-

|  | 1991. |  |  | 1911. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Tolat poptuation (thousende). | TOTAL MUMERTE EMPGHANTA VHON RACH DLSTHET TO- |  |  | TOTAL MTMEER OF EMIOHANTS YROM FACH DISTAJCT TO- |  |
|  |  | Oontiguon districtu In Benkal (thoosands). | Other diatricta ID Rengal (thousa nds). |  | Contiguota dintricte In Betiga! (thoumads) | Othar districte In Beakal (thoubunds). |
| Went Bengat (Burdwan | 8,051 | 381 | 123 | 8,438 | 395 | 147 |
| Division). |  |  |  |  |  |  |
| Contral Bengal (Presidency Division). | 9,461 | - 363 | 87 | 9,426 | 421 | 90 |
| North Bengal (Fajshahi | 10,938 | 207 | 45 | 10,731 | 241 | 44 |
| Division and Conch |  |  |  |  |  |  |
| Beljar). |  |  |  |  |  | 106 |
| linat - Bengal (Dacoa Divibion). | 12,837 | 258 | 144 | 11,985 | 258 | 106 |
| East Bongal (Clittagong | 6,305 | 112 | 30 | 5,783 | 124 | 22 |
| Divinion and Tripura Stato). |  |  |  |  |  |  |
| Total $\quad .$. | 47,692 | 1,321 | 429 | 46,413 | 1,439 | 409 |

A remarkable and perhaps unexpected conclusion is at once to be drawn. In spite of the fact that there has been on the whole an increase of population in the province since 1911, and some improvement in Railway communications,
there has been a very decided decrease in the number of persons found by the census outside the districts of their birth. The reduced migration is the more apparent for the reason that there has been a decrease in population in the districts in Western Bengal where, in proportion to the population, more migration tai:es place than in Northern and Eastern Bengal in which the population has increased, but this is not a complete explanation of what has happened. Apart from this, it would seem that the population of Bengal has shown itself decidedly less fluid than ten years ago. The causes give smpe for mach speculation, but it is probable that the effect may have been produced in this manner. It has been shown that the natural growth of the population has been most restricted in areas where economic pressure is greatest. Reduction of pressure through the check of natural growth has therefore been brought about most noticeably in such areas. Economic pressure, when it is not very great, has little effect on migration, for it requires an effort to uproot the Bengali from the soil on which he was born. Thus, although for the Province as a whole there may have been an increased pressure of the population on the soil, the increase where the pressure is not great may have added less to the bulk of migration than it has been reduced by relief in the areas of greatest pressure.

The figures in the above table show emigrants who go to districts in the Province other than those in which they were born to be 5.0 per cent. of the population in Western and Central Bengal, 2:5 per cent. in Northern Bengal, $3 \cdot 1$ per cent. in Dacca Division and $2 \cdot 2$ per cent in the Chittagong Division with Tripura State. But the reader is to be warned to remember that such proportions are not strictly comparaile one with another for the reason that the size of the average district is very different in the different quarters of the Province, as it is very different from that in other provinces, -and where districts are small a greater proportion of the moves fimm villages to villages which take place become moves which involve crossing a district boundary. Still the contrast between the proportion for Western and Central Bengal and those for Northern and Eastern Bengal is so great that it mar saiels be stated that the population is decidedly more fluid to the sonth and west of the prorince than to the north and east. In the Dacca Division, it is emigration especially from Dacea district that raises the proportion, but the districts of the division are very large ones, and it seems that, with the possible exception of the population of Bakarganj, that of the Dacca Division is decidely more fluid than that of either the Chittagong or the Rajshahi Division. It is to be noticed that emigration further afield than to neighbouring districts in the Province has increased of late vears in the Chittagong Division and to a greater extent in the Dacca Division and that generall speaking it is migration over short distances that has fallen off since 1911 rather than migration over longer distances. The increase of migration over longer distances in East Bengal becomes the more noticeable when the greatly increased migration from Mymensingh into Assam and the less noticeable increased migration from Chittagong into Burma are taken into account. It would seem that the rural population of Eastern and Northern Bengal at least is much less inclined to move from its native place than that of the parts of India beyond the province which send the greatest number of recruits to Bengal. The amount paid as land revenue is a far greater proportion of the value of the produce of the soil in areas not permanently settled that in Bengal. and in spite of subinfendation in the land tenure system the rent paid by the cultivator for his holding in Eastern Bengal is a much lower proportion of his profits from agriculture than that which is paid in provinces which do not come within the Permanent Settlement or than that which is paid in Bihar. The interest of the caltivator in Eastern Bengal is, therefore, more valuable than that of his fellow, for instance, in Bihar, the United Provinces or Orissa, and one of a family to whom a holding belongs is the less likely to forego his share and emigrate, while the others are the less able to bay him out. Therefore, even if the pressure of the population on the soil were as heavy in Eastern Bengal as in Bihar, it would be less likely to lead to migration The proportion between the number of emigrants and the natural population in plains districts of Eastern and Northern Bengal is as inllows and is contrasted below with the corresponding proportion in the
case of the districts outside Bengal from which most of the immigrants to the Province have come:-


The contrast becomes much greater when the figures taken are the proportions of the natural population who leave home and travel long distances. There is only one Bengal district from which emigrants are so large a proportion as in the Bihar and United Provinces and Orissa districts which have been mentioned, and that is Bankura, emigrants from which are $13 \cdot 23$ per cent. of the natural population, but Bankura district compares more closely with the Chota Nagpur districts than with those of Bihar, the eastern parts of the United Provinces and Orissa, and the proportion is over 10 per cent. for every district on the Chota Nagpur Plateau except Manbhum and Palamau, and in the case of Ranchi and Sambalpur no less than a quarter of the whole natural population has emigrated. Emigrants from Bikanir and Jaipur are people of an altogether different class, but the proportion between the numbers of emigrants from these States and their natural population is $17: 27$ and 12.82 per cent., respectively.

- 105. Migration to and from each division.-The migration between Bengal and other parts as it afiects each several quarter of the Province, and the migration between one quarter and another are analysed in Subsidiary Table III printed at the end of this chapter and illustrated by Diagram No. 38 on this page. North Bengal and Central Bengal each absorb rather more than one-third of the migra-
 tion from outside. Of the rest, rather more ihan two-thirds go to Western Bengal and rather less than onethird to Eastern Bengal. Of those who have emigrated from Bengal to other parts of India, Eastern Bengal has sent out 58 per cent., Dacca Division supplying rather more than two-thirds of these; Western Bengal has sent out:
some 16 per cent., Northern Bengal some 15 per cent., and Central Beagal some 11 per cent. Within the Province, Eastern Bengal sends out a balance of some 69,000 more emigrants to North Bengal than it receives from it, a balance of some 67,000 to Central Bengal and some 7,000 to Western Bengal. Western Bengal sends a balance of some $1,22,000$ to Central Bengal and some 4,000 to North Bengal; and between Central and Northen Bengal there is a transfer of 76,000 in favour of the latter. The balance of migration between the four quarters of the Province was much the same in 1911 as at present.」 The changes which have taken place have been in the direction of increased immigration from outside the Province to Western Bengal and to a slight extent to Central Bengal and decreased immigration from outside both to Northern and Eastern Bengal. There has been a decided decrease in emigration from Western Bengal to parts outside the Province, a slight increase in emigration to such parts from Northern Bengal and a great increase in emigration from Fastern Bengal. Within the Province there has been a distinct increase in migration from Eastern Bengal to Central Bengal and Northern Bengal, but the balance between other quarters is much the same as it was ten years ago. Migration of artizans, labourers and agriculturists is little affected by changes of administration, but the movement of an increased number of clerks: students and the like from the Dacca Division to Calcutta and Central Bengal has been somewhat accelerated since Bengal one more became a single province.

106 Streams of Migration.-The map in Diagram No. 38A., is intended to illustrate the directions of the migration which affects the Province and the several parts of it. The arrows indicate the direction in which migration from district to district takes place, thick arrows having been used to indicate the more important streams and light arrows the less important.


From outside the most important streans are:-
I. From Bihar and neighbouring districts of the United Provinces to the industrial area round Calcutta;
II. From Santal Parganas into Birbhum and across the Gauges into III. From Nepal into Darjeeling, Sikkim and Jalpail,
IV. From Chota Nagpur to the tea gardens in Jalpaiguri.
V. From Orissa to the industrial area round Calcutta; and
VI. From Sylhet into Tripura State.

The important streams leaving the province are :-
VII. From Mymensingh into Goalpara and further up the Assam Valley;
VIII. From Chittagong and to some extent from Tippera and Noakhal into Burma;
Within the province the streams carrying the greatest numbers with them are:-
IX. From Bankura into Burdwan and Hooghly;
X. From Midnapore to the banks of the Hooghly with their organized industry;
XI. From Hooghly to Calcutta on the part of a different class in search of clerical work;
XII: From Murshidabad and to a less extent from Nadia across the Ganges into Rajshahi and Malda;
XIII. From Pabna, Bogra and Mymensingh into Rangpur;
XIV. From Rangpur into Cooch Behar and Cooch Behar into Jalpaiguri; and
XV. From Tippera into Tripura State.
107. Immigration from Bihar and Orissa and United Provinces to the industrial area.-How large a proportion of the population of industrial towns up and down the Hooghly comes from beyond the borders of Bengal, has already been noticed in the last chapter. The following figures give the number of emigrants from the several Bihar and United Provinces districts which send the greatest number of recruits to Hooghly, Howrah, Calcutta and the 24 -Parganas:-

|  |  |  | Hooghly. | Howrsh. | 24-Pargrome | Cakeuta. | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bihar Districta- |  |  |  |  |  |  |  |
| Patna | $\cdots$ | $\cdots$ | 5,013 | 6,160 | 12,333 | 19,989 | 43,497 |
| Gaya | ... | ... | 4.802 | 5,61\% | 13,986 | 38,08: | 62,483 |
| Slushabud | ... | $\cdots$ | 3.407 | 7,324 | - 30.672 | 16.048 | 47,47t |
| Moughyr | .. | ... | 3,506 | 3,802 | 15,458 | 15,947 | 38,713 |
| Sarbia | ... | ... | 10,477 | 6,562 | 24,768 | 10,331 | 52,138 |
| Muzaffarpur | ... | ... | 4,677 | 4,018 | 11,682 | 14,456 | 35,033 |
| Darbhanga | ... | ... | 1,908 | 2,572 | 5.436 | 7,793 | 17,709 |
|  |  |  |  |  |  |  |  |
| Balia | ... | $\ldots$ | 3204 | 9.082 | 9.712 | - 3,491 | 25,489 |
| Ghazipur | ... | ... | $\underline{2.779}$ | 4.580 | 16,631 | 7,065 | 31,061 |
| Benares | . | ... | 1,912 | 3.179 | 8,515 | 10,948 | 24,554 |
| Azatngarls | ... | $\cdots$ | 2.115 | 3,5!\% | 12,458 | 5,753 | 23,924 |
| Jaunpur | ... | $\because$ | 1,220 | 6,047 | 8,656 | 5,588 | 20.511 |
|  |  |  |  |  |  |  |  |
| Cuttack Balusore | ... | $\cdots$ | 8,995 3,864 | 16,571 6,134 | 37.785 | 12,131 | 35,914 |

The above figures account for 125,539 immigrants to these four districts in Bengal from five districts in the United Provinces, who are more than onethird of the total number of persons found anywhere in Bengal who had been born anywhere in the United Provinces; and for 427,716 persons from seven Bihar and two Orissa districts, who form almost a third of the total number of immigrants to Bengal from the Province of Bihar and Orissa. Between them they account for 553,255 persons, considerably more than a quarter of the immigrants to Bengal from outside. This great body of immigrants comes
from two closely circumscribed areas, one consisting of the two districts of Cuttack and Balasore on the Orissa coast (Puri also sends a considerable number) and the other the western districts of Bihar with the adjoining ones just across the border in the United Provinces. The method of recruiting artizans and labourers for the jute mills and indeed for almost every large industry is in the main responsible. A sirdar, whose home is in one of these districts, brings down to a factory a gang recruited from among the poorer of his co-villagers, maintains some sort of control over them while they are employed and generally looks after them till he takes or sends them home again. This explains how it is that in one factory a large body of the labourers often comes from a very closely circumscribed area, often a few adjoining viliages only, in some up-country district. The numbers from the westernmost districts of Bihar are greater than from the districts adjoining them in the United Provinces, only because the latter districts are smaller, for they send quite as large a proportion of their people to the industrial area in Bengal. Generally speaking, the recruits from Orissa find less regular employment than those from the north-west. They are more often casual labourers and are almost all unskilled. More of the Biharis are skilled workmen, and the proportion that is skilled seems to increase among those who come from further to the north-west. The number which comes down from the Eastern Bihar districts is much smaller and very few come to industrial centres from Chota Nagpur. The aboriginal tribes of this plateau prefer to find work out of doors and shun the towns. It is not suggested that by any means all those who have come to Hooghly, Howrah, the 24-Parganas and Calcutta find employment in organized industry. Many of them ply their traditional caste trades in the industrial area as they do also in towns in other parts of Bengal. Muchis and Chamars are cobblers; Goalas are milkmen, and cartmen : Kahars are pali-bearers and coolies as are Kurmis, Bhats, Gorns, etc; Nunias are commonly earthworkers; Mallas boatmen and so on. Other castes are domestic servants, and needy Brahmans from Orissa are found in great rumbers in the towns employed as cooks by orthodox Hindus of the higher castes. Chhatris and others of superior caste from Bihar and the United Provinces are constables, durwans, zamindars' peons and the like. Most of the menial staff and porters on the railways come from Bihar and Orissa. Such immigrants are found in considerable numbers all over Bengal, although they are fewer in Tippera, Noakhali, Chittagong, Bakarganj, Khulna, Jessore and Faridpur than in the rest of the Province. But the abnormally large number of immigrants from Bihar and Orissa and the United Provinces in Calcutta and adjoining districts are mainly attracted by organized industry Nowhere in Bengal is the Bihari or the Oriya permitted to acquire rights in land and neither is commonly employed as an agricultural labourer. A possible exception to this rule exist in the Dinajpur and Rangpur districts where there may lrave been as many as 30,000 Biharis found employed as field labourers but not more. The rule does not apply to Santals, etc., who are willing to take up vacant and comparatively unfertile lands on the outcrops of the Old Alluvium in North and West Bengal and have been allowed to do so. It goes without saying that immigrants from Bihar and Orissa - and the United Provinces include a leaven of the mercantile classes, but they do not include any appreciable number employed in the professions or in clerical work. The numbers found in Hooghly, Howrah, 24-Parganas and Calcutta who had been born in Bihar and Orissa and the United Provinces at the last three censuses, are as follows:-

|  |  | dorm if bigar amd omissa. |  |  | borim fic Uxited Provincis. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1981. | 1911. | 1001. | 1821. | 1911. | 1201. |
| Hooghly | ** | 62,553 | 50,105 | 29,571 | 17,377 |  |  |
| Howrah | ... | 69.667 | 58,094 | 43,692 | - 42,242 | 47,243 | 12,069 $.39,727$ |
| 24-Parganas | ... | 177,989 | 144,723 | 78,822 | 88,913 | 83,536 | -46,295 |
| Calcuta | ... | 185,265 | 207.446 | 176,313 | 67,433 | -89,695 | 90,452 |
| Totel | ... | 495,474 | 460,368 | 328,398 | 215,965 | 235,487 | 188,543 |

Immigration to Calcutta from the United Provinces began to fall off before 1911, and both from Bihar and Orissa and the United Provinces it has fallen off in the last decade, mainly because Calcutta itself is becoming more a commercial centre, and industries are finding a home in the neighbourhood of the City rather than in the City itself. The number from the United Provinces in Howrah district has now fallen off as in Calcutta, but it has increased in Hooghly and the 24-Parganas where the jute mills have developed most rapidly of late. The number from Bihar and Orissa has gone on increasing in Howrah as well as in the other two districts, principally on account of the increased number unskilled labourers, especially Oriyas, who continue to come to them. In respect of emigrants from the plains districts of Bihar, Orissa and the United Provinces to districts of Bengal beyond the industrial area round Calcutta where they ply their caste trades, there has been a distinct falling off in number during the last ten years, though the number of up-country coolies in such places as Narayanganj, Madaripur, Chandpur and Sirajganj, the centres of the collecting trade in jute, have increased. The total numbers of immigrants to Bengal from Bihar and Orissa and the United Provinices, found in 1921 and in 1911 are as follows:-

## Immigrants from Bihar and Orissa : 1981—1,220,426; 19n-1,248,401. <br> Imnigrants from United Provinces: 1921-342,810; 1911—404,198.

108. From the Santal Parganas.-Rampurhat subdivision of Birbhum is largely populated by aborigines who have come in at some time or other from the Santal Parganas. The infiltration has been going on for a very long time and some Santals may even have settled in Birbhum when the tribe originally migrated to the Santal Parganas. Some have also passed into Murshidabad district, and there has been a constant stream of Santals, Mundas, Mal Paharies and others crossing the Ganges at Rajmahal and moving into Northern Bengal for the last half century. The "Barind," the undulating outcrop of the Old Alluvium offered them unoccupied land on which they could settle and still offers it. The soil is the soil of their own country and their methods of agriculture, which are both too crude and too laborious for the Bengali, can there be used with advantage. 202,444 emigrants from Santal Parganas are found in Bengal and 97 per cent, of these are claimd by the districts named below :-

| Burdwan-28,042 | Dinnjpur-53,350 <br> Birbhum-22,231 <br> Muralidabad-13,305 <br> Malda-38,011 <br> Rajshahi-15,081 |
| :--- | :--- |
| Jalpaiguri-14,866 |  |
| Darjeeling-4,447 |  |
| Rangpur-3,909 |  |
| Bogra-3,308 |  |

These figures account for 196,530 immigrants of whom more than two-thirds have crossed the Ganges into Northern Bengal. The number of immigrants to Birbhum and Murshidabad in 1901 was 37,623 and in 1911, 43,215 , but has now fallen to 35.536 . Those who have come in usually came to settle, and the fact that the original settlers are dying off and their places are being taken by their native-born children must account in a large measure for the reduction. The number of Santals in these two districts is now 83,581 in place of 70,583 in 1911. It seems, therefore, that though there may have been some reduction in immigration the stream must still continue to run strongly. The number of immigrants to Burdwan from the Santal Parganas in 1891 was no more than 6,241, but with the development of the coal mines of Asansol subdivision, which afford remunerative employment, their number rose to 13,825 in 1901 and to 27,376 in 1911, and has somewhat further increased during the last ten years. The number born in the Santal Parganas who were found in Malda, Dinajpur, Rajshahi and Jalpaiguri in 1891 was only 47,995. It had more than doubled by 1901 and reached 108,209 . It rose by nearly 50 per cent. to 156,089 in 1911, but has since fallen to 121,308 , only Rajshahi district having shown an increase in the last ten years. On this side of the Ganges as on the other, immigration has now been going on for a long time and much of the decrease is to put down to native-born children of the original settlers having succeeded their fathers who migrated, for the number of Santals in these four districts has risen from 212,685 in 1911 to

237,639 in 1921. Still there is no doubt that the streams of migration which cross the Ganges at Rajmahal has been considerably less during the last ten years, than in either of the two previous decades.
109. From Nepal.-The numbers found in 1921, 1911, 1901 and 1891 living in Darjeeling, Sikkim and Jalpaiguri who had been born in Nepal are given in the following table:-


In 1891, the total population of Darjeeling district was only 223,314 so that at that time no less than 39.4 per cent. of the population had been born in Nepal. The hills had in fact been peopled anew by Nepalese during the 30 years or so previously. It is not to be wondered, therefore, that the number born in Nepal has since decreased, as settlers died off and were succeeded by their native-born children. That after the lapse of another 40 years, as much as 20.5 per cent. of the population still consists of emigrants from Nepal, is evidence that the stream of migration has by no means run dry. Sikkim was closed to settlers from Nepal up to the time of the war of 1889 and the number born in Nepal found in the State in 1891 must have been very small. The immigrants from Nepal in 1901 were 40.6 per cent. of the whole population and still form 25.5 per cent., though Nepalese must have shared equally with others in Sikkim the heavy mortality which has reduced the population by just over 10 per cent. in the last ten years in spite of continued immigration. The number from Nepal found in Jalpaiguri district has been subject to curious fluctuations, for which the explanation would seem to lie in the fact that Nepalese do not go down to Jalpaiguri district to settle permanently as they have done in Darjeeling and in Sikkim, but rather to find temporary employment in the tea gardens and return to their own hills after a time. Nepal is the nearest source from which the labour supply for the Duars tea gardens is drawn, and the supply is therefore more elastic to the demand than the supply from Chota Nagpur, where the gardens have recruiting agents and the coolies are brought up at the expense of the industry. Naturally the gardens keep their labourers, recruited at their own expense, permanently employed if they can, and meet only a temporary demand for labour by employing Nepalese whom they discharge again as circumstances dictate.
110. From Chota Nagpur and the Central Provinces to Jalpaiguri.-The bulk of the labour employed in the Jalpaiguri is made up by aboriginal tribesmen from the middle of the Chota Nagpur Plateau. Ranchi is the district in which the great majority of the coolies are recruited. The number of persons born in Ranchi who were enumerated in Jalpaiguri district at the last census was no less than 126,214. The number from Singhbhum was 7,545, from Palamau 1,595 and from Hazaribagh only 1,323, and there were smailer numbers from other parts, so that migration from Ranchi completely swamps that from adjoining districts. In 1891, there were but $18,808 \mathrm{immi}$ grants in Jalpaiguri from Lohardaga district as it was then, fewer than there were from Nepal. Recruiting went on apace in the next ten years and the Census of 1901 showed 80,436 persons in Jalpaiguri who had been born in Ranchi. Apparently there was a movement in the direction of employing Nepalese labour in the next decade, for though the number of immigrants from Ranchi had risen to 99,000 by 1911, the number from Nepal was nearly double as large as in 1901. During the last ten years the tea industry seems to have definitely decided against Nepalese labour on the gardens in the Duars, where it has proved by no means as satisfactory as in the hills, for not only has the number of recruits from Ranchi risen by more than 25 per cent. since 1911 and the number of Nepalese immigrants to the
district fallen by 30 per cent., but there has been a commencement of recruiting further into Central India. In 1901, there were only $60 \%$ persons in Jalpagguri district who had been born in the Central Provinces and in 1911 the number was 611, but the figure according to the recent census bas risen to 8,334 persons, of whom 6,314 came from Nagpur district, 989 from Bilaspur and 897 from Raipur. The number of females, who bave been hrought in, is almost equal to the number of males. This even balance of the sexes is also apparent among the emigrants from Ranchi, for the tea industry finds employment for females as easily as for males.
111. Colonization of Tripura State from Tippera, Noakhali and Sylhet.-Immigration into Tripura State from Tippera district and from Sylhet in Assaun may be considered together. The immigrants are mainly
Bengali-speaking Muhammadans. The figures given below represents the Bengali-speaking Muhammadans. The figures given below represents the number of immigrants to the State from those two districts as discovered at each of the last four censuses:-

| Boril li- |  |  | Yodid in thipura statm |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1921. | 1811. | 1801. | 1 ngot. |
| Tippera | -•* | - | 25,689 | 35,302 | 12,055 | 6,845 |
| Syliet | - | - | 33,929 | 25,549 | 16,106 | 1,128 |

Smaller but not inconsiderable numbers go in from Chittagong, 9,891 in 1921. Noakhali 4,583 and Dacca 2,618 . Until 1901, the State had more recruits from Sylhet than from Tippera district, but the Census of 1911 showed a large number of fresh immigrants from Tippera. It seems that much of this fresh immigration must have been temporary, for the number from Tippera has greatly declined since 1911. The State now contains four from Sylhet to every three from Tippera, and the development of the State is going on most rapidly at the northern end against the Assam frontier. The number which passes in from Noakhali is small because the adjoining Division of the State, Belonia, has as dense a population as it can well bear.
112. Midnapore to Hooghly and Midnapore and Hooghly to Calcutta,

24-Parganas and Howrah.-The bulk of the migration from rural parts' of West Bengal to the industrial area along the Hooghly come from Midnapore. The census discloses a balance of migration from Burdwan to Hooghly of 8.803 persons which has increased from 6,221 in 1911, but this is not necessarily migration to the industrial parts of Hooghly and the migration from Bankura to Hooghly is certainly not so. The balance from Burdwan to Calcutta is 15,749 compared with 20,234 in 1911, but there is fittle movement from Burdwan to Howrah and the 24 -Parganas. Migration from Midnapore is much more important. Its extent and variations are shown by the figures given in the following table:-

| Balanet of tolgration from . Midaapore tom | 1991. | 1011. | 1201. | 1801. |
| :---: | :---: | :---: | :---: | :---: |
| Hooghly ... | 21,770 | 17,693 | 8.013 | 7,042 |
| Howrah | 7,027 | 8,479 | 10,414 | 11,326 |
| 24-Parganas ... ... | 61,621 | 42,399 | 24,270 | -.... |
| Oalcutta | 23,758 | 28,172 | 24,968 | 26,590 |
| Total... | 114,176 | 96,743 | 67,665 | 44,958 |

Midnapore people have flocked to the mill areas in Hooghly and the 24-Parganas in increasing numbers and seem to have taken the lead of those
of any other Bengal districts in doing so, a fact which is evidence, if more were needed, of the very heavy pressure of the population on the soil of the district: But the movement from Midnapore to Howrah is less than it used to be and the number found in Calcutta who had been born in Midnapore is now rather less than 20 years ago. As the jute industry has developed in Hooghly district, there has been a great reduction in the migration from there to Howrah. The balance in favour of Howrah was 22,587 in 1901 and 33,213 in 1911, but has now been reduced to 6,456 . Hooghly used to supply most of the clerical labour required in Howrah and much of that required in Calcutta and still does so, but the migration from Hooghly to Calcutta has also fallen off considerably, the explanation being the remarkable development of the daily passenger service on the East Indian Railway. 45,194 persons were found in Calcutta in 1901 who had been born in Hooghly, and 46,087 in 1911, but the Census of 1921 has shown only 29,234 . Clerks and others fock in in the same numbers as before, but very many more of them now live near stations on the line from Howrah to Bandel and come in every day to their work than was formerly the case.
113. Bankura to Burdwan and Hooghly.-The unsophistical Bankura people do not appear to be attracted to the industrial area in the neighbourhood of Calcutta, for Bankura sends only 6,262 emigrants to Calcutta 1,647 to Howrah and 2,335 to the 24 -Parganas. Its people, who leave their home district, seem to prefer agricultural employment to any other, and although a considerable number of its aborigines are attracted to the Raniganj coalfield, the bulk of the emigrants seek employment in rural parts of Burdwan and Hooghly, and to a less extent in rural areas in Midnapore. The balance of migration between Bankura and Midnapore is no more than 2,519, but for a long time past there has been steady flow into Burdwan and Hooghly as the following figures show:-

| Belanoc of migration f:om Batarara Lo |  |  | 1021. | . 1911. | 1001. | 1891. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Burdwan <br> Honglily | *** | - | 40.834 | 25,975 | 33.756 | 13,636 |
|  | $\cdots$ | -** | 48,140 | 45,138 | 41,612 | 25,921 |
|  | Total | $\cdots$ | 83,974 | 71,113 | 74,368 | 39,557 |

The fall in the balance between Bankura and Burdwan in 1911 was due to an increase in the number who had passed from Burdwan into Bankura from 6,571 in 1901 to 18,620 , and as the figure has fallen again to 6,709 , it seems certain that the increase must have been due to some temporary cause, possibly the fact that work was going on in the construction of the BankuraDamodar Railway close to the Burdwan border and was attracting labour. If such an increase had not taken place, the balance of migration from Bankura to Hooghly and Burdwan in 1911 would have been some 83,000 . There seems to have been a great exodus from Bankura between 1891 and 1901, but the stream has continued since. Both Búrdwan and Hooghly have lost population in the areas adjoining Bankura as heavily as Bankura during the last decade, so that increased demand for labour at home has been counterbalanced by increased demand in the adjoining districts and has not kept Bankura people from emigrating, though it has no doubt brought back many who left temporarily during the famine years.
114. From Murshidabad and Nadia across the Ganges.-Migration between districts on either side of one of the big rivers is generally occasioned by the river having diluviated the land on one bank and built. up new land opposite it on the other, and such action on the part of the Ganges has helped to bring people from its south bank to its north bank in Malda and Rajshahi. But such action has been by no means sufficient to account for the migration which is taking place from Murshidabad and Nadia northwards across the
river. There has been exchange of immigrants, but it is very decidedly in favour of Malda and Rajshahi. The figures given in the following tatle show the balance of migration betwen Malda and Murshidabad and between Murshidabad with Nadia and Rajshahi according to the last four census enumerations:-

| Bulabee of migration. | 1931. ${ }^{\text {- }}$ | 1911. | 1301. | 1031. |
| :---: | :---: | :---: | :---: | :---: |
| Murahidabad to Malda ... | 13,227 | 20,232 | 7,162 | 9,308 |
| Murahidnbad and Nadia to Rajahahi. | 28,101 | 24,383 | 23,139 | 14,496 |
| Total | 41,328 | 44,615 | 30,301 | - 23,804 |

It will be seen that there is a very decided movement of population northwards across the river, which accounts for more than half of the balance of 76.000 which North Bengal receives from Central Bengal. This stream of migration began to flow more than 40 years ago, but has increased very much in volume since 1891 and appears still to be increasing, for the balance between Murshidabad and Malda would have proved as great in 1921 as in 1911 but for a change in the boundaries of jurisdiction.' It may be taken as an indication of the strength of the economic pressure on the soil south of the Ganges whose capacities for production have seriously depreciated with the decay of the distributary rivers leaving the Ganges to join the Hooghly estuary, and the lowering of the sub-soil water-level in Murshidabad and Nadia which has resulted. Though migration generally has been somewhat stayed in so many parts of the province since 1911, and Murshidabad and Nadia have suffered so serious a loss of population during the last decade as 8 per cent., there is no sign that migration across the Ganges has been reduced.
115. Migration up the Brahmaputra.-The streams of migration from Pabna, Bogra and Mymensingh to Rangpur, from Rangpur to Cooch Behar and from Cooch Behar to Jalpaiguri may be considered along with the migration from Mymensingh and Rangpur into the Assam Valley. Beginning from the junction of the Jamuna and the Ganges there is a steady stream of migration up the course of the former northwards and then north-eastwards into the Assam Valley. The balance of migration from Pabna to Bogra and Mymen-

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Balobe of |  | 101. |  | singh and from Pabna and Mymensingh to Rangpur disclosed at each |
|  | $\cdots$ | (10:330 |  | of the last three censuses, is shown |
|  | … 32.801 | 23.102 | 29 | y the table in the margin. Before | the beginning of this century there had been some movement from Pabna into Bogra and Rangpur up the Jamuna. Those who went were mostly Muhammadans who had lost their land by diluvion in Pabna or had been attracted for some bother reason towards the islands and accretions along the Jamuna in Rangpur and. Bogra and the lower courses of the Tista in Rangpur. The new lands were then mostly on the right bank of the Jamuna and there was little migration onto the Mymensingh side. Mymensingh people had begun to cross over into Rangpur. In the next ten years there was a phenomenal increase of migration up the course of the river which involved 70,000 persons. Most of it, especially, at the southern extremity of the stream, was permanent migration, for the numbers born in Rangpur and found in Pabna were only 251 in 1901, 240 in 1911 and 303 at the last census. During the last decade, the progress up the right bank of the Jamuna has fallen off, but that from Mymensingh to Rangpur has gone on increasing.

There has been northward migration by another class of people from Rangpur into Cooch Behar and from Cooch Behar into Jalpaiguri. These people are not those who seek new alluvial formations to bring them under
cultivation, and are not generally Muhammadans, but more often the indigenous Hindu cultivating.classes of North Bengal and especially Rajbansis. The movement is an older one than
 that mentioned just above. It involved 28,000 people in 1901 and slightly less in 1911, while the number involved in 1921 has so much decreased as to indicate that the stream must almost have ceased to flow. It can get no further northwards than Jalpaiguri district, for there it meets the hills, but it can, and to a certain extent does, turn eastward into the Assam Valley, for the balance of migration from Jalpaiguri to Goalpara is 9,635. Cooch Behar people do not, however, seem to be going into Goalpara, for the balance of migration is slightly in the opposite direction and Jalpaiguri people do not penetrate further into the Assam Valley than the first district they come to.

A movement in which Muhammadans take the greatest part has shown a startling development during the last ten years. In 1901 only 22,056 persons were enumerated in Assam who had been born in Mymensingh and of these 15,289 were found in Sylhet, only 2,402 in Goalpara, 652 in Nowgong and smaller numbers in the other Assam Valley districts. In 1911, there were 34,171 Mymensingh people in Goalpara, but still there were less than a thousand in any district further up the Brahmaputra. Now the number found in Goalpara is 77,932, in Kamrup 29,578, in Darrang 12,460 and in Nowgong 52,199. The 3,649 emigrants from Mymensingh to the Assam Valley districts in 1901 had increased by ten times to 36,615 in 1911 and they are now no less than 172,061. The greatest migration has been to Nowgong where there were 750 Mymensingh people in 1911 and where there are now seventy times as many. There has been very little increase in migration from Mymensingh into Sylhet, but the people of the district have taken to going to Cooch Behar in the same manner as they have taken to going up the Brahmaputra Valley, for there were only 1,552 in Cooch Behar in 1911 who had been born in Mymensingh and there are now 9,797. A certain number of Rangpur people have been found in Goalpara at each of the last three censuses, but the number 14,748 is not greater now than it was 20 years ago. There are 1,429 from Rangpur in Kamrup, but only very few in districts further up the Valley. Altogether, the stream into the Assam Valley must have carried nearly 150,000 persons with it during the last ten years and they have almost all gone from Mymensingh. It is all permanent migration and has included 4 females to every 5 males. Those who have gone are ordinary cultivators most of them Muhammadans, and they have gone by whole families, and taken up land in the wide stretches of untilled plain on the right bank of the river as far up as Gauhati and from thence more on the left banks as far as Tezpur beyond which few seem to have penetrated.
116. Migration to Burma.-Migration from the Chittagong Division into Burma is largely periodic. It takes place in the cold weather and the emigrants return before the rains. The arrangement is now an old standing one which involved as many as 100,000 persons as long ago as 1891 . It increased by 40 per cent. between 1891 and 1901 but fell off somewhat during the next ten years though the number born in Bengal and enumerated in Burma in 1911 was 134,985 . The number disclosed by the recent census is an increase of 7 per cent. The emigrants include only one woman to every 8 men .

| digthigt and natuhal VYISION: WHER EMOMEAATKD. | borm in (000's ouittad). |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Distriot (or Natural livisiod). |  |  | Contiguous dilxtrlet in theIroviuces. |  |  | Other perta of the Provinco. |  |  | Contiguous rarts of other Provideas. |  |  | Nod-contliguous mit of others Provinces. |  |  | Ootuide Ic dia. |  |  |
|  | .Total. | Male. | Yumato. | Total. | Malo. | Yomalo. | Total. | Male. | Fomalo. | Total. | Mulo. | Femala. | Total. | malo. | Female. | Total | Make. | Yeuake. |
| 1 | 2 | 3 | 4 | 6 | 6 | 7 | 8 | $\because$ | 10 | 11 | 12 | 13 | 14 | 16 | 16 | 17 | 18 | 19 |
| BEMGAL ... ... ... | 45,683 | 23,283 | 22,370 | ... | ... | * | $\cdots$ | $\cdots$ | .. | 388 | 218 | 173 | 1,428 | 1,082 | 376 | 112 | 67 | 45 |
| burdwan division ... | 7,589 | s,78s | 3,780 | 86 | 28 | 37 | 15 | 11 | 4 | 111 | 88 | 83 | 287 | 212 | 75 | $3 \cdot 22$ | 245 | $\cdot 77$ |
| Buriman ... ... ... | 1,24 | 62 A | 016 | 85 | 37 | 48 | 14 | 8 | ${ }^{\text {B }}$ | 4 | 93 | 21 | 50 | 33 | 15 | 93 | -69 | 29 |
|  | 783 980 | 309 <br> 409 | ${ }_{402}^{394}$ | ${ }_{15}^{22}$ | ${ }^{7}$ | 10 | 2 | $\frac{1}{2}$ | 1 | ${ }^{9}$ | 3 | 7 | ${ }^{3}$ | ${ }^{2}$ | - 1 | 02 | . 09 | -.. |
| Midiapore Homghly | 2,5998 | 1,302 | 1,294 | ${ }_{115}^{19}$ | 88 81 81 | ${ }_{64} 1$ | 10 | 8 | ${ }_{3}^{4}$ |  |  | $\ldots{ }^{\text {.. }}$ | 90 | 67 | 93 | . 70 | . 35 | ${ }_{-13}$ |
| Howrah $\quad . .$. | 815 | 406 | 408 | 46 | 92 | 21 |  | 8 |  | ... | $\ldots$ | ... | 128 | 110 | 98 | 130 | 113 | $\cdot 37$ |
| Cantrat Sengal- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| parsidenot divibion ... | 8,428 | 4,898 | 4,082 | 281 | 180 | '11 |  | ${ }^{5}$ |  | 16 | * | 7 | 838 | 488 | 100 | 17.20 | 15.3 | $3 \cdot 9$ |
| 24-Parganas Ualcutha ... ar | 2,171 | 1,111 | 1,000 | 158 <br> 98 <br> 8 | 82 61 | 38 38 38 | 178 178 | 17 183 | ${ }_{5}^{7}$ | $\cdots$ | $\cdots$ | $\cdots$ | 291 314 | 318 835 11 | 78 80 | 315 13980 | 20.36 00.30 | 3.30 |
|  | +1,425 | (1767 | (137 | 89 89 89 | 61 16 13 | 3, <br> 18 <br> 3 | \% | b <br> 3 <br> 8 | $\begin{array}{r}3 \\ 2 \\ \hline\end{array}$ | ".. 13 | $\cdots$ | $\cdots$ | ${ }^{15}$ | 11 6 | 4 | . 08 | -06 |  |
| $\underset{\substack{\text { Murahiddabad } \\ \text { Jotororo }}}{\text {... }}$... | 1,203 |  | 603 <br> 804 <br> 800 | 31 58 58 | 13 15 15 | 18 20 20 20 |  | 3 3 | 2 1 |  | ... | $\ldots$ | ${ }_{8}^{6}$ | ${ }_{6}^{6}$ |  | $\cdots$ | -08 | $\ldots$ |
| Khulna ... ... ... | 1,692 | 723 | 609 | 51 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Morth Bengal ... ... ... | 10,087 | 6,158 | 4,011 | 172 | - 88 | 73 | 25 | 18 |  | 180 | 84 | 78 | 424 | 282 | 142 | $88 \cdot 8$ | 48.8 | 39.8 |
| majbiatil myision ... | 8,487 | 4,855 | 4,832 | 189 | 103 | 80 | 24 | 15 | 9 | 167 | 82 | 78 | 405 | 286 | 138 | 88.85 | 48.15 | 38.7 |
| Rajphaht ... ... ... | 1,384 | 700 | ${ }^{678}$ |  | 30 | 26 | 13 17 | 888 | ${ }_{7}^{3}$ |  | $\cdots$ | ... | -368 | 93 67 | 13 | . 15 | 4 | $\bigcirc$ |
|  | 1,650 | 804 369 | 76 309 | 25 40 | 12 21 21 | 13 19 |  | ${ }_{5}$ | 1 |  |  |  | ${ }^{193}$ | 104 | $8{ }_{81}$ | 25.14 | $14 \cdot 3$ | $10 \cdot \mathrm{AL}$ |
|  | 687 17 | ${ }_{3}^{3189}$ | 309 $8 \%$ | ${ }^{40}$ | 21 2 2 | 1 |  | 23 | 14 |  | 1 | 1 | 32 75 | 30 31 | 114 | ${ }_{43}^{4}$ | $\begin{array}{r}3368 \\ .33 \\ \hline 38\end{array}$ | 98.1 |
|  | 2,3388 | 1,203 | 1,185 | $8{ }^{31}$ | ${ }_{12}^{27}$ | 37 3 1 | 37 | ${ }^{23} 8$ | 14 3 | $\ldots{ }^{2}$ | ... ${ }^{1}$ | $\ldots$ | 75 25 | 17 17 | ${ }^{14}$ | -63 | -03 | ${ }_{-01}^{1}$ |
|  | 1,543 |  | 48.5 665 | 28 27 27 | 12 14 | 13 |  | $\xrightarrow[3]{3}$ | 1 | … 4 | $\cdots$ | $\cdots$ | 15 | 13 | 3 | 04 | ${ }^{0} 9$ | . 01 |
|  | -1884 | $\begin{array}{r}437 \\ 378 \\ \hline 18\end{array}$ | 417 <br> 154 | 275 81 81 | ${ }_{9}^{18}$ | 17 12 | 16 | 10 | ${ }_{0}^{1}$ |  |  | ${ }^{11}$ | 20 20 | 18 | ${ }_{6}^{6}$ | . 78 | ${ }_{8}^{6}$ | ${ }_{-1}$ |
| Emst Bangal ... ... ... | 18,882 | 0,587 | 0,305 | 57 | 31 | 28 | 8 | 6 | 4 | 63 | 28 | 25 | 128 | 28 | 31 | 178 | 178 | 68 |
| dacoa nivimion ... ... | 12,014 | 6,410 | 6,195 | 102 | 81 | ${ }^{11}$ | 9 | ${ }^{\circ}$ | 3 | 11 | , | 5 | 100 | 80 | 20 | $\cdot 95$ | $\cdot 68$ | 25 |
| Пacea ... ... ... | 8,024 | 1,507 | 1,617 |  |  | 29 | ${ }_{7}^{8}$ | ${ }_{0}$ | $\stackrel{9}{2}$ | $\cdots$ - | $\cdots$... | $\cdots$ |  | 23 | 4 | 45 | . 34 |  |
|  | 4,700 2,159 | $\xrightarrow{2,17}$ | 2, | ${ }_{80}^{68}$ | 38 41 4 |  | ${ }^{7}$ | ${ }_{3}^{6}$ |  | ... |  | $\ldots{ }^{4}$ | 59 11 | ${ }_{8}^{43}$ | 14 | . 21 | W8, | ? |
| linkurgans | 2,595 $\mathbf{2 , 5 3 5}$ | 1,003 | $1,=64$ | ${ }_{5 B}$ | 96 | 12 | 11 | 13 | 4 | $\cdots$ | $\ldots$ | $\cdots$ | 5 | 5 | ... | 13 | w | 04 |
| omittagonu divibiun | 6,040 | 2,97* | 2,8is2 | 98 | 23 | 13 | 3 | 2 | 1 | - | , | 3 | 14 | 10 | - | $\cdot 62$ | . 38 | ' 4 |
|  | 2,698 1,432 1 | 1,377 | 1.810 720 |  |  | $\begin{array}{r}13 \\ 7 \\ \hline\end{array}$ |  |  | 1 $\vdots$ | ... | $\ldots{ }^{\text {. }}$ | ... ${ }^{\text {s }}$ | 7 | 0 | $\ldots{ }^{1}$ | -10 | W1 |  |
|  | -1,592 | 76, | (427 |  |  |  |  |  | $\ldots{ }^{9}$ | $\cdots$ |  | … | 1 | 1 | $\ldots{ }^{2}$ | . 06 |  |  |
|  | 160 <br> 208 <br> 80 | 87 <br> .102 <br> 8 | ${ }_{96}^{70}$ | 4 4 | ${ }_{23}{ }^{4}$ | 13 | 5 | 3 | $\cdots$. 9 |  | $\cdot 1 /$ | $\cdots{ }^{\prime \prime}$ | 15 | 4 | $\cdots 7$ | 25 | 1 | ${ }^{13}$ |
| sikxim ... ... ... ... | 58 | 27 | s1 | ... | ... | ... | ... |  | $\cdots$ | 2 | 1 | 1 | ... |  |  | 81 | 13 | $s$ |

subsidiary table li.-Emigration (actual lifaures).

 divisiona. Thow who wore enumpratod outalide Iudia ure dotallad bolow:- Total. Male. Jomalo.
sUBSIJIARY TABLE IIL-Migration berwien natural, divisions (actual figures compared with 1911).


Noty. -The Agnrem withic braokete show the pumber born and enumeratod to each natural divialon.

Total.

| Province on thatz. | Imyicrasti 90 Bixgal |  |  |  |  |  | Rycese ( + ) or defiotricy (-) OP EXYIGRAETS OVEB Eyichayti. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 181. | 1011. | Fartatiov. | 1881. | 1012 | Variation. | 1921. | 1911. |
| 1 | \% | 8 | * | 5 | 6 | 7 | 8 | - |
| Ajmer-Merwara -- -- | 1,930 | 053 | + 1,977 | 970 | 289 | + 681 | + 980 | $+\cdots 364$ |
|  |  | 80 | 48 | 690 | - 1,870 | 888 | 858 | 1.109 |
| Anem --. --. -- -- | 68,587 | 67,089 | $+\quad 1.178$ | 375,206 | 198,575 | $+\quad 181.631$ | 306,939 | - 328,488 |
| Befortistan (district and admanatered terriborim). | 60 | 97 | 29 | 656 | 123 | - 383 | - 389 | 28 |
| Eegrat - .-. .-. -- |  | $\cdots$ | - | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - |
| Bibar aod Orion -- - - | 1,200,488 | 1,248,401 | - 97,975 | 107,232 | 153,400 | - 40,168 | + 1,118,104 | + 1,005,001 |
| Bomidey -- .-. -- | 7,515 | 4.948 | + 21865 | 7,985 | 6,377 | + 1.578 | 440 | 428 |
| Barme -- .-. ..- ... | 2,161 | 2,000 | 239 | 146,067 | 133,756 | + 10,381 | - 142,748 | 133,156 |
| Ountril Providoca and Berar -- | 31,73 | 19,379 | + 35,276 | 8.063 | 3,543 | 478 | + | $\pm 15,836$ |
| Cours - - - - | - | 3 | + | - | 8 | - | $\cdots$ | 2 |
| Delhi - $-\cdots$-.. | 1,889 |  | $\pm \quad 1.889$ | 2,778 | - | + 2.778 | - 859 | - |
| Madras (ixcluding Leocadiren) | 81,770 | 14,540 | + 17,080 | 2.281 | 6,537 | 8,256 | + 27,899 | + 7.703 |
| North-Went Frodeler Proridoe (district and admioisterad coritwrial | 1,026 | 1.054 | - 8 | 77 | 972 | + 608 | + 240 | $\pm 762$ |
| Pucjub - -- -- .- | 14,304 | 17.564 | - $\quad 3.280$ | 2,949 | 8.780 | 831 | + 11,3ss | + 13,784 |
| Uniond Proviluon of Agra and Oudb. | 348,801 | 404,188 | 61,289 | 18,479 | 25,659 | 7,180 | + 184.399 | + 379,530 |
| Teed Efilith Tereltery -- | 1,743,044 | 1,781,288 | - 37,098 | 870,128 | 530,585 | + 139,534 | + 1,07s,51\% | + 1,250,881 |
|  | 835 | 281 | + 314 | 372 | 800 | $+4 \quad 12$ | + 163 | 79 |
| Beluchitas (Ageocy Tracts) - | 24 | 19 | $\pm \quad 5$ | -- | 2 | - 3 | + 94 | $\pm \quad 17$ |
| Beroda Seace --. -- -- | 190 | 124 | + 75 | 257 | 283 | -. 78 | - 58 | 208 |
| Bengal Statex -- -.. -- | - | - |  | - | - | $\cdots$ | - | .. |
| Bhar and Oriman Staten -- | 7,153 | 2,970 | + ${ }^{-183}$ | 8,890 | 11,254 | - 2,294 | 2.587 | 8,014 |
| Bombay Seavee -.. -- | 1,718 | 2.578 | $+\quad 1,140$ | 515 | 197 | $+\quad 18$ | + 3,203 | + 2,081 |
| Contrul indis Ageacy -- -- | 91 | 2.161 | - 2,280 | 949 | 1,004 | - ss | - 8 | $\pm \quad 2,157$ |
| Outral Providces Stales - | 2,057 | 1,509 | $+\quad 1,458$ | 211 | 2,256 | 2,045 | + 28846 | 657 |
| Cwalior beate - - .-- | 1,788 | $\cdots$ | + 1.788 | 325 | -- | +*-325 | + 1.463 | $\cdots$ |
| Hy derabed State -- -- -- | 389 | 24 | + 145 | 293 | 717 | 46 | + \% | 473 |
| Eedurir Secke $\because \because \quad-\quad-$ | 169 | 923 | 124 | 105 | 181 | - $\quad 26$ | + 6 | + 162 |
| Ma.srau States (Inc.ading Coohld and Irarabcore). | 74 | 103 | + 651 | 67 | 156 | 89 | + 687 | 58 |
| coemossate . ..- -- | 285 | 18 | + 174 | 8 | 88 | - . ${ }^{15}$ | + 218 | + 96 |
| Trasameore state -.. - | 859 | 64 | $+\quad 978$ | 68 | 194 | - 66 | + 77 | 70 |
| Mrore stave -.. -- -- | ${ }^{181}$ | 488 | $\pm 93$ | 424 | 413 | + $\quad 11$ | $+\quad 97$ | $+\quad 15$ |
| North-Fent Prontler Prorince (Agedcien and tribel areal). | $\cdots$ | $\cdots$ | .- | 340 | 15 | + 128 | 140 | 12 |
| Prajub Senter -- | 1.582 | 1.015 | + 530 | 233 | 238 | 18 | + 1,999 | + 773 |
| Rajoptamen Agricy - - | 47,883 | 26,659 | +* 11,208 | 774 | 737 | + 87 | + 17,091 | + 35.928 |
| gikdm -- - - | 4.057 | 3,854 | + 703 | 1,566 | 3,059 | -- 1,486 | + 2,491 | + 303 |
| Crited Prorlooen Scutes | 39 | 1,496 | - 1,504 | 135 | 100 | - 5 | $+\quad 139$ | $\div 1,338$ |
| Total Fumetorg stater - | 72,318 | 35,283 | 17,053 | 10,060 | 21,892 | 6,826 | $+88,850$ | + 33,271 |
| Lotim, unopectiod -.. - | 30 | 106 | - 76 | $\cdots$ | $\therefore$ | -- | + 30 | $+106$ |
| Proch and Portapoen Settbmentes | 1,181 | 2,201 | - 1,180 | $\cdots$ | - | $\ldots$ | $+\quad 1,181$ | + $\mathbf{8 , 3 6 1}$ |
| cean rotal - | 1,817,778 | 1,839,018 | - 21,24t | 818,185 | 652,587 | + 133,008 | + 1,131,580 | + 1,288,420 |

sÚBstdmary TAble ry.-part II.
British Terr ilory


## subsidiaky table IV.-Part III.

Feudatory States.

| PROTINCE OR State | Imygramit to brroak |  |  | bxigrames yrox beranl |  |  | EICESA ( + ) OR DENGIENOY ( - ) or fyyizalint ofiz. ENIGRANTK |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1891. | 1811. | Variation. | ${ }^{-1031}$. | 1911. | Fariation. | 1891. |  | 1911. |
| 1 | , | 8 | 4 | $s$ | 6 | 7 | 8 |  | $\bullet$ |
| Ajpm-Merwirs ... -- | 76 |  | $\div 7$ | "- | $\cdots$ | $\cdots$ | + 75 | $+$ | 3 |
| Addamamand Sicobert -.. | - | $\cdots$ |  | 7 | 58 | - 51 | 7 |  | 58 |
| Amem - .- -- .- | - 00.048 | 20,989 | + 9,249 | 1,702 | 1,963 | - 261 | + . 88,346 | + | 28.838 |
| Bencesiatan (Distriet, apd | $\rightarrow$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | -- |  | $\cdots$ |
| Bedgal - - - - | $\cdots$ | $\cdots$ | - . | $\cdots$ | - | - - | $\cdots$ |  | $\cdots$ |
| bibar and Orime ... -.. | 10,675 | 18,420 | + 1,255 | 87 | 49 | $+8$ | + 19,818 | + | 18,371 |
| upubey ... .-. ... -.. | $\infty$ | 96 | $+\quad 64$ | 2 | 30 | 28 | + . ${ }^{88}$ |  | - 1 |
| Bartma .-. .-. .-. -- | 9 | 4 | + - , 5 | 99 | 77 | - 763 | 20 |  | 767 |
| Ceriral Proriocasad Berar ... | 2,607 | 4,869 | + 1,145 | 48 | 3 | $+\quad 30$ | + 2,465 | + | 1,860. |
| Curs - .- ... ... ... | - | - | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - . ... |  | - |
| Dellat -.. -- .-. .-. | 7 | $\cdots$. | $+\quad 1$ | $\cdots$ | $\cdots$ | $\cdots$ | + 7 |  | $\cdots$ |
| Madras (loclodiog Lacondirea) | 2.677 | 1,070 | + 1,007 | $\cdots$ | $\cdots$ | $\cdots$ | + 2,677 |  | - 1,070 |
| North. Weat Fmotier Prorince <br>  verritarios). | 11 | 2 | - 12 | - | -* | - | t. $\quad 1$ |  | 23 |
| Ponjab -.. --. -.- -- | 34 | 82 | - $\quad 28$ | $\cdots$ | 28 | 88 | $+\quad 54$ | + | 4 |
| Teltind Provibcese of Agra and Vadb. | 4,617 | 4,030 | 3 | 28 | 81 | 63 | + 4,589 | + | 4,339 |
| Total Eritah Tereitory -- | 89.770 | 88,408 | + 13,881 | 1,887 | 2,982 | 1,115 | + 87,003 | $+$ | 63,427 |
| Amam Saste ( X adpar) -..- --. | 107 | ${ }_{6}$ | + 111 | 8 | - | $+$ | $+\quad 194$ | + | 88 |
| Beluehtrtan (Ageceg Tracta) -- | - | $\cdots$ | $\cdots$ | - | $\cdots$ | $\cdots$ | -- |  | $\cdots$ |
| Barodestatiex -.. -- -- | $\cdots$ | $\cdots$ | $\cdots$ | - | $\cdots$ | ... | $\cdots$ |  | $\cdots$ |
| Berapel Station -- ... - | $\cdots$ | $\cdots$ | - | - | $\cdots$ | $\cdots$ | ... |  | $\cdots$ |
| Blame and Orime States -- | 964 | 8 | + 650 | $s$ | - 2 | $+3$ | + 659 | + | 8 |
| Bombey states ... ... - | 101 | 103 | + 88 | $\cdots$ | 9 | 2 | + 101 | + | 101 |
| Centril lodin Agency -- --. | 68 | $\cdots$ | + *s | 4 |  | + | + 64 |  | - |
| Central Proilocas Statea | 111 | $\cdots$ | + 111 | $\rightarrow$ | 4 | - 1 | $+\quad 141$ | - | 4 |
| Ombior state - .- - - | $!$ | $\cdots$ | + | $\cdots$ | - | $\cdots$ | 3 |  | - |
| Hyderated State .. -- ${ }^{\text {a }}$ - | 1 | $\cdots$ | + $\quad 1$ | $\cdots$ | - | $\cdots$ | $\pm 1$ |  | $\cdots$ |
| Eachmir siate -- -.. -- | 3 | $\cdots$ | $+\quad a$ | - | - | - | $\pm 3$ |  | $\cdots$ |
| Mairao Sutes (incloring Oxchip asd Trarabousif. | - | $\cdots$ - | - | - | - | - | $\cdots$ |  | - |
| Contin state ... -- - | $\cdots$ | $\cdots$ | - | $\cdots$ | - | - | $\cdots$ |  | $\cdots$ |
| Franemeore seate .-. -- | $\cdots$ | - | $\cdots$ | - | $\cdots$ | $\cdots$ | $\cdots$ |  | $\cdots$ |
| Yymoreste - - - | 4 |  | + $\quad 3$ | $\cdots$ | 1 | - 1 | $+\quad 4$ |  | -- |
| North-Went Frontiter Province (Ageov: an and tribalareat). | -- | $\rightarrow$ | - | $\cdots$ | $\cdots$ | - | $\cdots$ |  | $\cdots$ |
| Puajub Sextan. .- . - . | 18 | $\cdots$ | $18$ | -- | 4 | - 4 | + 38 | - | 4 |
| Rajpriame Agedcy -- -- | 2.015 | 913 | + 100 | - | 1 | - 1 | + 1,013 | + | 914 |
| suktire - - - - |  | - | - | $\cdots$ | - | - | $\cdots$ |  | $\cdots$ |
| Taitod Proviorsa Statue... - | 26 | 18 | $+\quad 18$ | $\cdots$ | - | - | + 35 | $\pm$ | 18 |
| Total fandory states - | 2,341 | 1.831 | + 1,210 | 12 | 14 | 2 | + 2,328 | $+$ | 7,117 |
| LDivin, unapeateed | - |  | $\rightarrow$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |  | - |
| Frents and Portaguen setuloment. |  |  | - 1 |  | - | - | + 22 | + | - 23 |
| Geaxd Total | 72,138 | 37,583 | + 14,570 | 1,478 | 2,898 | 1,117 | + 70,254 | $+$ | 54,587 |

## CHAPTER IV.

## Religion.

117. Introductory.-This chapter deals with the figures contained in the Census Table VI, which are analysed in four subsidiary tables printed at the end of the chapter giving-
I.-A general distribution of the population by religion,
II.-A distribution of population of each district according to the main religions, Hindu and Muhammadan,
III.-The number and variations of the number of Christians, and
IV.-The distribution of urban and rural population by religion.

The return of religion in the census schedules is perhaps more safely to he relied upon than the returns of other matters than bare numbers and sex. No distinctions could be clearer between Hindus, Muhammadans, Christians and Buddhists. The vexed question "what is a Hindu?" is sometimes raised in respect of persons of aboriginal races which are in process of discarding their ancient tribal beliefs in favour of Hinduism, but it causes less trouble in Bengal than in certain other parts of India. There are however cases in which there is a possibility of doubt, and in such cases much depends on the point of view of the census enumerator and the instructions he gets on reference to those who are supervising his work. The effect of not always discriminating between Animists and Hindus from the same stand-point is seen in the figures obtained at successive censuses for the numbers of Animists in the Chittagong Hill Tracts,' but in other parts of Bengal it does not appear that the discrimination has proved a matter of much difficulty. There is some difficulty at times in respect of the correct return of Jains who have retained the caste distinctions which prevail among Hindus, but the number of Jains in Bengal is comparatively very small, and their largest numbers are found in Calcutta, where their leaders in religious matters came forward on the occasion of this census and did their best to ensure that their co-religionists should be correctly returned.

118, The religions of the population of Bengal.-The population of Bengal and Sikkim is divided according to the religions professed as follows:-

| Bearal |  |  |  |  | B1kktm. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mubammadans |  | -•* | 53.55 | per cent. | Hindus | -." | ... | 66.73 p | or cent. |
| Hindus | -* | .-. | 43.72 | " | Ruddhiste | ... | ... | 32.78 | " |
| Animista | ... | ... | 1779 | " | Christians | ... | ... | 0.45 | " |
| Buddhints | ... | ... | 0.58 | , | Muhamma |  | ... | 0.20 | " |
| Clıristians | ... | ... | 0.31 | $\because$ | Animists | ** | ... | None. |  |
| Others: | ... | ... | 0.05 | " | Others | - 0 | ... | 0.08 | - |

The distribution at successive censuses in the several divisions of Bengal and in Sikkim is detailed in Subsidiary Table I printed at the end of this chapter, in which appear also the proportionate rates of increase in the numbers professing each religion between one enumeration and the next. The relative numbers who are adherents of the Hindu, Muhammadan and other religions in the several parts of Bengal is illustrated in diagram No. 39. In this diagram, though the height of the column for each natural division is the same, its width is proportionate to the total population, so that the areas shaded to represent Hindus and Muhammadans are proportionate to the actual numbers of persons professing each religion. It will be noticeed that Muhammadans are in majority approaching three to one over Hindus in both divisions of Eastern Bengal, and two to one in Northern Bengal. In Central Bengal Hindus have a small majority and in Western Bengal they are six to one. Thus though Western and Central Bengal supply only little more than one-third of the total population of Bengal,
they contain more than half the Hindu population of the Province. Similarly, the Muhammadans in two divisions of Eastern Bengal comprise more than half the total Muhammadan population. Adherents of other than these two main religions are most numerous on the borders of the Province, where indigenous or immigrant aborigines still adherent to their tribal beliefs are most numerous.


Diagram No. 40 illustrates the changes in the distribution of the popula-

tion according to religions which have taken place since 1881. Muhammadans have increased in number faster than Hindus, and "Others," though the proportion of them to the total population is still very small, have steadily increased, "so that the balance between Hindus and Muhammadans which in 1881 , was only slightly in favour of Muhammadans, 4,969 of them against 4,882 Hindus in every 10,000 of the population is now very decidedly in their favour, 5,355 of them against 4,372 Hindus in every 10,000 . The change has not been produced by conversion, for instances of conversion are few and far between, nor mainly by the greater fecund-- ity shown by Muhammadans. Though it is true that, in Eastern Bengal especially, the natural growth among Muhammadans has been greater than that among Hindus in the same locality, the increase of the majority of Muhammadans over Hindus has been due in the main to the accident that Muhammadans
are numerically superior in the healthier and more progressive parts of the Province, while Hindus have a majority in the parts which have suffered the severest disabilities of the last 50 years. The increase in the Muhammadan majority from 67 per 10,000 in 1881 to 301 in 1891, 419 in 1901, 711 in 1911, and 983 in 1921 was less noticeable between 1891 and 1901 than before or since, because that decade was one of recuperation in the western parts of the Prorince after the visitation of a succession of epidemics of malaria. The proportion of Muhammadans has increased everywhere and at each successive enumeration except in Central Bengal, where each census has shown a decrease, and between 1881 and 1901 in Northern Bengal, while the proportion of Hindus. has everywhere decreased except in Central Bengal. These two variations from what shows itself as normal progress are in each case partly the results of immigration. The increase in the proportion of Hindus in Central Bengal is largely due to the immigration of Hindus to Calcutta and the industrial area of which it is the focus, though
it is ansisted by the fact that the morthern parts of the Jresidency Division where Muhammadans mont predominate are the unhealthy and unprogressive parts, while the southern parts, Khulna and the 24 l'arganas, in which a majority of the cultivators belong to Hindu cante, Pods, Katbart- tas, etc,, are decidedly more healthy and more progressive. The decrente in the proportion of Muhammadans in North Bengal from lext to 1 Isol and the fact that the increase in the proportion since has been show compared with the increase in Eastern Bengal are due in the main to the immigration of Animists from the Santal Parganas into Malda, Dimajpur and Rajshahi, the importation of Hindu and Animist coolies to the tea gardens of Jaipaiguri, and the steady flow of migration from Nepal into the Imarjeeling Hills. The general tendency of the changes that have taken palce has been in the direction of segregation of Hindus and Muhammadans. though this has been accidental rather than intentional. There has been no actual drawing together of Muhammadans to Eastern Bengal and Hindus $t_{0}$ ) Western Bengal, though the result of the changes that have taken place has heen to increase the Muhammadan majority most in the districts where it was already greatest and to increase the Hindu majority or decrease it least where Hindus were already found in the greatest numbers. In the Cenus Report for Calcutta the same tendency bas been noticed in the several Ward of the City, but there the result has not been fortuitous; there has been an actual drawing apart of the adherents of the two religions.
119. The Muhammadans.-In numbers at least the Muhammadans form the most important religious community in Bengal. They comprise $53 \cdot 55$ per cent. of the population and outnumber the Hindus in every district except the six districts of Western Bengal, the 24 -Parganas, Calcutta, Khulna, Jalpaiguri, Darjeeling, and the Chittagong Hill Tracts. Hindus are the more numerous in Cooch Behar and Tripura State, as also in Sikkim. The Muhammadans of Bengal form more than one-third, 37.78 per cent., of the whole number of Mubammadans in India, and those in British territory in Bengal form 42.41 per cent. of the Eotal number of Muhammadans in British India. The Muhammadads in Bengal are nearly twice as many as those in the Punjab, four times as many as those in the United Provinces, five and half times those in Bombay, nearly seven times those in Bihar and Orissa, ten and a half times those in Madras, and twelve and a half times those in the North-West lirntier Province. The proportion of Muhammadans in the populaion of Bengal compares with the proportion in other parts as follows :-


| North-Weat Frcntion | Province | ... | 90.36 | per cent. |
| :---: | :---: | :---: | :---: | :---: |
| Kanhmir | ... | ... | 76.74 | " |
| Bengal | ... | ... | 53.55 | " |
| Tloo Punjab | $\cdots$ | *' | 1.105 | " |
| Annaititalin | .." | ..* | 27.78 | " |
| Bombay | ... | -•• | 1742 | $\cdots$ |
| Thes United Provinces |  | ... | 14.46 | , |
| Hyderabad | ... | ... | 10.41 | " |
| Bihar and Orisan | ... | -•• | 976 | " |
| Mndras | $\cdots$ | ... | $4 \cdot 87$ | " |
| Burma | $\cdots$ | *' | $3 \cdot 80$ | * |
| The Central Provincen and Berar... |  |  | 8.64 | " |

The average proportion in India is 21.68 per cent. Though the great mass of the Muhammadans in Bengal is engaged in agriculture and backward in education, Bengal must be looked upon as the great stronghold of Muhammadanism in India. Hyderabad, the primier Muhammadan state, has about the same area as Bengal, though its population is only about a
quarter, and, as the proportion of Muhammadans in it is only 10.41 per cent.; their number is only one-twentieth the number in Bengal. Their religion is a very real thing to the cultivating Muhammadan classes, especially in Eastern Bengal. Prayers are most punctiliously said by all of them at the appointed times and their children must learn to say them before they go further with their education. Mosques are very numerous and are more ngticeable features of the landscape, for instance in Bakarganj, Noakhali, Tippera and Chittagong, than the actual habitations of the villagers, for the latter are always buried deep among fruit and betel-nut trees. When a corrugated iron shed is seen standing fat the open, closer inspection will generally reveal the little hay built out towards the west, which marks it for a mosque. Brickbuilt mosques, which, freshly whitewashed and ornamented with coloured tiles, supply a welcome break in the prevailing green of the scenery are not uncommon, but in the densely populated parts of the lower delta on hoth sides of the Meghna estuary the "tin mosque" is to be met with almost every mile. Commonly there is no permanent incumbent who officiats in the smaller ones. The place is taken by the senior or most erudite villagen who happens to attend. Certain of the itinerant preachers, who are better known, command the attendance of very large congregations, and maulviand hafez, those who have the Koran by heart, are numerous, while almost every large village holds one or two Hazis and it is everyone's ambition as he gets old to see Mecca before he dies. The religious leaders keep pace with the times, and during the past century a succession of revivalist movements under various names has been propagated with great enthusiasm in Eastern Bengal Conversions to the faith of Islam are nowadays few or none, but the faith has been kept keenly alive and to some extent purified of taints of Hinduism during the last hundred years. Even now it is not peculiar to find Muhammadans in some parts of the Province make offerings to some tree or even at a temple dedicated to the Hindu goddess Kali along with their Hindu neighbours, but especially in Eastern Bengal there is good reason to believe that such customs have become much less common than before the spread of the Wahabi, Farazi and kindred movements. This report is, however, to deal with the census figures and the conclusion to be drawn from them, and to them it is necessary to turn.

In Western Bengal the Muhammadans are but 13.44 per cent. of the population. They are almost half, $47-32$ per cent. in Central Bengal, $59 \cdot 82$ per cent. in Northern Bengal, and 69.92 per cent. in Eastern Bengal. The proportion in each district is given in column 7 of Subsidiary Table II printed at the end of this chapter and is illustrated by the map in the diagram printed on the next page. Bogra is the district in which Muhammadans are in the greatest proportion, 82.49 per cent. Then follow Noakhali 77.57 per cent., Rajshahi $76-54$ per cent., Pabna 75.83 per cent., Mymensingh 74.91 per cent., Tippera $74 \cdot 12$ per cent., Chittagong $72 \cdot 81$ per cent., and Bakarganj 70.56 per cent. In all these districts except Rajshahi the proportion has steadily increased. It will be noticed that these form a ring round Dacca except on the south-western side. They must have fallen just within the borders of the Subah of Rengal as it was for several centuries in Moghul times, when the Rajas of Cooch Behar and Hill Tippera and the rulers in Assatn and Arracan were turbulent neighbours, and the high propurtion of Muhammadans just within what was the old frontier is no doubt to be traced to this attempt to make this frontier defensible. It is known that colonies of Moghul soldiers were planted in some parts, and it may weil have been that the invaders of India who had penetrated so far found rich land unoccupied in Bengal more easily than elsewhere, and an indigenous people less difficult to dispossess than in other parts of India. To satisfy their unruly soldiery must always have been a problem with the Moghul as with other princes who have overrun India from time to time, and ne doubt they found an easier means of rewarding them for their services by giving them grants of land in Bengal than elsewhere. Their descendants alone may not account for the large numbers of Muhammadans to be found to-day, bat it was very natural that they should have made converts as a means of strengthening their position, and the indigenous population may well have adopted Muhammadatism for the sake of protection. To what extent the blood of foreign invaders iniuses

the mass of the Bengali Muhammadans has been a matter of much speculation. The subject was discussed at length by Mr. E. A. (now Sir Edward) Gait in the Census Report for 1901, and his conclusions were to the effect that '" there can be no doubt as to the local origin of most of the Muhammadans of East and North Bengal." He estimated the stringth of the foreign element in the Province as it was then to be four millions at the most, one-sixth of the total number professing the faith of Islam. Later enumerations do noi furnish material for a more reliable estimate, for it was noticed that in the census of 1911 in Eastern Bengal, Muhammadans who had risen in the world often called themselves Moghuls, Pathans and even Saiyads with very little justification for doing so. This tendency was apparent also at the last census, when indeed it was recognized that any attempt to do otherwise than permit individuals to name as they chose the section of the community to which they claimed to belong, could have been of little use in proportion to the heart-kurning and disturbance which it would have caused. The proportion of Myhammadans is between 60 and 70 per cent. in Dacca, Faridpur, Nadia and Jossore in the centre of Bengal and in Rangpur which has received much migration from the south. 'In Murshidabad and Malda, just within the gates of Bengal, through which the Ganges passes the Rajmahal Hills, it is between 50 and 60 per cent. The proportion is much lower in the parts where the Moghul power was not so long or so firmly established. The Muhammadan rulers must havo left what is now Khulna, the 24-Pargauas, Howrah and the Delta parts of Midnapore very much to the forefathers of the Kaibarttas, the Pods and other castes which now form so large a proportion of the cultivating and aquatic population. They marched and countermarched over Western Bengal, but did not break up the power of the indigenous peoples and did not make many permanent settlements. Cooch Behar and Jalpaiguri they can hardly have penetrated.

The number of Muhammadans in Eastern Bengal has increased very fast. It has grown by $67 ; 3$ per cent. in the last forty years, while the population as a whole has grown but $54: 3$ per cent. Their increase during the same period in other parts of the Province has been much more moderate, 21.5 per cent. in North Bengal, 12.9 per cent. in West Bengal, and only 10.5 per cent. in Central Bengal. The increase of Muhammadans during the last 10 years in the several quarters of the Province is compared with the

|  |  | Iocresp per ceat. In namber of mhamedem | Incr 3 ce per cent. in toral poguls路 | the marginal table. Muham- |
| :---: | :---: | :---: | :---: | :---: |
| West Bengal | ... | -4.9 | -4.4 | madans continue to increase |
| Central Bengal | ... | $-1 \cdot 8$ | +0.4 | tion excent in West |
| North Bengal | ... | +2.9 | +19 | Central Bengal. In the former |
| East Bengal | ... | +9.9 | +8.3 | the average |
| Whole Province | ... | +5•2 | +28 | all religions, just beating the |

dus. In Central Bengal they are handicapped by the fact that their numbers are greatest in the more unhealthy parts of the division, and are defeated by the ingress of Hindus to Calcutta and its neighbourhood from other parts of India as well as from further parts of Bengal. The fecundity of the Muhammadan population in Eastern Bengal and the healthier parts of Northern Bengal is very great indeed. Whether the followers of Islam in these parts have in their blood the strain of the hardy races which made up the Moghul soldiery or are the descendants from indigenous races which were low down in the scale of civilization, it is natural to expect greater fecundity among them than among the generality of Hindus, and the contrast between the rate of growth of the two communities is very remarkable. In Eastern Bengal migration has little or no effect upon the progress of either and conversions none at all, yet while Hindus have increased in 40 years by only 22.4 per cent. in the Dacca Division and 56.0 per cent. in the Chittagong Division with Tripura State, the increases of Muhammadans in the same period have been 61.9 per cent. and $79 \cdot 3$ per cent., respectively. In the Province as a whole while Hindus have increased by 15.2 per cent. since 1881, Muhammadans have multiplied two and half times as fast and have increased by 38.5 per cent. During the last 40 years the Muhammadans in Tippera district have increased ed by 96.0 per cent., in Noakhali district by 86.4 per cent. and in Mymensingh district by 77.6 per cent. In these parts they have practically doubled their numbers in two short generations. Very nearly all the Muhammadans in Bengal belong to the Sunni sect. The total number of Shias in the Province is now only 2,580, although in Moghul times the ruling princes were generally Shias, and that sect must have been much more numerous in this part of India than one in 10,000 as at present. $\mathbf{1 , 5 2 3}$, more than half the Shias enumerated in Bengal, live in the town of Murshidabad, which was the seat of the last Moghul ruler of the Province. There is a dwindling community of them in Dacca city which now numbers only 154, and a small number, 66 only, living in and near the Imambari at Hooghly, a Shia foundation. In addition 816 were found in Calcutta and 23 in the 24-Parganas, but none were returned elsewhere in che Province. All the religious movements which have affected Bengal during the last century and more have been movements among the Sunni sect.
120. The Hindus.-The Hindus of Bengal are less than rue in ten, 9.32 per cent., of the total number of Hindus in India, and they form a smaller proportion of the total population in Bengal than in any other part of India with the exception of Beluchistan, the North-West $\dot{F}$ rontier Province, the Punjab, Kashmir, and Burma. They form 82.07 per cent. of the population in Western Bengal, 51.41 per cent. in Central Bengal, $35 \cdot 52$ per cent. in Northern Bengal, and 28.48 per cent. in Eastern Bengal. The proportion in each district is given in column 2 of Subsidiary Table II printed at the end of this chapter and is illustrated by the map in diagram No. 43 on the next page. Since almost everywhere Hindus and Muhammadans between them account for the bulk of the population, the depth of shading in this map necessarily varies very much in converse to the depth of shading in the map forming diagram No. 42. Hindus are in greatest numbers in the south-west of the Prorince, their majority decreasing and rapidly disappearing as one passes east
and north from Midnapore and Bankura. In the extreme north the fact that the Nepalese tribes, which are by far the most progressive of the Himalayan races and have spread themselves along the hills to the east of their home, are Hindus, is responsible for their majority in Darjeeling as in Sikkim. The independence which the Raja of Cooch Behar was able to maintain against the Moghuls is responsible for the fact that Hindus, mostly of local origin are still in a majority in his State. His influence during the Moghul period is no doubt partly responsible for the number of Hindus in the north of Rangpur and Dinajpur, while his people have spread into Jalpaiguri, where also the labour imported to the tea gardens is either Hindu or Animist. Tripura State remained predominantly Hindu for the reason that though the Moghuls conquered the Raja in the end, they obtained no very permanent hold on his domains. His race belongs to the Eastern hills, but even in Moghul times his court was a refuge for numbers of Hindus from the plains, who received grants of land in what is now his estate in Tippera district and exercised a great influence over his administration. The flow of immigration has in the last half a century almost swamped the indigenous population, but the Hindu majority is maintained in spive of the fact that so many of the immigrants bave been Bengali Muhammadans from Tippera and from Sylhet in Assam.


The Hindu population of Bengal has increased but $15 \cdot 2$ per cent. in the last 40 years, $56 ; 0$ per cent. in the Cnittagong Division with Tripura State, $22: 4$ per cent. in the Dacca Division, $19 \cdot 3$ per cent. in the Central Bengal, $7 \cdot 4$ per cent. in Northern Bengal, and only 6.4 per cent. in Western Bengal.

During the last decade the progress of the Hindus in the four quarters of the Province compared with the pro-


| - |  |  | lo tovial popuiatio 1 |
| :---: | :---: | :---: | :---: |
| West Bengal | - | -5*2 | -4.9 |
| Ceatral Bangal | ... | + -3 | +0.4 |
| North Beogal | -* | -3.2 | $+1 \cdot 9$ |
| Eat Bengal | ... | +4.6 | +8-3 |
| Whole Province | ... | $-0.7$ | +2•8 | gress of the population as a whole has been as the marginal table shows. The actual number of Hindus has decreased since 1911, and everywhere except in Central Bengal the Hindus have made less progress in numbers or more retrogression than has the population as a whole. The reason for the exception in the case of Central Bengal has already been explained. The body oi tthe Hindus gains little in Bengal, compared to its gains in the Central Plateau of India, through the process by which aboriginal tribes are given up their tribal beliefs and passing within the pale of Hinduism, and it loses a few from its numbers by the conversion of persons of the lower castes to Christianity, but on the other hand it gains by the immigration to Calcutta and its neighbourhood from beyond the Provnice. Commentary on the numbers belonging to the numerous castes among Hindus will be found in Chapter XI.

121. Brahma Samaj and Arjya Samaj.-The BrahmaSamaj and the Arjya Samaj, were each founded as a refuge for those Hindus who refused to be bound by all the trammels of Hindu orthodoxy and whose beliefs were monotheistic. The former only had its beginnings in Bengal and until the census of 1911 there were no adherents of the Arjya Samaj returned at the census of this Province. The numbers of the Brahmo Samaj returned at successive enumerations are printed in the margin. In addition the Arjya

| 1881 | $\ldots$. | $\ldots$ | 766 |
| ---: | :---: | :---: | :---: |
| 1891 | $\ldots$ | $\ldots$. | 2.316 |
| 1901 | $\ldots$ | $\ldots$. | 2,493 |
| 1911 | $\ldots$ | $\ldots$. | 2,458 |
| 1921 | $\ldots$ | $\ldots$. | $3,-84$ | Samaj had 20 adherents in Bengal in 1911 and 214 in 1921. The number belonging to the Brahmo Samaj in Bengal is just over half the total number in India, but the small number is by no means a measure of the influence of its doctrines. Fersons who hold the doctrines, for the diffusion of which the Brahma Samaj is largely responsible, whose ideas have been widened by an English education and the experience of Western methods of thought and whose beliefs and practices depart from the standard of Hindu orthodoxy, are nowadays able to find kindred spirits with whom they can associate without the necessity of renouncing Hinduism and proclaiming themselves Brahmos. Thus though the number of professed Brahmos is small and has increased but little in the last 20 years, thousands of the intellectual Hindus of Bengal have been so profoundly influenced by the monotheistic ideas which belong to the doctrines of the Brahma Samaj as really to be Brahmos at heart, though they have not actually joined the Samaj. The Arjya Samaj is much larger than the Brahma Samaj and has in India as many as 476,578 members, nearly nine-tenths of whom live in the United Provinces and the Punjab. The few found in Bengal were among the immigrants from up-country.

122. The Animists.-The term Animist is perhaps one which needs a word of explanation. Animist is a term applied for want of a better to those amorphous forms of religion of which the basis is " the belief which explains to primitive man the constant movements and changes in the world of things by the theory that every object which has activity enough to affect him in any vray is animated by a life and will like his own."* It peoples the world with spirits which have the power to influence man directly. Mostly they are malevolent spirits, and it is found that the religious aims of the aboriginal tribes of India are almost always directed to discovering the wishes and intentions of these baneful creatures of imagination and their performances to propitiating them. Animist is the term which has been used for all those aborigines who still retain ancient tribal beliefs of this character. Such persons in Bengal now number $849,047,1.79$ per cent. of the total population. They form 3.09 per cent. of the total population of India and are comparatively most numerous in Assam, where they form 15.90 per cent. of the total; in the Central Provinces, $13 ; 23$ per cent.; in Burma, 5.34 per cent.; and in
[^3]Behar and Orissa, $5 ; 13$ per cent. The proportion their numbers bear to the total in Madras is rather less than in Bengal, 137 per cent., and in Bombay considerably less; 0.71 per cent. The numbers found in Upper India are very small. Animists in Bengal form 8;69 per cent: of the total numbers of Animists in India. They form $4 \cdot 27$ per cent. of the population of Western Bengal and 3.85 per cent. of that of Northern Bengal. The numbers in Central and Eastern Bengal are much smaller. The proportion in each district and State of the Province is given in column 12 of Subsidiary Table II at the end of this chapter and is illustrated by the map in diagram No. 44 on this page. It is on the western edge of Bengal that Animists are most numerous. Here they are originally immigrants from the plateau of Chota Nagpur

and especially from its north-eastern extremity, the Santal Parganas. The parts of Midnapore, Bankura, Burdwan and Birbhum which are close to the frontier approach in their character the country beyond the border, and are part of the original home of some of the aboriginal tribes who still have not embraced Hinduism, but the numbers of these tribes found along the border have been greatly supplemented by immigration. Sảntals have 'come in large numbers to the Rampurhat subdivision of Birbhum and the parts of Murshidabad west of the Bhagarathi, and a steady stream of them has poured for a long period across the Ganges at Rajmahal into Malda, Dinajpur and further into the heart of Northern Bengal. The Animists of Jalpaiguri, where they form a larger proportion of the total population than is found in any other district in the Province, have not to a large extent followed the same stream. A few belong to indigenous tribes of the foot hills, but the bulk have been imported direct from Chota Nagpur as coolies to be employed in the tea-gardens. By no means have all the Animist immigrants
who have crossed into Northern Bengal from the Santal Parganas or passed into the plains of Burdwan, Hooghly, Murshidabad and Nadia come to settle. Many come for the cold weather only, to find employment as earth workers and agricultural labourers, and return to the cultivation of their fields at home before May. These often penetrate further into the Province. than settlers and a few even cross the Jamuna into Mymensingh, though they had almost all re-crossed to go home by the date of the census, the 18 th of March. The Animists enumerated in Mymensingh were the indigenous inhabitants of the Madhupur jungle and the foot hills on the northern edge of the district; mostly of the Garo tribe. Their number has been in much the same proportion to the total population of the district since 1881, whereas
the proportion of Animists among the population on the western side of the Province has rapidly increased owing to immigration. Very few Animists indeed are found on the Lower Delta, for they travel on foot, are simple people who are most comfortable on the dry soil of their homes; and the rivers of Eastern Bengal are a bar to their progress into the parts frequently intersected by streams not fordable in the cold weather. The return of their number in the eastern hills from census to census has been very irregular. Here appear the difficulties which are so commonly met with in Central India to determine whether one of an aboriginal tribe is an Animist or a Hindu. In 1881 all the indigenous people of Tripura State were returned as Animists and none of those in the Chittagong Hill Tracts. All figured as Hindus in Tripura State in the statistics for 1891, while a certain number of Animists were returned in the Chittagong Hill Tracts. In 1911 most of the hill tribes in the Chittagong Hill Tracts whọ were not Buddhists were returned as Animists, while the figures for Tripura State showed Animists as only 18 per 10,000 . At the recent census care was taken to discriminate correctly between Animists and Hindus in the Chittagong Hill Tracts, with the result that hardly more than a third of the people of hill tribes which are not Buddhist were recorded as Animists. In Tripura State it seems that the comprehension of the term Hindu was somewhat further extended than in the hills under British administration, but on the whole it may be accepted that the figures for Animists obtained at this census are more reliable than those obtained hitherto.

The number of Animists in the Province has increased by no less than $171 \cdot 2$ per cent. since 1881. Decade by decade the proportionate increase has been of $16 \cdot 5$ per cent. between 1881 and $1891,31 \cdot 3$ per cent. between 1891 and 1901, $65 \cdot 1$ per cent. between 1901 and 1911, and $16 \cdot 2$ per cent. in the last decade. The progress has been somewhat less uneven if allowance is made for the irregularity in the return in the eastern hills, but the decade 1901 to 1911 was that in which the increase was greatest. The last decade has shown the number of Animists in Western Bengal about stationary. The extent of migration has never been on the same scale as in Northern Bengal, and it is known that the influenza epidemic was especially severe among aborigines. Moreover, the rise in prices of agricultural produce has no doubt eased the economic strain which drove these people from their homes. The decrease in the numbers in Central Bengal is not shared by Murshidabad with the other districts of the division, and may be partly due to the fact that the census coming a few days later in the season than in 1911, missed more of the bands of labourers who had been on their way home than in 1911. The increase in the number of Animists in Northern Bengal between 1901 and 1911 has been most reduced in the last decade in Dinajpur, to which the flow of immigration has definitely decreased, and where influenza and malaria made great inroads on the aboriginal settlers towards the latter part of the decade.
123. The Buddhists.-In Bengal there has been no survival of the early Buddhism which competed successfully with Hinduism and became for a time the established religion over the greater part of India, except possibly in a small measure in the hills of Tripura State, to which, at the Muham madan conquest, a number of Buddhists are believed to have fled. Buddhism is not one of the religions of the plains of Bengal at all. Its adherents are found in considerable numbers only in the Himalayas on the north and in Chittagong and the hills adjoining Burma to the east. A few have cone
down into Jalpaiguri district, some have joined in the Colonization of the Eastern Sundarbans, and some are found in Calcutta, but the plains of Central Bengal hold very few who are permanent inhabitants. The Buddhists in Bengal have grown in numbers as indicated by the figures given in the
1881 ... ... 165.102 margin, by 77.8 per cent. in the last 40 years, 1891 ... ... $\quad 1651.102$ faster than the population of the Province as a 1901 ... $. . .1210, b 06$ whole, but not faster than the population of the 1911 ... ... 246,866 tracts in which they are found in greatest 1921 ... ... 275,759 numbers. Nowhere does Buddhism seem to have gained converts within recent times, but on the other hand Christianity has claimed a certain number of converts from it among the Lepchas and Bhotias of the northern hills. How completely Buddhism was driven out of India will be realized when it is stated that the Buddhists of Bengal are 74.6 per cent. of the total number in India not including Burma, and that Sikkim supplies another 7.2 per cent., Assam 3.8 per cent., and Kashmir $10 \cdot 2$ per cent., leaving less than 5 per cent. to other Provinces. The Buddhism of the Eastern Himalayas is of Tibetan origin. Monasteries are numerous in Sikkim and Bhutan, all founded from Tibet and maintaining a close ennnection with Lhassa, and the religion is the State religion in the case of both. When what now forms the Sadar and Kurseong subdivisions of Darjeeling was separated from Sikkim, and later, when what is now Kalimpong subdivision was taken from Bhutan, the great majority of the inhabitants were Buddhist by religion. The indigenous Lepchas and the Bhotias are still Buddhist, but they are now outnumbered by Nepalese immigrants.
 madahat. Dommation. ter of the population of the ${ }_{16,795}^{25.695}{ }_{27}^{24 \cdot 01}$ hills in British territory and not ${ }_{9.293}^{23.0} \quad{ }_{23}^{27.0} \quad$ quite a third of the population 26.788 - ${ }_{32} \cdot 8$ of Sikkim. Very few have gone
 into Siliguri subdivision where, as also in the Sadar subdivision of Jalpaiguri, Buddhists are less than 0.4 per cent. of the population. They account for rather more, 1.6 per cent., of the population of the Alipur Duar

|  | Number of Bindulate. | Proportion of total popalation. |
| :---: | :---: | :---: |
| Chittagong fill Tracts ... | 118,762 | $68 \cdot 5$ |
| Sadar subdivinion | 68,545 | $80 \cdot 8$ |
| Bundarban auhulivision | 33,635 | 88.7 |
| Ramgarh oubdivision | 10,582 | 46.5 |
| Chittagong district | 72,402 | $4 \cdot 5$ |
| Sadar aubdivision | 40,409 | $3 \cdot 5$ |
| Cox's Bazar aubdivision | 26,098 | $0 \cdot 1$ |
| Tripurs State ... | 10,147 | $3 \cdot 3$ | subdivision. The Buddhism near the eastern borders of the Province is Burmese in origin. The Arracanese disputed the possession of Chittagong itself for three centuries after Shamsuddin, the first Muhammadan to do so, forced his way as far as the town in 1347, and much later, towards the end of the eighteenth century, a great number of Maghs (Arracanese) took refuge in the south of Chittagong district and the hill tracts behind after the conquest of their own country by the Burmese. Practically all the Buddhists in Chittagong district are Maghs, but in the Chittagong Hill Tracts Maghs are outnumbered by the large Chakma tribe, who are followers of Buddhism. The Tiparas, Kukis, etc., are either Hindu or Animist and are responsible for the reduction of the proportion of Buddhists in Ramgarh subdivision. Buddhists in Tripura State are Chakmas and Maghs, the former being in the majority, but the 1,700 in Tippera district are all Maghs; 10,180 Maghs settlers are to be found in the Sundarbans in the south of Patuakhali subdivision of Bakarganj ristrict and form 1.6 per cent. of the subdivisional population. A small number among the 3,449 Buddhists found in Calcutta are Burmese. traders, but the great majority are Maghs, who readily find employment as cooks in European households, hotels, etc.

124. The Jains.-The number of Jains found in Bengal at successive Number ot censuses has been as shown in the margin.
 more than one per cent. of the total number of adherents of the Jain religion in India, who number $1,178,596$. The largest number, nearly half a million,
is to be found in the Bombay Presidency, more of them in the Feudatory states of Bombay than in British territory. - Rajputana Agency has 279,722, aud it is among the immigrants from Rajputana that most of the Jains in Bengal are to be found. Though Bihar was the birthplace of their religion, here are few indigenous Jains in that Province and practically none in Bengal. The greatest increase in the number returned as Jains has taken place in Calcutta City. There were only 1,797 in the City in 1911 and the number has risen to 5,524 . As has already been mentioned, it is possible that part of this increase is due to the fact that greater care was taken in the return of the Jain religion than formerly. Outside Calcutta it is in North Bengal that Jains are most frequently to be met with and especially in Rangpur. They are also to be found in considerable numbers in Murshidabad, but hardly penetrate to Jessore and Khulna or to the districts of Eastern Bengal, except Mymensingh. Jains are divided into two main sects, the Digambars and Swetambars, whose tenants differ mainly as to the doctrine of nudity and as to the position of women. The first holds that the Tirthambars went about naked and that Mahavira himself prescribed nudity at least for ascetics. They do not clothe their images, and divest themselves of their upper garments when they eat. They also hold, contrary to the opinion of the Swetambars, who clothe their images, that women cannot attain Nirvana. There is an offshoot of the Swetambar sect, called the Sthanakdwasis, which denounces idolatory and denies the efficacy of pilgrimages. At the special request of the Swetambari Terapanthi Sabha separate figures were collected regarding the numbers belonging to the Swetambari sect in Calcutta, and it was found that out of the 5,524 Jains in the city, 2,199 belonged to it.
125. Sikhs.-Sikhs are very few in Bengal, though, as the figures printed in the margin show, their number increased very much between 1901 samose of and 1911. All are immigrants and more than

| 1881 |  |  |  | si:L4 |
| :--- | :--- | :--- | ---: | :--- |
| 1891 | $\ldots$ | $\ldots$ | half are to be found in Calcutta, where they are |  |
| 1891 | $\ldots$ | $\ldots$ | 44 | traders and mechanics, taxi-cab drivers and the |
| 19011 | $\ldots$ | $\ldots$ | .258 | like. The few Sikhs in Bengat are less than one |
| 1921 | $\ldots$ | $\ldots$ | 2.231 | in a thousand of the whole body of adherents of | 126. The Jews the Sikh religion in India.

cutta, where their number is 831 suaber o Jont. males (896). European Jews are few and the ${ }_{1891}^{1831} \quad \ldots \quad . . .{ }_{1}^{1,013}$ colony in Calcutta is an old foundation. It 1991 … … $\begin{aligned} & 1.914 \\ & 1901\end{aligned}$ 1911 ... $\quad . . .1,1,893$ Jews in India, the majority of which is to be thousand Jews each in Burmand in Bombay City. There are more than a uny other parts of India.
127. The Confucians.-Of the 1,443 Confucians found in Bengal 1,411 were returned from Calcutta. None were discovered by the Census of 1881 or by the census of 1891 and in 1901 there were only 178, but the number rose to 1,058 in $19!1$ and has further increased. Bengal has 12 per cent. of the Confucians in India, practically all the rest, except a few in the Andaman Islands, being returned in Burma.
128. The Zoroastrians.-Of the $\mathbf{7 7 0}$ adherents of the Parsi . (Zoroastrian) religiou 641 were found in Calcutta. They are traders who hare come over irom Bombay. Though their number in Bengal is so small, it is larger than in other Provinces of India except the Bombay Presidency certain States adjoining it, the Central Provinces, United Provinces and Kashmir, and the last three contain not many more than Bengal. The number in Bengal is steadily growing. It is twice what it was in 1901 and five times what it was in 1881.
129. The Christians.-Christianity has made but little impression uron the population of Bengal when measured by the number of converts popnlatinn. less than one in 300 , and among Indians only one in 356. The total in Bengal, 149,069, is only one in 320 of the Christians in India, for the
proportion of the total population which Christians form is very much higher in Southern India. In Travancore and Cochin they form more than a quarter, 29.3 per cent. and 20.8 per cent. of the population of these Statess respertively. The proportion in the Madras Presidency is $3 \cdot 22$ per cent., ten times as great as the proportion in Bengal, aud in the Central Provinces and Berar, $4: 24$ per cent., fourteen times as great. The proportion is higher than in Bengal also in Burma, 1.95 per cent. in the Punjab, $1: 33$ per cent., in Bomhay, 1.04 per cent. in Bihar and Orissa, 0.8 per cent. rising to 34 per cent. in Chota Nagpur and in the United Provinces, 0.44 per cent. The proportion in India as a whole is 1.50 per cent. Christians are more numerous in Central Bengal than in other divisions of the Province mainly by reason of a large numbers found in Calcutta and the 24 -Parganas. The number in each district found at each successive census since 1881 and its proportionate variation during each decade is given in Subsidiary Table III printed at the end of this chapter. The distribution of the total number among the several districts of the Province is illustrated by the map in diagram No. 44 The area of the black square shown upon each district in this

map is proportional to the number of Christians in the district, though the position of a square does not indicate the part of a district in which most Christians are to be found. A square one inch each way on this map would indicate the presence of 360,000 Christians. Under the name of each district on the map appears the denomination of the mission or missions to which the greatest number of Christians are adherent. It will be seen that the largest
body of Christians is in Calcutta. To this body Europeans and Anglo-Indians

| Jalpaiguri | $\ldots$ | $\ldots$ | $\mathbf{8 , 7 2 6}$ |
| :--- | :---: | :---: | :---: |
| Nadis | $\ldots$ | $\ldots$ | 8,533 |
| Dasjeling | $\ldots$ | $\ldots$ | 8,098 |
| Bakarganj | $\ldots$. | $\ldots$. | $\mathbf{7 , 5 7 4}$ |
| Faridpur | $\ldots$ | $\ldots$ | 6,299 |
| Midnapore | $\ldots$ | $\ldots$ | 5,838 |
| Dinajpur | $\ldots$ | $\ldots$ | 5,009 |

130. Sects of Christians.-The Portuguese were the first to bring ('hristianity to Bengal. Portuguese adventurers, who for a considerable period were frankly pirates, made their headquarters on the island of Sandwip off Noakhali and were strong enough at one time to hold the balance of power in those parts between the Mogul force with its headquarters at Dacra and the ruler of Arracan. They enslaved their captives and converted them to Christianity. The Feringhis of Eastern Bengal, who are their descendants, may or may not all have Portuguese blood in their veins. There are none now on the island of Sandwip, but they are found on the Noakhali mainland, in Chittagong and Bakarganj, and there is a colony of them near Geonkhali in Midnapore. In appearance they are scarcely to be distinguished irom their neighbours, though they adhere to the Roman Catholic faith and are baptised with Portuguese names. In ordinary life, however, they are generally called by names such as are in use around them, and the priest sometimes has to search carefully through his registers to discover by what name he is to marry or to bury them. Their total number is below 2,000 .

The origin of the Portuguese churches in Dacca district and in Bakarganj dates back almost to the same period. The Portuguese church is the proprietor of a wide zamindari some 20 miles north of Narayanganj granted by the Moguls, and the tenant cultivators are almost all Christians. The Portuguese churches are administered by the Bishop of Mylapur, who is subordinate to the Archbishop of Goa. Other Roman Catholic missions controlled by the Archbishop of Calcutta, with Suffragan Bishops at Krishnagar and Dacca, began work later. In Central Bengal the Soceity of Foreign Missons of Milan is at work, in Eastern Bengal the priests are Jesuits and comprise natives of several European continental nations. Roman Catholics are 26,083 males and 24,474 females, a little more than onethird of the total number of Christians in Bengal.

The evidence of tombstones shows that there was an Armenian church at Sutanuti within the area now covered by Calcutta at least 60 years before Job Charnock founded the English Settlement, and Armenians were also settled 100 years before the battle of Plassey at Chinsura, Dacca and Murshidabad. Armenian Christians number 436 males and 395 females. The church is intended to minister to its own nationals and their descendants and is adhered to by practically no Indian converts. The same may be said of the Greek Church, adherents of which were returned as 79 males and 39 females.

Protestant missions of various denominations are at work in every part of the Province. The Anglican Communion is represented by the Society for the Propagation of the Gospel, the Church Missionary Society, the Oford Mission, and the Church of England Zenana Mission. All are at work around Calcutta. The first has a considerable congregation drawn from semi-aboriginal races in Midnapore: The second ministers to a large community in Nadia district and in Faridpur, and controls a colony of Santal Christians in Jalpaiguri. The Oxford Mission, which is rather scholastic than bent on making Christians, extends to Barisal and Dacca. The English Baptist Mission, though it extends also as far as the Chittagong Hill Tracts and Dinajpur, works mainly in the southern parts of the Presidency and Dacca Divisions. The northern parts of Dacca and Chittagong Divisions are covered by Australian Baptist Missions now working under one board of management, but except among the Garos in Mymensingh district they have made little headway. Methodists are at work among the aboriginal people of Bankura and the Asansol subdivision of Burdwan, and the London Missionary Society (Congregationalist) in the neighbourhood of Calcutta. Presbyterians have undertaken the work among the Eastern

Fimalayan people and have founded large congregations, especially in the neighbourhood of Kalimpong, though there are also many Roman Catholics in the hills. The Lutheran Missions of Chota Nagpur hardly touch Bengal, though there are Lutheran Chriatians among the immigrants to Dinajpur, Julpaiguri and elsewhere, anid a Lutheran mission is established in Sikkim and Cooch Behar.

The following table gives the number of adherents of each of the most important Christian sects:-

|  |  |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

The value of the figures is somewhat reduced by the fact that so many were returned as Christian or Protestant only, without further details, in spite of the very explicit instructions issued on the points. For this the people of Calcutta are largely responsible, especially Europeans and Anglo-Indians, who filled up their own schedules without reading the instructions printed on the back. Generally speaking, Europeans are Protestants and favour the Anglican Communion, while the majority of Anglo-Indians are Roman Catholics. Neither subscribe many to the numbers of the Baptist, Methodist, Congregationalist and similar denominations, which especially the Baptists, have made much headway among Inidans. In 1901 those who were returned merely as Protestants were added to the numbers of the Anglicans and, as it seems that a large proportion of those who returned no sect at the last census must have belonged to the Church of England, the number of its adherents cannot have fallen as much as the above figures indicate.
131. Growth of the Christian Community.-The number of Christians in Bengal has more than doubled during the last 40 years. The rate of increase in successive decades has been 13.9 per cent. between 1881 and 1891, 29.5 per cent. between 1891 and 1901, $21 \cdot 7$ per cent. betweèn 1901 and 1911, and 14.9 per cent. in the last decade. The increase since 1881 has been 106.2 per cent., while the increase in the total population in the same period has been but 28.6 per cent. The contrast between these last two figures is the more remarkable when it is remembered that Christians are very few in such districts as Noakhali, Tippera, Mymensingh and Bogra, which, of the plains districts, have shown the greatest increase of population. Christian

[^4]missions have made little or no headway either among the better class Hindus or the Muhammadans. Their converts are made either among aboriginal tribes as in Western Bengal, the western part of Northern Bengal, Jalpaiguri and Mymensingh, the hill tribes of the Himalayas and the most backward of those of the eastern hills, and Hindus of the lower castes, the Namasudras of the low-lying tract on the borders of Faridpur and Bakarganj, and Pods, Kaibarttas, etc., in Jessore, Khulna and the 24 -Parganas. The community has received its greatest numbers of converts in the last decade in Midnapore at the hands of the Society for the Propagation of the Gospel; in Jessore and Khulna at the hands of the English Baptist Mission; in Dinajpur at the hands of the Franciscan Roman Catholic Mission and the English Baptist Mission; in Jalpaiguri and Rajshahi mainly through the Presbyterians; in Faridpur, Bakarganj and the Chittagong Hill Tracts through the English Baptist Mission, assisted in Faridpur by the Australian Baptist and the Christian Missionary Society and by the Jesuit Mission in Bakarganj; in Mymensingh through the Australian Baptists and in Tripura State through the Thado Kuki Mission, which is undenominalional, though supproted by the Presbyterians.
slbsidiary table i.-General distribetien of the Population by Rehigion.


SUBSIDIARY TABLE II.

SUBSIDIARY TABLE II.-Distmisution by Imathets,


- of the main Religion.

subsidiary table fil.-Chmigtians, number and vabiation.

subsidiary table lv.-Religions of Urban and Rural Population.

| Natural Dipinion, |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hindu. | Musalman. | 4nimit. | Obristian. | Others. | Hlodu. | Momimina. | Anionlat. | Ouristlas. | Others |
| 1 | 2 | 3 | 4 | 0 | - | 7 | 1 | $\bigcirc$ | 10 | 11 |
| bergal ... ... ... ... | 8,948 | 2,730 | - 14 | 200 | 80 | 4,188 | 8,845 | 180 | 18 | ${ }^{0}$ |
| $\begin{aligned} & \text { West Eongal- - } \\ & \text { Burdwan Dirialon } \end{aligned}$ | n,079 | 1,730 | 41 | 185 | - | 8,919 | 1,308 | 462 | - | 1 |
| Centrat BentalPrenideney Divition ... | 7.001 | 2,560 | 14 | 263 | 103 | - 469 | 8.238 | 36 | 33 | 1 |
| North BentatMriathintil Division and cooch Bohar. | 5,024 | 3,657 | 8 | 153 | 257 | 2,408 | 6.039 | 294 | 90 | 31 |
| Eapt Bental- <br> Dacea Diptialon ... ... | 6,084 | 4,272 | $\cdots$ | 81 | 19 | 2,888 | 7,063 | - 8 | 23 | 5 |
| miltagong Ditinion and Trlpura Buate. | 8.869 | 4,303 | - | 109 | 200 | 5.49 | P,008 | 38 | c | 324 |
| ejxnim ... ... ... ... | $\cdots$ | ... | ** | .. | $\ldots$ | -,478 | 3 | "* | 48 | 3,270 |

## CHAPTER V.

## Age.

132. Introductory.-This and the two suceeding chapters deal with the distribution of the population by. Age, Sex and Civil Condition given in Census Table VII, for the population adherent to each religion and in Table XIV for selected castes. This chapter besides dealing with the statistics of age, makes use of the vital statistics published for each year of the decade by the Department of Public Health. It has not been a long chapter in former Census Reports, for those who wrote them devoted themselves instead to Ethnological and similar studies in connection with caste and religion but the age statistics are worthy of closer examination. There are 14 subsidiary tables printed at the end of the chapter giving :-
I. A distribution by annual periods of age for 100,000 Hindus and 100,000 Muhaminadans of each sex in Western and Northern Bengal and in Eastern Bengal obtained direct from the returns.
IA. A graduated distribution by annual age periods for 100,000 Hindus and 100,000 Muhammadans male and female.
IB. An analysis of Sub-Table IA giving the graduated distribution by quinquennial age periods.
II. The age distribution of 10,000 of each sex and religion obtained direct from the returns for the last four censuses for the Province as far as available and for each Natural Division.
III. The age distribution of 10,000 of each sex and religion obtained direct from the returns of the last four censuses.
IV. - The age distribution of 1,000 males and females for selected castes.
IVA. The proportion of children under 12 and of persons over 40 . to those aged 15-40, also of married females aged 1540 to females of all ages for selected castes and races.
V. The proportion of children under 10 and of persons over 60 to those aged 15-40, also of married females aged 15-40 to females of all ages at the last three censuses in each district.
VA. The proportion of children under 10 and of persons over 60 to those aged 15-40, also of married females aged 15-40 to females of all ages for each religion in each Natural Divisions.
VI. Variations in population at certain age periods.
VII. Reported birth-rate by sex and Natural Divisions for the last decade.
VIII. Reported death-rate by sex and Natural Divisions for the last decade.
IX. Reported death-rate by sex and age in the last decade.
X. Reported deaths from certain diseases during the decade.

Three appendices are also printed at the end of the chapter-
I. A note on the manner of presentation of birth and mortality rates;
II. The report of an enquiry regarding the fertility of marriages in Bengal; and
III. A note on the tests of the accuracy of vital statistics which have been carried out of recent years by the Department of Public Health.
The age returns are one of the curiosities of an Indian census. The instructions regarding the entry of age in the schedules are simple enough, viz., that the number of years which each person has completed are to be entered and that children below one year of age are to be entered "infants." The latter rule was provided to prevent the number of months of a small child's age being entered and subsequently confused with entries in years.

The difficulty is that all but a very small proportion of the perople of India have only the vaguest idea of their age. The knowledge is an instance in which the civilization of India is centuries behind that of Europe. The age returns in England are not by any means quite perfect, but they have very much improved since the decennial census first became an institution, and the defects which they now show do not arise mainly from lack of knowledge. The great majority of the population knows its age to the day. The upper and middle classes in Europe have for several hundreds of years taught their children to keep festival on their birthdays. The practice dates earlier than the spread of Christianity both anoong the Latins and among the invaders from the north, but it has undoubtedly had some encouragement in the Christian era from the analogy with Christmas, always the children's festival from earliest times. Indian children do not keep their birthdays in the same way. Even among the educated classes very few know the date of their birth, and only a small proportion are able to state their age in years with any certainty. There is often, it is true, a record of their birth in the higher and middle classes among the Hindus in their horoscopes, for the astrologer notes the day, hour and minute of birth before casting it. These papers are consulted before marriages take place and are sometimes produced in evidence in court, but census enumerators would not be allowed to examine them, even if they had the time to spare to do so and the documents were at hand. The individual to be enumerated has not committed the date to memory. Often the papers have been lost, and it is very common to find men whose families have been literate from generations with no better evidence of their age than Matriculation Examination certificates showing in what year their age was about 16. Among the illiterate it is not uncommon for an old man to say that he is "probably $25^{\prime \prime}$ ' or for a father to give his age less than his son gives his. Many simply plead entire ignorance but others-and they the great majority-make wild guesses or give such ludicrous replies as bis chalis, 20 or 40 . The ideas of the enumerators on the subject of age are often quite as nebulous as those of the persons to be enumerated. They blithely take down whatever is told them and it must not be imagined that the entries are even approximately correct. But the resultant statistics are by no means without value. They are very interesting psychologically, and much can be made of them in addition. In Table VII printed in the Tables Volume the complete statistics of age by quinquennial periods is given for males and females of each religion. Similar statistics by annual periods were not tabulated for the whole Province but areas were taken as samples in West and North Bengal and in Eastern Bengal which were occupied by some 100,000 of each sex of Hindus and Muhammadans, and. statistics prepared from them. Subsidiary Table I, printed at the end of this chapter, gives the age distribution of 100,000 of each sex and religion in North and West Bengal and in East Bengal according to the figures obtained. The extreme irregularity in the figures is immediately noticeable; the large numbers returned as aged $25,30,35,40,45,50$, etc., represent persons who guessed at their age and plumped for multiples of five. A preference for even numbers rather than odd numbers also appears, though it is often upset by the appearance of 5 in the middle of the series of digits and seems, therefore, to resolve itself into a preference for numbers ending with a 2 or an 8 . Seeing that the age returns have been so greatly influenced by such preferences as these one is tempted at first sight to throw them aside as quite valueless. But this is not so. The existence and, effect of these preferences is of psychological interest, but it is something more. When large numbers are concerned, it is safe to say that a population which guessed its age in an ascertained manner on one occasion will do in an almost identical manner on another and that ordinarily as many will guess too high as too low. With the increase of civilization a knowledge of the age of the population and of the numbers of the several age periods becomes increasingly important. The application of the recent legislation which makes it competent to certain Local Administrative Bodies to introduce compulsory education for children between certain ages requires, before preliminary arrangements can be made
to carry out the project, a knowledge of the number of children which may be expected to be found between these ages. If a correctly graduated distribution of the numbers in each year of age, among 100,000 of the population of each sex and age, can be obtained, it will supply figures for the number of children between the ages of 6 and 11, or of persons between any other two ages. But this will not show how many people would claim or would be estimated by another enquiry to fall between the same two ages. It is at this point that the crude figures are of value. They tell us at least how many individuals would be placed in each age period by other estimators of the same class as the census enumerators. Such considerations as these show that a closer examination of the peculiarities of the arude distribution by annual age periods given in Subsidiary Table I at the end of this chapter is worth making.

Generally speaking, it is only after the age of 25 or 30 that the majority of the population makes no attempt to guess its age nearer than to the nearest multiple of 5. After that age the proportion that guesses in this way appears to increase with age, but there are marked differences between the behaviour of males and females, Muhammadans and Hindus, and Western and Eastern Bengal people in the matter. More Hindus attempt to give ages which are not multiples of five than Muhammadans, and it is likely that individuals among Hindus have on the whole the more accurate knowledge of their ages. This is no doubt to be accounted for by the advantage which they have over Muhammadans in the matter of education. The ages of males who have reached maturity are not given as much more carefully than those for females, as might have been expected from the disparity between the extent of education in the case of males and the case of females. The explanation lies in the fact that the enumerators commonly got their information regarding females from the male members of the household and not direct from the females. The sampling, which was done separatelv from Eastern Bengal and from Western and Northern Bengal, has brought out some remarkable differences in the manner in which ages were returned in the two halves of the Province. Both among Hindus and Muhammadans, those living in Eastern Bengal seem to have guessed their ages much more often bv plumping for a multiple of 5 than those living in the western half of the Province. The Eastern Bengal people favoured multiples of 10 much more often than odd multiples of five, but the Western Bengal deople showed much less often a preference for even multiples of 5 . In the western half $:-$ of the Province very many, Hindus especially. seem to have tried to avoid multiples of 5 , and the result has been that the ages of large numbers have been given in figures ending with 2 and 8 and of only somewhat smaller numbers in figures ending with 6 . Thus. among Western Bengal, Hindus, more gave their age at 22 and 32 than at 20 and 30 , more at 36 than a $\hat{t}$ 35, and more at 72 than at 75. The attempt to avoid multiples of 5 at the earlier ages is more marked. Among Hindu males in Western Roncal. 12 was a much stronger favourite than 10 and 18 than $9 n$. while more gave their ages at 16 and 14 than at 15 and at 8 than at 10 . In the case of Hindu females and also of Muhammadans of both sexes in Western Rengal 12 was more often given than 10. Nn doubt the enumerators were in part responsible for these curious results. Thev wanted to avoid the appearance that in their returns ages had too obviouslv been guesses, but. whether the enumerators or the enumerated were responsible for the results. they indicate that withont doubt the people of the western balf of the Province are much the more alive to the importance of the knowledge and correct return of age. From the manner in which the sampling was done-anproximatelv equal numbers both of Muhammadans and Hindus being dealt with in the two halves of the Province-it is apparent that the greater predominance of Muhammadans in Eastern Bencal has had no effect upon the results. No samples were taken from Calcutta or its near neighbourhood and it is clear that in this respect at least the civilization of West Bengal is distinctly in advance of that of Eastern Bengal.

The figures for children at ages under 5 are very peculiar. Among 5oth males and females, Hindu and Muhammadan, the total number is less than
the number returned aged between 5 and 10 . The number returned as between 1 and 2 is less than half the number returned as between 2 and 3, and this is less than the number returned as between 3 and 4 or 4 and 5. The main features of these peculiarities are now new, nor are they confined to this Province; they are common to all the provinces in India and have appeared at every successive enumeration. They are somewhat more marked than at previous censuses in the figures for Bengal, by reason of the fact that there was a very distinct fall in the birth-rate towards the end of the last decade and especially at the time of, and in the months following, the Influenza Epidemic and the sharp rise in prices in 1918. The very small number of children returned as between 1 and 2 years old is partly to be accounted for by the instruction that the word "infant" was to be used for children less than 12 months old. The word, especially when put into the vernacular by the Bengali word sisu, is commonly understood to mean an infant still unweaned. Consequently, many babies more than 12 months old but still at the breast were entered as " infants", and included at the time of tabulation with those less than 12 months old. A child moreover who has completed 1 year and is getting on for 2 is comminly called 2 years of age in Indin and a child of $2 \frac{1}{2}$ is called 3 . This is the explanation of the fact that the hiatus in the return for those aged between 1 and 2 affects the returns of thase aged 2 and 3 in direction of reducing them.

From what has been said it will readily be appreciated that to use the crude figures for the distribution of the population by annual age periods without adjustment could not but lead to serious error. To use for instance the figures given in the Subsidiary Table I against the ages 6, 7, 8,9 and 10 , to discover what portion of the population would come within a provision of law to make primary education compulsory to all children between the ages of 6 and 11, could not but lead to a serious misconception. An attempt at gradnation of the series showing the distribution by annual periods must be attempted. The extraordinary inequality of the series in its crude form makes this task a difficult one, and one in which a considerable element of guesswork must inevitably be involved. Graduation is necessary in the case of the corresponding figures for a European country, but in proportion as the crude returns give a less irregular series of figures, the element of guesswork in the graduation of them is reduced.


The diagram printed on this page shows the contrast on point of rregularity between the crude figures for the distribution by annual age periods of

100,000 Muhammadan males in Bengal and of 100,000 of the male population of England and Wales in 1911. The ups and downs in the broken line indicate that even in England, especially after the age of 30, there is a preference for even rather than odd numbers, and for figures which are multiplies of ten. But the irregularities which are caused are small indeed compared with those which the Bengal figures display. It is worthy of note that the English figures show, although to a much less marked degree than the figures for Bengal Muhammadans, the same irregularity at the age of one. The tendency of the English curve, moreover, is to be convex from above about the age of 30 , where the Bengal figures also are high compared with those round about 20 . The hump in the English curve at this point has a real significance corresponding to a noticeable fall in the birth-rate since 1870 . In Bengal the case is different and will be examined later. The point to be noticed at the moment is that the irregularities in the English figures being so much less than those in the Bengal figures such a feature as the hump about the age of 30 in the English curve cannot but have a real significance, while the explanation of the corresponding feature in the Bengal curve may be only psychological.

The Actuary to the Government of India has been employed on the occasion of each census to prepare life tables from the statistics of age returns. As a necessary preliminary he must complete a graduated distribution of the population by annual periods of age.
133. Graduation of the distribution by annual age periods.-His graduation is à means to an end, and in making it, his aim is to eliminate all irregularities, and to idealize the figures ignoring altogether the accidents of certain changes in the number of births from year to year. It shall be my purpose here to show a process of graduation which shall first of all attempt to eliminate the irregularities due to ages having been guessed, to estimate the direction and intensity of tendencies to exaggerate age or the reverse, to eliminate them without altogether ignoring variation in the birth-rate of recent years, and, having produced a graduated series, to show how it may be used to ascertain the age distribution of the population of subdivisions of the Province, districts and towns, etc., for which the statistics of the distribution by the quinquennial periods according to the census returns have been published in Table VII.

A preliminary step is necessary to be taken before we embark on the graduation of the age distribution given in Subsidiary Table I. The figures were obtained by sampling, by taking the age return for 100,000 of each sex and religion and tabulating the results. The tabulation has, however, been done for the whole population by quinquennial age periods and the results published in Table VII. If the samples which have been taken are not exactly representative of the whole, it will show itslf- by a slight variation between the figures in the annual distribution taken together 5 at a time and the distribution of the whole population by quinquennial periods. As might have been expected, since so large a number as 100.010 of each sex and religion was used for the purpose of sampling, the variations are not large and the distribution may be made representative of the whole population by a slight adjustment, and an excess or defect in any quinquennial period remove by a distribution of it over the 5 annual age periods concerned roughly in proportion to the numbers returned in each. After making such adjustment we now have a series of figures which may be taken to be a correct proportionate distribution by annual age period of the whole population of each sex and age as returned.

Certain peculiarities of the age returns of an Indian census can be eliminated from the statistics by mechanical process. Far more persons gave their ages at 40 than the true number who were between 40 and 41 years old. Most of these knew their age was roughly 40 and plumped for the round number. We can eliminate the effect of plumping for multiples of 5 by distributing the abnormal excess who returned a multiple of 5 among the two annual age periods on each side of it. Bv distrihuting the excess returned at stages of 5 , we shall at least have eliminated the
which are multiples preference of such
multiples, though we shall not have eliminated the preference of even multiples of 5 over odd multiples. A useful step in the graduation of the age distribution according to the returns will have been taken if we replace each number in the series by the mean of 5 numbers, itself and the two numbers above and below it. The process is called "Bloxam's method of smoothing " after a statistician who invented it. The preference for even over odd numbers remains, for the mean which will replace the figure against an age expressed by an even number of years will be the mean of the figures against 3 even age numbers and two odd ones, while the figures against an even number will be the mean of the figures against 2 even age numbers and 3 odd ones. The effect of the preference for even numbers over odd can be eliminated by taking twice over a series of means of consecutive numbers two at a time. By applying such a process again and again, and especially if means of as many as ten or eleven consecutive numbers in the series were taken at a time it would be possible ultimately to produce a perfectly smoothly graduated series. But the objection to doing so is that it would too much idealize the distribution. While removing the irregularities which had been caused by guesses having been made, it would at the same time remove all other irregularities, some of which have a very real significance. Accordingly it is inadvisable to carry the graduation by taking means further than has just been mentioned. The next step is to plot the last series of means obtained upon squared paper so that abcisse represent age and ordinates the number of persons in each annual age period. Through the points thus plotted a smooth curve may be drawn which may fairly be taken to represent the age distribution with the preference for even over odd numbers, and the preference for multiples of 5 eliminated. The curves obtained in this manner for Muhammadans and the Hindus are reproduced in miniature in Diagram 47 and 48 on this page.



After the age of 30 in both of them in the curves all wave in a similar manner with the same wave-length of 10 years, the top of the wares corresponding to the even multiples of 5 and the hollow corresponding to the odd multiples. These waves indicate no more than the preference for even multiples of 5 over odd ones. In the case both of Hindus and Muhammadans the waves are more noticeable in the curves for females than males as was only to be expected. They might have been eliminated altogether if, in applying Bloxam's method of smoothing, means of as many as ten numbers had been taken together at a time, but such a proceeding throughout the series would have obscured certain significant pecularities of the curves before the age of 30 , which are worthy of examination. It will be noticed that the hollow between the crests of the waves at 50 and 60 in the curves of Muhammadans and Hindus and especially in the case of males are distinctly more pronounced than the hollows on either side. It is just possible that there may be some real significance in this, and that it may be a still remaining trace of a low level of birth-rate in the decade from 1860 to 1870 when there was a shortage of food supplies, and when malarial fever was raging in Central and Western Bengal, and spreading to areas which had not previously suffered in the same way. But it is more likely that the explanation is psychological. When 50 is reached, people are more easily satisfied to give their ages to the nearest multiple of 10 than before. The same people might distinguish between 45 and 40 , but would not trouble to distinguish between 55 and 60.

In the case of both Hindus and Muhammadans the curve for males remain higher than the curve for females from before the age of 30 for nearly 30 years. This is accounted for by a tendency either for males to exaggerate their ages or for females to understate them or both during this period of life. That the oldest people should exaggerate their age is very natural. It is found almost universally and there is no doubt whatever that the tendency exists in India. Authentic cases of persons who have lived 1100 years are few in England. Only 29 males and 73 females out of $45 \frac{1}{4}$ millions gave their age at over 100 in England and Wales at the Census of 1911. It is an indisputed fact that Indians reach maturity earlier and age more quickly than the people of Europe, yet, whereas, about 2 per million gave their age at 100 and over in England the corresponding proportion in Bengal was over 300 per million. One woman in Sikkim gave her age as 140 , an altogether impossible figure, and the same tendency to exaggerate has undoubtedly affected the figures for the ages at least from 70 to 100 as well as above it. There is no means of discovering the truth and determining the extent of thie results of this tendency, but if the estimate made by the Actuary in dealing with the figures of 1911 was a good one, viz., that a proportion of less than 1 per 100,000 lives beyond the age of about 87 in Bengal and that only 35 males and 38 females per 100,000 of each sex live bevond 78 , it means that practically all, who gave their age at 100 or over. must have added on 25 years.

Below 30 the waves in the curves are less regular than above it. In the case both of males and females of both religion the crest before the one at the age of 40 has moved very distinctly backwards and the top of it is at 27 or 28 instead of at 30 . Further back though the curves for malesHindu and Muhammadan-show the same general tendencies, those for females show quite different ones. The crest in the neighbourhood of 20 for males has entirely disappeared and the curves show a long depression between the crests at about 28 and at about 8 . It appears that at least from 14 to 24 the number of males has been understated and that there has been a distinct tendency to overestimation of their ages by young men from 18 or 19 up to 24 and an understatement of the ages of boys from 13 or 14 to 17 . This is very natural. At 17 or 18 the boy becomes a man and both he, his parents and the census enumerator, are inclined to make too much of his man's estate and over estimate. Underestimation below that age is equally natural. The boy has obviously not reached man's estate and his age is put down at something which will make it appear certain that this is so. The exaggeration of ages just after adolescence is considerably more noticeable than the underestimation before it. Its result has been noticed
in the figures for every successive census and was expressed by Mr. Hardy, the Actuary, who dealt with the figures for 1881 and 1891 as a heaping up, of the figures between the ages of 25 and 30 at the expense of the preceding and following ages. In the figures for the Census of 1921 this has apparently been more noticeable at the expense of the preceding than the following ages. The girl becomes a woman some years before the boy becomes a man. The hiatus in the statistics represented in the hollow of the curves for males round about 20 , just after adolescene is reached moves, in the case of females, to the age period from 13 to 16 and is represented by the hollows in the curves for females whose lowest points are reached about 14 or 15 . There is some heaping up of the figures for females round the ages of 18 to 20, but whereas in the case of males the avoidance of the ages which are the turning point of adolescence appear to show itself more in exaggeration over that point than in underestimate below it, this is not so in the case of females. From 9 to 14 the curves show a large excess of boys per mille males over girls per mille females.

| Age. |  | Hludan. | Mahammadnas |
| :---: | :---: | :---: | :---: |
| 9 | $\ldots$ | 175 | 228 |
| 10 | $\ldots$ | 307 | 345 |
| 11 | $\ldots$ | 322 | 496 |
| 12 | $\ldots$ | 345 | 485 |
| 13 | $\ldots$ | 315 | 32.2 |
| 14 | $\ldots$ | 202 | 160. | The excess at each age is given in the margin, and as a whole it is represented by the area in the gap between the curves for males and for females from the ages of 7 and 15. This area is smaller than the gap between the curves between 15 and 25 , but, whereas very much of the latter area is accounted for by the understatement of the numbers of males between 15 and 25 , between 8 and 15 the understatement towards the end of the period and overstatement of the numbers of males towards the beginning will.tend to balance to one another, and the gap between the curves from 8 to 15 must be put down almost entirely to the understatement of the age of girls in that period. As is well known this is the age at which girls are married in Bengal. The custom of the country ordains that it is the duty of parents to marry their daughters before they arrive at puberty, but marriage is expensive and the expense falls upon the girls' parents. Often they have the greatest difficulty in meeting it and are obliged to put it off later than they could wish. To avoid the disgrace which falls upon parents who fail to marry their daughters before the age of puberty, and the imminence of such disgrace when the girl is growing up but her marriage has not yet been performed, or when she has been married but her husband has not yet taken her away from her parents' house, there is a well marked tendency to understate the age of girls who are still living in their fathers' homesteads. That this tendency existed has been a fact well known for a long time. The census figures render it possible to estimate the force of this tendency. Assuming that the number of boys in the ages from 9 to 14 are approximately correct, and that as the experience of other countries where age statistics are more reliable shows, this is an age at which the numbers of males and females in the population are exactly equal, the underestimate in the case of Hindus amounts to a total of 1,666 years in the ages of 12,728 female children, or an average of 1.6 months for each child, and in the case of Muhammadans a total of 2,036 years in the ages of 14,165 children or an average of $1: 7$ months for each child. The understatement is about the same in the case of Muhammadans and Hindus. From the difficulty and the expense which the better class of Hindus have in marrying. their daughters it might perhaps have been anticipated that the tendency to understatement might have been the greater in the case of Hindus, but it is to be remembered that in respect of the expenses of marriage the Muhammadan cultivators have come to be very extravagant indeed, that the better class Hindus form but a comparatively small fraction of the Hindui population and among the lower class there are people among whom marriage expenses do not fall at all heavily upon the girls' parents. The abrupt rise in the curves for females after the age of 15 is easily explained. As soon as the young wife goes to live with her husband and bears her first children the tendency at once is to make her out an older woman than she really is.

From what has been written earlier in this chapter regarding the ages of early childhood and the shape of the curves helow the ages of 10
it is at once apparent that the figures obtained from the census returns are of very little value, The actuaries who have dealt with the statistics of former censuses have, in preparing life tables, found it necessary to throw over the census statistics altogether for ages below 10 or 12, and have worked mainly upon the vital statistics of certain Proclaimed Clans. Mr. Ackland, the actuary who dealt with the figures for 1911, wrote: "This is of course far from satisfactory but the only alternative course appeared to be to omit the figures for the younger ages altogether. In the practical application of the Proclaimed Clans figures, 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 necessary to make a continuous curve throughout life and a smooth junction with the graduated figures mathematically deduced at higher ages." His aim was to produce an idealized distribution through the early ages as through subsequent ages, one for the early ages based in fact on a stationary birth-rate. The birth-rate of recent years has, however, been far from stationary. My aim is somewhat difierent from his, and, especially in view of the fact that the normal birth rate in Bengal has been so violently disturbed during the last decade, I propose to use a different method of arriving at an age distribution for children born in recent years. The figures obtained from the returns for the numbers in each of the early stages must be discarded but it seems probable that the total number of male children who are below 12 or 13 is about correct. Though we may not know the number of children born each year, we have figures for the number of births obtained each year by the same agency and in the same manner, the figures published ammually by the Department of Public Health. It is fairly safe to take it that the number of births returned is every year about the same proportion of the true number. Let us take it to be so and assume that the true number of births is the number returned, multiplied by the constant $a$. At any time the number of infants aged less than one year is the number born in the year previous, multiplied by a factor depending upon the rate of infantile mortality. We may not know exactly what this factor is, but the greatest infantile mortality is in the first few weeks and months of life and depends upon the conditions of child birth. since the incidence of epidemics and the like enters little into the case, conditions of child birth remain much the same from year to year, and when we are dealing with large figures we may assume that the factor dependent upon rates of infantile mortality from year to year is approximately constant. -Let us assume this is to be the case, and take the number of children at any moment aged less than one year to be the number born in the year previous, multiplied by a constant $b$. The number of these which survive another year is reduced by a factor depending on the mortality rates between 1 and 2 years of age. To obtain this factor and the corresponding factors for subsequent years, I propose to use the proportion between the graduated numbers given for Bengal by Mr. Ackland on page 176 of the Census Report for India, 1911, and to take it that the number of children aged 1-2 years is the number recorded as having been born between 1 and 2 years previously, multiplied by two constant $a$ and $b$ and the fraction $\frac{36}{54} 96$; that the number aged 2-3 years is the number recorded as having been born between 2 and 3 years previously, multiplied by $a$ and $b$ and by the fraction $\frac{3+3,3+3}{41+\frac{3}{81}}$ and so on. It will be seen that use is not being made of the absolute numbers given in the graduated distribation for 1911, but only of the proportions between them, and as this proportion is only to be used for a short series it will be conceded that it is legitimate to use it. A means is at hand for eliminating the constants by equating the total number of male children aged 0-13 in 1921 obtained in this way to the fotal nomber of male children aged 0-13 according to the census, or rather according to the figures obtained from our smooth curves based on the census figures. By the use of this metiod we obtain the age distribution 0-13 per 100,000 males,

| 4 tr |  |  |  | Mrameminer |
| :---: | :---: | :---: | :---: | :---: |
| 0 | $\cdots$ | $\cdots$ | 3.230 | fill 0 |
| 1 | $\cdots$ | $\infty$ | 2.550 | \$. 159 |
| $\underline{9}$ | $\cdots$ | - | 2888 | 3,428 |
| 3 | $\cdots$ | $\cdots$ | 2,860 | 3,489 | of the Hindo and Muhammadan populaion given in th emargin. These numbers are shown plotted on the curres in diagrams 47 and 48 by stars. If we draw curves through


| Aks. |  |  | Hiadis. | Mathumbudaus, | these stars it will be seen that |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | $\ldots$ | ... | 2.414 | 2,934 | what we have done is to replace |
| 5 | $\ldots$ | ..' | 2, 295 | 2,800 | what we have done is to replace |
| ${ }^{\text {d }}$ | ... | ... | 2.367 | 2.876 | the original curves for males be |
| 7 | ... | ... | 2.270 | 2.740 | dween the ages (1--13 by other curves |
| 8 4 | $\cdots$ | ... | 2.311 | $2 \times 30$ | the sum of whose ordinates is the same |
| 10 | ... | ... | 2,178 | 2, 2,661 | as the sum of the ordinates to the |
| 11 | ... | ... | 2.124 | $2 \operatorname{sing}$ | orioinal curve |
| 12 | ... | ... | 2085 | 3,532 |  |
| 13 | ... | ... | 2,0:2 | 2, 1 亿1 | The next step towards graduation of the distribntion is to smooth ont | the waves in the curves from 35 onwards. The mechanical process of taking successive means of one mumber and the number which appears ten places below it in the series can be used to assist in this, though the curve being generally concave upwards, such a process tends to raise it slightly higher than it should be. Having plotted this last series of means, it is safer to use the points only as a gude to assist in drawing a smooth curve which will intersect the waved curve twice every decade, and leave such gaps let ween the two that the total area of the gaps on the one side of the new curve equals the total area of the gaps on the other. There is little to assist in drawing the smooth curve through the ages from 12 to 35 where understatement and overstatement of age bave occured to the greatest exterit. The area of the gaps between the new curve and the old on either side must be equal and as the birth-rate is known to have been fairly steady from 1885 or so to 1910 we are justified in drawing a curve with closest continuity that we are able to obtais and in continuity with the curve we have sulstituted in the early ages and the smooth curve for later ages. One word more is to be said regarding the curve for the early ages. The returns published hy the Department of l'ublic Health give the number of births from January to December each year, while the census was taken in the middle of March, two montlis and a half after the end of the calendar year. This will affect the general trend of the curve but very little, and as we are nut in a position to tell for certain in what direction it wil produce ifs efiect at any point, it is well to follow the substituted curve exactly at the earliest ages, though we may smooth it off sotnewhat after the first year or two. The final age distribution obtained by the methods which have been outlined in the above paragraphs for males of the Hindu and Muhammadan religions is given in columins 2 and 4 of Subsidiary Table IA printed at the end of this chapter.

Attencion has been called to the great preference for ceven multiples of 5 over odd multiples in the returns of age for femalesthan for males. A deliberate understatement of age of umarried girls has been traced and the sharp rise after 15 in the curves for females smouthed as far as we have smoothed them has been noticed. The returns indicate that the are figures given for females are much less reliable than those for males. That this was only to be expected the following considerations will show. Not only are females very much less eduated in Bengal than males, aud consequently less capable ct any sort of reckuning, but the census enumerator probably saw most of the males whom he had to enumerate, and since he was a man of the village he must commonly have known most of them by sight for years. When an age was given which was obviously incorrect he was no doubt often able to correct it. But in recording the ages of females he was in a different position. He would see none of the females he had to enumerate except the female nembers of his own family and some small girls of others, and knew none of the others by sight, for after the age of 12 or so the "purdah" shats them from view. Me could, therefore, do very little to rectify mistakes in the ages uf females, and had to enter what was told him. Even in European countries the age returns for females are known to be distinelly less accurate than the age returns for males, particularly owing to the tendency for women who have passed their prime to understate their age. In the circumstances 1 am of opinion that a more accurate age distribution for females can be deduced from the corresponding age distribution for males, than can be ohtained by proseeding to deal with the graduation of the numbers for females in einch age as has already been done for males. I am the more disposed to adopt the procedure of oltaining graduated numbers for females
from those for males, because the figures for males having been pullished and studied, the greatest interest in the figures for females is ly way of comparison with the figures for males. As a basis for the difference between the graduated numbers for females and the males hoth among llindus and Muhammaduns, I propose to take the difference in the rorresponding numbers according to Mr. Ackland's tables fur Bengal which appear on page 176 of the Census Report for India, 1911, and to which reference has already been made. It is well known that a somewhat larger number of boy babies are horn into the world than girl babies. Much of the disparity in numbers of male and fenale infants disappears during the first few months of life for boy babies are more delicate than girl babies and the mortality among the former is considerably greater than among the latter. Acrording to Mr. Ackland's figures the graduated numbers for males legan in the first year by being 19 ahend of those for females. but the difference had disappeared by the age of 5 and hecame a difference in the opposite direction which increased to 11 at the age of 10 , but disappenced by the age of 10 , and thereatter became un increasing difference in favour of the number of males. The change cones at the age when women in Bengal bear their first chaldrenthe only age, not, only in Bengal hut also in Fingland and other European combries, at which the rate of mortality among females is higher than among males. According to Mr. Ackland's figures the difference in favour of the numbers for male imcreases up to the age of 29 when it reaches 13 , then comvences to decrease and disappears about 4, , to he replaced by a difference in favour of the numbers for females which rise to 11 just after the nge of 60 is reached. Later the absolute difierence decreases, hut its proportion to the numbers themselves in each age continues to increase.

Two adjustments are necessary before these differences can be applied

to the graduated numbers for Muhammadan and Hindu males for 1021 to deduce the corresponding numbers for fenales. The first and less important adjustmeat is to he made on account of the fact that during the war the proportion of male births to female birthy rose very distinctly in Bengal. The fact and the figures which hear it out will be found discossed in the next chapter. The second is necessary on account of the fact that the Mindu population of Bengal is much more affected by migration than the Muhommadan. If statistics of immigrants and emigrants had heen prepared ly age and religion, an aljustment rould have heen made with exacturss, but this was not done and merely for the purpose of this adjuistment it would not have been worth while to underake thuir preparation. The adjustment can, however, he male approximately without such figires. Tlie number of miale Hindus in Berual per 100 . 000 females is 109.129 and the number of male Muhammadans per 106,000 females, $10.5,830$. The predeminance of males per 100,000 females is greater hy 3,299 in the case of Hindus than in the case of Muhammadans. The difference is due to the greater excess of
immirnants over emigrants in the case of Hindus than of Muhammadans. Those immigrants are people who have left their women folk at home, and we may take it that the ages of practically all of them were between 20 and about 45. Mr. Ackland's figures are for the Muhammadan and Hindu population together and the proportion of Hindus to Mubammadans is now as $2,(18)$ is to 2,549 . To make allowance for the greater predominance of males among Hindus than among Muhammadans,. which amounts to 3,299 per 100,000 females we nust therefore reduce the sum of the ordinates
 20 to 45 and increase the sum of the ordinates over the remaining age periors 0 to 20 and 46 to the end of life by the same amount. Similarly, we must increase the sum of the ordinates to the curve for females in the case of
 sum of the ordinates over the remining age periods 0 to 20 and 46 to the end of life. We must make the adjustment in each individual ordinate so as to retain continuity in the curves for females and in the graduated series of numbers which represents the age distribution. Following Mr. Ackland's figures for 1011 and making these adjustments we obtain graduated numbers for females in each age per 100,000 females of all ages which are given for Hindus and Muhammadans in columns 3 and 5 of the Subsidiary Table I-A printed at the end of this chapter.

The age distributions which have been reached are illustrated for Muh-

ammadans in diagram No. 49 and for Hindus in diagarm 50. Both distributions differ in character between the ages of childhood and of later years. The actuary who dealt with the figures of the last census idealised the distribution from one end of life to the other. It was inevitable that in later life the distribution should be treated in much the same manner again, but it was «not necessary to treat it in the same manner for the ages of childhood. That would have involved treating the birth-rate for the last ten years as having gradually fallen off, whereas the changes in it have been abrupt and have been very great. The results of these changes are shown in the distribution in the earliest years. Rather further on, the curves have been smoothed off and after the age of 10 , the distribution corresponds to the result by which would have been produced by constant or rather a steadily changing birth rate, Such a distribution beyond the age of 10 is justified by the fact that decades previous to the last one have not shown such abrupt changes of birth-rate as has the last, and that we may well suppose that a process of selection with the lapse of years would tend to eliminate them. As we pass on from early childhood the distribution depends less and less on the numbers born in a particular year and more and more on the mortality which has taken place since among those who began life in that year. The waves in the curves in diagrams 49 and 50 corresponding to the early years of life will appear again in the ages from 10 and upwards in corresponding curves representing
the age distribution in 1931 but smoothed off very considerably. Perhaps by 1941 they may have almost disappeared from the curve for the ages from 20 and upwards, but in any case it is unlikely that at that time the figures obtained direct from the census returns will give any indication of their existence.
134. Age distribution in Bengal and in European countries compared.It is essential to have some such distribution as that which has been prepared and discussed, before any comparison can be made between the age constitution of the population of Bengal and the age constitution of the population of an European country. It is in such countries that the business of Life Insurance has been developed, and if a similar business is to develop on anything approaching the same scale in India it is likely to be developed on basis of European experience and the actuarial work connected with it will probably follow the results of similar work in Europe. Insurance Companies in England make use of Census Statistics to a very great extent, but they have a mass of statistics of their own based on their own experience which now goes back more than a century. Until they acquire similar experience in India they can only use their experience in England by adjusting its results on the basis of comparison beween the age statistics of the English Census and those of the Census in India. A.comparison, therefore, between the age distribution obtained from the Census of Bengal and the corresponding distribution age obtined from the Census in England is of much practical value besides being of great academic interest. In diagram No. 51 on this page the age

distribution for Hindu and Muhammadan males in Bengal is compared with the corresponding age distribution obtained from the Census of England and Wales in 1911. The figures for 1921 are not yet available, and, even if they were, their use would perhaps be less convenient than the use of the figures of 1911 for the reason that the disturbances of the last ten years have rendered the age distribution in England at present an abnormal one. Insurance Companies in England may have to alter their premium rates in some instances to allow for a changed age distribution, and will no doubt do so, but their past experience was one of normal conditions and it is an age distribution into which abnormalities have not been introduced which is the better compared with the age distribution of Bengal which took no such part in the war as involved the sacrifice of the lives of young male adults or involved their disablement, or the disturbance as in England of the normal processes of migration. It will be noticed from the diagram that the age distribution for Hindus does not by any means diverge so far from the English distribution as does the distribuyears has Muhammadans. The natural fecundity of the Hindus of receni of the has been much greater than that of the population in England, but thar the Hindus and the people of England in this still. The contrast between the Hindus and the people of England in this respect is no greater than that
between Hindus and Muhammadans in Bengal. The curve for Hindus is rather nearer to the English curve in the earliest ages than to the Muhammadan curve though both curves would be further from the English curve but for the high infantile mortality in Bengal, and hut for this the Hindu curve would have been nearer the Muhammadan than the English curve. The curve for Hindus passes away from the English one somewhat, just beyond the age of 20 , by reason of the fact that at this age the Hindus of Bengal are recruited by migration from outside the Province and the curve is forced upwards in consequence. On the other hand this is the age at which a considerable number of young men leave England to seek their fortunes abroad and the English curve is bent downwards in consequence. The English curve has a decided hump in it at about the age of 40 which is explained by the fact that up till 1870 the birth-rate remained high and has since very much decreased. The effect of this would have been more noticeable and the curve would have run much more nearly horizontally in the earlier ages but for the fact that the effect of the reduced birth-rate has been counteracted by a reduction of the death-rate among children. There is a hump in the Hindu curve at about the same point which may be due in part to a reduction of the birth-rate among the Findus during the last 40 years, though it has been rendered more prominent by the effect of immigration. A less noticeable reduction than that which produced the same configuration in the English curve would produce such a hump, for there does not seem to have been in India the same reduction in mortality among children tending to eliminate its effect. The Hindu curve falls rapidly away from the English curve beyond the age of 40 and runs down close to the Muhammadan curve. In fact it approaches so near to the latter that the distance between the two is not more than what would be accounted for by the reduction in the proportion of Muhammadan males over 50 due to the greater proportion of children among them than among Hindus. Longevity is much more noticeable in England than among the people of Bengal, but hardly more, if any, among Hindus than among Muhamadans.

For the ordinary purposes of comparison a graduated distribution by quinquennial age periods is sufficient. It may be obtained by adding together the figures against each five successive ages in the distribution by annual age periods. For the use of those who wish to examine the comparison between the age distribution in England and Wales and in Bengal more carefully, the following figures are offered :-


| Age parlods. |  | Elindar |  | Muhammedess. |  | Both religion together. |  | Eaglead and Waleer |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Males. | Temalear. | Maset | Females. | Mnies | Tomata | Malex | Tomalen |
| 0-5 | --* | 1,395 | 1,419 | 1,700 | 1,668 | 1.564 | 1,657 | 1,110 | 1,030 |
| 5-10 | ... | 1,161 | 1,179 | 1,418 | 1,4C0 | 1,300 | 1,302 | 1.168 | 984 |
| 10-15 | ... | 1,063 | 1,977 | 1,241 | 1,290 | 1,159 | 1,162 | 1,004 | .941 |
| 15-20 | ... | 996 | 905 | 1,064 | 1,064 | 1,034 | 1,083 | 948 | 903 |
| 20-25 | ... | 951 | 931 | 937 | 944 | 943 | - 938 | 861 | 898 |
| 25-30 ... | ... | 896 | 869 | 804 | 813 | 844 | 888 | 834 | 872 |
| 30-95 | ... | 815 | 789 | 685 | 695 | 743 | 737 | 788 | 805 |
| 35-40 | ... | 723 | 698 | 572 | 683 | 639 | 634 | 724 | 724 |
| 40-45 | ... | 615 | 600 | 471 | 482 | 535 | 534 | 616 | 621 |
| 45-50 | ... | 470 | 467 | 372 | 377 | 416 | 417 | 632 | 538 |
| 50-56 | ... | $3: 3$ | 341 | 279 | 279 | 308 | 306 | 440 | 448 |
| 55-60 ... | ... | 235 | 246 | 192 | 193 | 211 | . 216 | 348 | 360 |
| 60-65 ... | ** | 160 | 173 | 124 | 126 | 142 | - 147 | 273 | 292 |
| 65-70 | $\ldots$ | 106 | 114 | 73 | 76 | 88 | - 92 | 210 | 237 |
| 70-75 | ** | 58 | 63 | 39 | 41 | 47 | 51 | 136 | '171 |
| $75-80$ | $\ldots$ | 25 | 28 | 20 | 22 | -23 | 25 | 73 | 97 |
| 80-85 | ... | 9 | 10 | 7 | 7 | 8 | 8 | 32 13 | 47 22 |
| 85 aud over ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 13 |  |
| Mean ago |  | 24'60 | 24'58 | 21.71 | 21.91 | 23*00 | 23.10 | 28.00 | 29.12 |

In the following table the age distribution by quinquennial periods for the whole population of Bengal (males and fomales together) is contrasted
with that obtained in 1911 for France which had and still has a very low birthrate compared with other European countries, Germany which had a high birth-rate and the Union of South Africa with its predominance of natives.

|  | - |  | Benkel 1021. | Franee $1911$ | $\begin{gathered} \text { Germany } \\ 1911 . \end{gathered}$ | Onton of South Africh 19!!. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Under 5 | ... | *.. | 1,561 | 886 | 1,200 | 1,500 |
| 5-10 | $\bullet$ | - | 1,301 | 847 | 1,139 | 1,302 |
| 10-15 | $\cdots$ | $\cdots$ | 1,160 | 842 | 1,066 | 1,167 |
| 15-20 | .-* | *** | 1,033 | 813 | 968. | 1,018 |
| 20-25 | - 0 | *** | 941 | 792 | 864 | 936 |
| 25-30 | $\cdot \square$ | -•• | 841 | 7841 | 774 | 887 |
| 30-35 | . ${ }^{\text {a }}$ | ... | 740 | 760 | 743 | 783 |
| 35-40 | $\cdots$ | *.. | 657: | 715 | 647 | 602 |
| 40-45 | ** | ** | 535 | 655 | 565 | 495 |
| 45-60 | .** | $\cdots$ | 416 | 616 | 484 | 351 |
| 60-56 | ** | ... | 305 | 552 | 423 | 299 |
| 56-60 | -•* | -•* | 214 | 481 | 340 | 178 |
| $60-65$ | ** | -.. | 144 | 420 | 284 | 195 |
| 65-70 | - | -." | 90 | 346 | 221 | 103 |
| 70-75 | *** | - | 49 | 250 | 15 | 86. |
| 75-80 | $\cdots$ | ... | 24. | 146 | 83.4 | 43 |
| 80-85 | $\cdots$ | -9* | 8 | 70 | 35 | 3\%; |
| 85 and |  | ** | 1 | 25 | 19 | 27 |

The South African figures are those obtained direct from the returns and they show some of the same defects as the corresponding figures for Indian provinces, the preference for multiples of 10 evident in the high figures for ages $50-55,60-65$ and $70-75$ and the exaggeration of age at the end of life, but the comparison is interesting. It shows the high proportion of children in India compared with such a country as France with its-very low birth-rate. Children under 5 are hardly more than half the proportion to the whole population in France that they are in India. In France half the population is over 35; in Bengal less than a quarter. Even Germany's birthrate did not bring its proportion of children in 1911 nearly as high as in India. Children under 10 were 23.4 per cent. of the population in Germany in 1911 against 28.6 per cent. in Bengal in 1921 in spite of the reduction of the birth-rate here during the last ten years. The South African figure which corresponds, $28 \cdot 0$ per cent., however nearly reaches the same level as in Bengal.
135. To adjust the age distribution for a part of the Province.-The graduated age distribution, which has been reached, is for the Hindu and Muhammadan populations of the Province as a whole, but it may be used to assist in determining the numbers in any particular age in a part of the Province for which figures are given in Table VII or for any of the larger municipalities for which statistics in the form of Table VII have been prepared in manuscript and handed over to the Director of Public Health. The same tendencies to exaggerate age at certain periods of life, to underestimate it at others, to plump for round numbers in giving it and so on, were met with in much the same degree all over Bengal, and it is therefore justifiable to graduate the crude figures for a part by changing them in the same manner as the crude figures for the Province have been changed to give the graduation. An example of the use of the graduated figures is to be found in Chapter

IV of the Census Report for Calcutta where they are used to produce a corrected age distribution for the population of the City. Calcutta's population is, however, far more abnormal in its sex and age constitution than that of any district of the Province, and the graduated distribution can be used in a much more satisfactory manner to obtain a corrected age distribution for the population of a district. As other examples of its use let us set ourselves the two problems of discovering-(1) how many Muhammadan women of childbearing age from 15 to 45 there were in March 1921 in Dacca city, and (2) how many Muhammadan male children there were of an age which would render them liable to compulsory education if the law were applied to Dacca making it compulsory that every child from 5 to 11 years of age should go to school. The following table shows the crude numbers in the $15-20,20-30$, $30-40$ and $40-50$ age periods per 100,000 Muhammadan women in Bengal, the corresponding numbers from the graduated age distribution and the actual numbers in these ages found in Dacca city, according to the statistics given in part C of the Census Table VII:-

|  | Age. |  | Orade trgurea for Bengel | Adjuated Igarm for Bedgal. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Nnmbera retarned in Dacca City. |  | Corrncted Agura tor Dacca Cist. |
| 15-20 | *** | *-. |  | 10,393 | 10,635 | 2,186 | 2,238 |
| 20-30 | .." | ..' | 19,211 | 17,674 | 4,146 | 3,793 |
| 30-40 | ... | - | 12,160 | 12,782 | 2,763 | 2,902 |
| 40-50 | ... | ... | 7,374 | 8,588 | 2,030 | 2,356 |

The figures in the last column have been obtained by rule of three from the figures in the last column but one, by changing each in the proportion of the corresponding figures in the second and third columns. According to the graduated figures for Bengal, 4,816 of the 8,588 between 40 and 50 , were between 40 and 45. We may take it that in the same proportion 1,321 females in Dacca are between 40 and 45. The answer to the first problem, therefore, is 10,234 . This happens to be very nearly the same number that returned themselves in these ages.

The number of Muhammadan boys returned in Dacca city as aged 5-10 was 3,529 and $10-15,3,104$. For the Province the number of boys returned as aged 5-10 was 16,966 and number aged 10-15, 13,096 per 100,010 Muhammadan males. In graduating the figures, these numbers were changed to 14,182 and 12,409 . The corrected number of Muhammadan boys in Dacca city aged $5-10$ is, therefore, 2,950 and aged $10-15$ is 2,941 . According to the figures given in Sub-Table I-A, 2,642 out of the 12,409 boys between 10 and 15 were between 10 and 11. In this proportion the number aged 10-11 in Dacca is 626, and the answer to the problem what is the correct number of Muhammadan boys in Dacca aged between 5 and 11 is therefore 3,576 .
136. Use of the crude age distributions obtained direct from the returns.- In comparing the age distribution of the population of one part of India with that of the population of another, or the age distribution of the population of the same part at different times, it is unnecessary to use graduated figures. Indeed, it is more satisfactory to use the crude figures for the element of guesswork and the personal equation of the person who did the graduations for different parts and at different times for the same part: must necessarily enter into the graduation. Two different persons will have worked on slightly different lines, and have made allowances for the errors which were apparent to them, each in different manner and to a slightly different extent. But the tendencies to exaggerate and to underestimate as well as to make guesses in a particular manner, change very little from place to place in India, from people to people and from time to time. For some purposes it is necessary to use the crude figures and not graduated figures. for instance, when stating specific death-rates, i.e., deaths among persons in certain age periods as a proportion of the numbers of persons living at those ages; for the age at death which is given when a death is notified, is stated
by the relatives of the deceased whose knowledge of his age is as defective as his own and who guessed it in the same manner as it was guessed at the time of the census. Similarly if it is required to know, for example, how many Muhammadan boys in Dacca city between the ages of 5 and 11 would be discovered by another enquiry from parents, the figure should be obtained from the unadjusted figures obtained at the census. If, however, another enquiry were made for the purpose of discovering how many boys there were between 5 and 11 in order to ascertain to what numbers compulsory education would be applicable, and the parents knew the object of the enquiry and wished to avoid having to send their children to school, the enquiry would probably produce a different result altogether. The difficulty of ascertaining the age of a child must necessarily cause a considerable amount of trouble in the enforcement of a Law making Primary Education compulsory between certain ages, and it is difficult to suggest a way out of the difficulty. To those who see a solution in the compulsory registration of births in municipal areas there are two answers. One is that it is very common for a child to be born in his parents' rural home and be brought into a town afterwards, and if the parents said that this had happened it would be impossible for the authorities to contradict it; and the other is that without a knowledge of age on the part of parents or the children themselves registration will be of little or no assistance. To obtain a copy of a birth certificate from the Somerset House without delay, the applicant must give the exact date of birth and place of registration. It is possible to obtain one after some delay if the approximate date is given, but not at all if this cannot be done. The difficulty of-obtaining a certificate in India without giving the exact date would be greater than in England, because in India there is very much less variety both in what corresponds to the English surname if there is any such thing, and the small number of possible combinations of what corresponds to the English Christian names. As the administration of the country proceeds on civilized lines, it is inevitable that the Indians' lack of the knowledge of age must continue to cause difficulties. They can be cured only by the spread of education, but the lack of such knowledge even among highly educated Indians shows that it cannot be expected that improvement will come quickly. Progress in this direction might be accelerated if direct action were taken by Education authorities, and teachers in primary and other schools tried to interest the children in the matter. The children would certainly go back to their homes and ask parents " when was I born? " and the younger the child the better guess could the parents make in answering him. The child having got his answer the schoolmaster should make it his business to see that the date stuck in the child's mind. Much might be done by such means to remove the lack of knowledge of age which is a blot on Indian civilization.
137. Age distribution in the several parts of the Province and at different censuses.-The distribution of the population by quinquennial periods based on the figures obtained direct from the Census Returns of 1891, 1901, 1911 and 1921 is given for Bengal, Bihar and Orissa together and in an abbreviated form for each of the divisions of Bengal in Subsidiary Table II, Part 1, at the end of this chapter, and for Bengal for 1911 and 1901 in Part 2. This arrangement was necessitated by the fact that a separate distribution for Bengal alone for 1901 and 1891 was not available in former Census Reports. The distribution for Bengal both in 1911 and 1921 shows a greater proportion of very young children than that for Bengal, Bihar and Orissa together. At the ages of 3 and 4 the proportion becomes the same, and it rises in Bihar and Orissa above that in Bengal at least for males between the ages of 5 and 15. From 15 to 30 the proportion in Bengal assisted by immigration rises the higher. Between 30 and 35 the number is much the same in the two provinces, but at later ages it is greater in Bihar and Orissa. The changes in the distribution for Bengal between 1911 and 1921 have been a great decrease in the proportion of young children which is continued in the age period 5-10. This is due solely to the reduction of the birth-rate during recent years and accounts also for the increase in the proportions throughout middle life, in the case of males up to the age of 50 and in the case of females up to 40 . There has been a slight decrease in the proportion of
obder people. In Bengal, Bihar and Orissa the proportion of children was greater in 1801 than it has been since, though it was almost as high again in 190). Though it hads fallen so greatly during the last ten years, it is still not much lower than it was in 1901. The greater contrast between the figures of 1901 and those of the recent census is the reduction in the proportion over the age of 50 and the increase between the ages of 5 and 40 . At the present time the proportion of children below the age of ' 5 in Western Bengal is barely three-quarters the proportion in the Province as a whole. It ramains below the provincial figure for the age $5-10$ but is about the same hetween 15 and 20 and is very much higher between 20 and 60 . The proportion of women over 60 in Western Bengal is phenomenally high though it has steadily decreased since 1891. The proportion of old men is not abrormal. The proportion of children in this part of the Province, was as high in 1891 as it is now in the Province as a whole, but it fell steadily till 1911 and there has been a large drop in the last ten years.

The proportion of children in Central Bengal also is below the average for the Province, for, though the birth-rate has been high in Murshidabad and Nadia, the flood of immigration of adults to the vicinity of Calcutta has reduced it as it has raised the proportion between 20 and 60. The predominerce of males among these adults is responsible for the greater differences between the age distributions for females and males in this part of the Province than in others. Here also the proportion of children and of old people has fallen very much since 1891.

The age distribution in North Bengal is very much the same as that for the population of the whole Province, though the proportion of children, especially in the ages 5-10 is higher. Here the proportion of children from $0-5$ has decreased considerably during the last 10 years, but it is not very much lower than it was in 1901, while the proportion from 5-10 has not been reduced appreciably in the last ten years, is higher than in 1901, and decidedly higher than in 1891. In these parts the proportion of old people has fallen considerably and is now below the average.

In the Dacca Division the proportion of children, though not as high as in the Chittagong Division, is very much higher than in the Province as a whole. The proportion below the age of 5 has much decreased since 1911 and is decidedly lower than it was in 1901, but the proportion between 5 and 10 is higher than it has been before, for the birth-rate during the first part of the last decade was very high indeed. The proportion between 10 and 15 is also higher than the average and is higher than it was 10 years ago, the numbers in middle age, 20-40 are smaller than the average, but are much the same as in 1911 and greater than in 1901 or 1891. The proportion between 40 and 60 has decidedly risen since 1911 but the proportion 60 and over has decreased. The Dacca Division as well as the Chittagong Division and North Bengal contain greater proportions of men who are old, than of women, though the reverse is the case in Western and Central Bengal.

- The Chittagong Division has a phenomenally high proportion of children and of young people up to the age of 20 , but adults are proportionately fewer than elsewhere. The proportion of children especially below the age of 5 has fallen greatly since 1911 but the number $5-10$ is as great as in 1911 and greater than in 1901 or in 1891. Here, as elsewhere the number of old people has fallen considerably.

138. Mean age.-The expression "mean age", is used with its literal meaning, the average age of those forming the population of a definite locality at a particular time. Though it has no connection with "mean expectation of life" and is of little but academic interest. it forms a useful means of comparison between the age constitution of different sections of the population in different localities and at different times. The mean age for each section of the population, for which an age distributinn is given in Sub-Tables II and IUI at the end of this chapter, is given at the bottom of each series of numbers by quinquennial age periods. This mean age was calculated from the figures as returned without any graduation and for former censuses is different from that given at the bottom of the corresponding Sub-Tables in the Census Report for 1911. At that time the distribution by quinquennial age periods
was " smoothed" by " Bloxam's Method" in each case before the mean age was calculated. Not only is it unsatisfactory, as has already been pointed out, to use this method for an age distribution by quinquennial age periods, but no record has been left to show exactly how this smoothing was carried out and to what extent, nor any record of what was done at the two ends of the series. Unless the mean age is calculated by exactly the same method in every case comparison between the results is not justifiable, and it was, therefore, thought best to calculate mean ages from the figures of previous censuses afresh without attempting any adjustment of the distribution by quinquennial age periods before doing so. The method used for catculating the mean age, the same that has been used on former occasions, is explained by the following rule quoted from the French Census Report for 1891:
" Determine the total number of persons living at the close of each quinquennial age period. The sum of these totals multiplied by 5 and raised by $2 \frac{1}{2}$ times the number of persons dealt with, gives the number of years lived. The mean age is determined by dividing this last number by the number of persons living." This rule assumes the average age of the persons living in each age period to be the age half way through the period. It assumes, for instance, that the average age of the persons returned as between 25 and 30 is $27 \frac{1}{2}$ and so on: In this it is not absolutely correct. There are rather more persons living whose ages are between 25 and 26 than there are whose ages are between 29 and 30 , and many more returned the multiple of 5 with which each quinquennial period Began, than the subsequent ages in the period, so that the mean age calculated by this rule is a little higher than the true average age of the persons living. It is not, however, the absolute figure for the mean age that is of importance. The mean age is used only for comparing different sections of the population at different times and for the purposes of comparison what is essential is that the means of comparison shall have the same relation to the age statistics in every case. In respect of the ages at the end of life we have no figures by quinquennial age periods beyond 70, for these aged 70 and over were placed in one group in the statistics for 1911 as for 1921, and for previous censuses we have no figures bevond 60 . For the purpose of calculating mean ages the figures for "aged 60 and over" in instances where it formed one group, have been divided into three- 60-65, 65-70 and 70 and over-in the proportion between the numbers in these groups in 1921, and for the last census as well as all previous censuses the average age of those 70 and over has been taken to be 75. This seems to be reasonable, and as before the important point is to treat the statistics of each census and for each section of the population in precisely the same manner in order to justify the comparison of mean ages. The results obtained are to be used sojely for the purposes of comparison and we may make this comparison whether we insist that they are true mean ages in each case or not. It will be convenient to bring together here the figures which appear for the mean apes of the several sections of the community at different times in different parts, the twn Subsidiary Tables II and III at the end of the chapter. They iare os
follows:-

| Teocility and retton of the peperation. | Miat age in trabs. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Tor make. |  |  |  | For temaje. |  |  |  |
|  | 198. | 71. | 1001. | 1501. | Ivn. | - 197. | T201. | : 2081. |
| Bengal, Bihar and Orissa- |  |  |  |  |  |  |  |  |
| All religiose -.. | -24-1 | 23.8 | 24.0 | 24.0 | $24 \cdot 0$ | -24.0 | 24.4 | 84.6 |
| Biridons | -24:7 | $24 \cdot 5$ | 24.5 | 24.6 | 250 | $25 \cdot 0$ | $25 \cdot 3$ | 25n |
| Mahammadans | . 23.1 | -22•8 | 23.0 | $23 \cdot 1$ | 22.4 | 22.4 | .22*8 | 93-2 |
| Chumbinas | 230 | .88\%7 | $\mathbf{2 3 1 1}$ | \%2\%7 | $22 \cdot 5$ | 224.4 | . 98.5 | $22 \cdot 3$ |
| A nimists | 227 | 22*1 | 21.7 | 21.6 | $22 \cdot 6$ | $22 \cdot 1$ | 200 | 2is |


| Locality nud moction of the Dopulation. |  |  |  |  |  |  |  |  |
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|  | Yor malm, |  |  |  | For fammben |  |  |  |
|  | 1981. | 1011. | 1001. | 1891. | 1221. | 1311. | 1001. | 1*31. |
| Bengal- |  |  |  |  |  |  |  |  |
| All religions $\quad .$. | 23.9 | $23 \cdot 8$ | ... | ... | $23 \cdot 1$ | 23.2 | * | - |
| Hitdun ... ... | $25 \cdot 1$ | 26.1 | . ${ }^{\text {. }}$ | ... | $24 \cdot 6$ | 24.7 | ... | ... |
| Muhammadans ... | 2\%.9 | 22.7 | ** | ... | 21.9 | 21.3 | ... | ..* |
| Claristians - ... | $25 \cdot 2$ | 252 | ..* | ..• | 23.4 | 23.6 | ... | ... |
| Animists $\quad .$. | .23-7 | $2: 2$ | ** | ** | $22 \cdot 1$ | 21.7 | ... | ... |
| Weatern Bengal- |  |  |  |  |  |  |  |  |
| All religions ... | 25.0 | 24.9 | 24.8 | $24 \cdot 7$ | $25 \cdot 2$ | $25 \cdot 3$ | $25 \cdot 5$ | $25 \cdot 7$ |
| Central Beagal- |  |  |  |  |  |  |  |  |
| All religions ... | $25 \cdot 2$ | $25 \cdot 1$ | 25.2 | 24.9 | 24.6 | 24.7 | $25 \cdot 2$ | 25.3 |
| Northern Bengal- |  |  |  |  |  |  |  |  |
| All religions $\quad .$. | $23 \cdot 3$ | 23.5 | 23.7 | $23 \cdot 9$ | 22.5 | 22.4 | $22 \cdot 8$ | 23.5 |
| Eastern Bengal, Dacca Division- |  |  |  |  |  |  |  |  |
| All religions -... | $23 \cdot 2$ | $23 \cdot 2$ | 23.3 | 23.5 | $22 \cdot 2$ | 22.3 | $22 \cdot 7$ | $23 \cdot 2$ |
| Esstern Bengal, Chittagong Division and Tripura State- |  |  |  |  |  |  |  |  |
| All religions ... | 22.7 | $22 \cdot 7$ | 22.7 | 22-9 | 21.9 | 21.8 | $22 \cdot 1$ | 22.6 |

139. Mean age of males.-It will be seen that variation in mean ages are very slight. This the common experience met with in the statistics of other countries and even more noticeable in European countries than in India. The mean age for males in Bengal, Bihar and Orissa remained about the same in 1901 as ten years previously. For Muhammadans it fell slightly and for Christians and Animists it rose a little while for Hindus it was stationary. For Bengal alone it must have slightly fallen, for though it rose slightly in Western Bengal and more in Central Bengal, it fell in Northern Bengal and Eastern Bengal which accounted between them for considerably more than half the population. Between 1901 and 1911 there was a decided drop in which the Hindus of Bengal, Bihar and Orissa shared as well as the Muhammadans though not to the same extent. In Western Bengal there was again a slight rise but there was a slight fall in Central Bengal and the Dacca Divisions and a rather greater fall in Northem Bengal, while the figure for Chittagong Division remained the same. Probably the fall for Hindus was not so great in Bengal as in the parts which have since been formed into a separate province, but the fall in the case of the population of Bengal of all religions was probably about the same as in Bihar. During the last decade the mean age has risen in Bengal, Bihar and Orissa by more than it fell between 1901 and 1911. The explanation is, of course, the reduction of the birth-rate. The mean age for males has fallen in none of the five divisions of Bengal except Northern Bengal, nor in any religious community in
either pronnce. The rise has been decidedly more in the Bihar Province than in Bengal for each religious section as well as for the population as a whole. The reduction of the birth-rate and the ravages of influenza have been seriouse enough in Bengal, but they have between them produced a much greater effect on the age distribution of the population of the neighbouring province. In loth provinces the effect is more noticeable in the case of Animists than in the case of more civilized peoples and in Bengal in the case of Hindus and Christians, it has been very slight. In Western and Central Bengal there has been a slight rise, but it has been a very slight one in Eastern Bengal, not enough to affect the mean age to the first place of decimals and the mean age in Northern Bengal has fallen considerably. Apparently the Muhammadans in Northern Bengal have continued the progress of the previous 30 years in the direction of reducing the mean age among males, undisturbed by the troubles of the last ten years, or rather there has been a relief from other disabilities among them which has counteracted the effect of their new troubles. A low mean age in such a country as Bengal is generally an indication of great natural fecundity and the mean age used as a measure of a fecundity seems to indicate that it is greater in Bengal than in Bihar, and in Bengal greatest in the Chittagong Division in which the mean age for males is only 22.7 years against 23.2 years in Dacca Division and 25.0 years in Western Bengal. The mean age has been changed more in Northern Bengal than in the other divisions. It was a whole year greater in 1891 than in the Chittagong Division but the difference now is 0.6 years and the Northern Bengal figure is now practically down to the figures for the Dacca Division and would probably be as low but for the greater immigration of adults to Northern Bengal and the greater emigration of them from the Dacca Division. The immigration of adult males to the neighbourhood of Calcutta operates to raise the mean age in Central Bengal and to a less extent that in Western Bengal, but the effect of migration cannot be more than enough to raise the mean age in either case by more than 0.2 years. The effect of migration is also to raise the mean age for Hindus and to a less extent to lower that for Muhammadans, but again the effect cannot be sufficient to produce a variation greater than a comparatively small fraction of a year.
140. Mean ages of females.-The mean age as calculated for females. in this country is not strictly comparable with that for males, for there are abnormalities in the age returns for females which are not found in the returns for males. The general tendency of these peculiar abnormalities is to reduce the mean age for females below that for males, for it has been seen that there is a universal understatement of the ages of unmarried girls from 9 to 15 and whereas males who have passed adolescence, generally overstate their age, married females between 20 and 30 are inclined to make understatements. On the other hand it is probable that there is more exaggeration in the case of old women than of old men, but in the later age periods numbers are few and their effect on the mean age is not great. It has been seen that understatement of the ages of girls between 9 and 14 brings down their average age by 1:6 months. Understatement of the age of women between 15 and 30 is probably almost as great. Between the two, they would reduce the mean age for women of all ages by about 07 of a year, and the overstatement by young adult males raises the mean age in the case of males by half as much, so that in comparing the mean age for men with that for females we should at least add -1 of a year to the latter. This makes the mean age for females about the same as the mean age for males in Bengal, with Bihar and Orissa; but it is still much the lower in Bengal. The migration of adult males is partly responsible for the contrast between the two provinces in this respect. The much greater drop in the mean age for females than for mates, especially in the case of Muhammadans in Eastern and Northern Bengal, between 1891 and 1901, is difficult to
explain, though it may have been due in part to an increased understatement of the ages of young females and less exaggeration by old people. It is difficcult to believe that natural causes could have produced a change affecting females as much more than males as the figures indicate. Since 1901 the changes in the mean ages for females have conformed closely with those for males, though the rise in the mean age during the last ten years has not generally been as noticeable in the case of females as in that of males. In fact the mean age for females has fallen since 1911 in Bengal though not in Bengal with Bihar and Orissa, and has risen only in Northern Bengal and in the Chittagong Division.
141. Mean age compared with that in European countries.-If the mean age in Bengal be compared with the mean age in European countries, it must be the mean based on the graduated not the crude age distributions. Based on the graduated age distribution by quinquennial periods given above in paragraph 134, the mean ages are as given in the margin. In the case of males

|  |  | mbas agetim trajas |  |
| :---: | :---: | :---: | :---: |
|  |  | Malri. | Famales. |
| For Hindus in Beugal, 1921 | ... | $24 \cdot 60$ | 24.58 |
| For Muhammadans in Bengal, 1921 | -." | 21.71 | 21.91 |
| For both religions together, 1921 | ... | 23.00 | $23 \cdot 10$ |
| For the population of England and $1911$ | Wales | 28.00 | $29 \cdot 12$ | there is 5 years' difference between their mean ages in Bengal and in England 10 years ago, and 6 years' difference in the case of females, and as the difference between the mean expectations of life at birth in the two countries must be about the same, it means that the general level of life insurance premia which would be asked in Bengal must necessarily be on an average some 18 per cent. higher than in England. The mean age for females in England and Wales is more than a year higher than that for males. In Bengal it is only $0 \cdot 10$ of a year higher and in the case of Hindus instead of being higher it is apparently a shade lower, though in the case of Muhammadans it is 0.20 of a year higher. For both sexes together in Bengal the mean age is 23.09 years, much lower than the 27.38 years at which it stood in Germany in 1911 in spite of that country's birth-rate having been so high compared with that in other European countries, and by nearly 10 years lower than in France, for the population of which the mean age in 1911 was $32 \cdot 50$. The mean age obtained from the figures which have been given for the Union of South Africa works out at $26 \cdot 15$, which is perhaps rather higher than the true mean age on account of the irregularities in the returns for South African natives, but it is clear that the mean age there is very much higher than in Bengal, but lower than in England and lower than in Germany.

142. Natural fecundity.-In columns 2, 3 and 4 of Subsidiary Table V is given the proportion of children under ten to persons aged between 15 and 40 for each district and state in Bengal at each of the last three censuses, but a better measure of the natural fecundity of the population is obtained from the figures given in columns 5,6, and 7 which show the number of children of both sexes under ten, per cent. of the married females between 15 and 40 , i.e., in the reproductive period of their age. The figures for 1921 are illustrated
in diagram No. 52. The proportion is equally high in Eastern and Northern


Bengal, about 183, considerably lower in Central Bengal, 160, and lower again, 146, in Western Bengal. It is highest in Cooch Behar, Rangpur, Mymensingh and the Chittagong Hill Tracts. Then come Noakhali, Tripura State. Malda, Dacca, Tippera, Dinajpur, Sikkim, Chittagong, Jalpaiguri, Pabna, Bogra, Faridpur, Khulna and Darjeeling for all of which the proportion is above 175. Then comes a considerable drop to Rajshahi 168 and Bakarganj 166 and a further drop to the 24-Parganas 161, Nadia 160, Jessore and Bankura 157, Murshidabad 156, Midnapore 155 and Howrah 152. The districts in which the proportion is lowest are Burdwan and Calcutta 130 Birbhum 131 and Hooghly 143. The districts stood in much the same order in the matter'of this proportion in 1911 and in 1901. Between 1901 and 1911 the natural fecundity of the population of the Province as a whole proved to be much the same, but, whereas it decreased in Western and Central Bengal and in the Chittagong Division, it increased in Northern Bengal. During the last decade there has been a decrease all round, but the decrease has been less in the Dacca and Chittagong Divisions than in other parts of the Province. The proportion of children under 10 to married females from 15 to 40 has fallen more than 10 per cent., in Birbhum 26, Bogra 25, Dinaipur 23. Malda 21, Burdwan and Murshidabad 17, Noakhali 15 and Nadia 11. The parts least affected are Cooch Behar where the proportion is the same as in 1911 and has been higher than in any other part of the province at each of the last three censuses, Rangpur, Calcutta, Midnapore, Chittagong and Jessore. The proportions of children to married females in the reproductive ages among Hindus, Muhammadans and Animists in each division will be found in columns 5 to 7 of Subsidiary. Table V-A. In Cen-
tral and Northern Bengal it appears that the natural fecundity of Hindus and Muhammadans is about the same, but in Western Bengal it is higher aranng Findus than among Muhammadans and the reverse is the case in Eastern Bengal, the net result for the whole Province being greater fecundity among Muhammadans than among Hindus in the proportion of 179 to 1fi3. Everywhere Animists breed faster than either Hindus or Muhaminadans. The changes since 1001 appear to have affected the peoples of each religion to much the same extent. The proportion of children under 12 to married females between 15 and 40, given in Subsidiary Table IV-A for the selected castes and tribes for which Census Tables XIV was prepared, do not indicate as great natural fecundity as might perhaps have been expected among the communitiez low down in the social scale. There is a remarkably low proportion of children to married women in the reproductive ages among Doms and it is comparatively low in the case of Bauris. That it is low in the case of Baishnabs may be put down to the fact that large numbers of loose women call themselves Baishnabs. According to the available statistics the proportion is remarkably high among the Baidyas and Brahmos and comparatively high among the Brahmans. Of these for whom statistics are available the people showing the greatest fecundity are the Chakma tribe of the Chittagong Hill Tracts.

- 143. Longevity,-Columns 8 to 13 of Subsidiary Table V give the proportion of persons in each sex over the age of 60 , per cent. of those aged 15 to 40 at the last three censuses. For the Province as a whole longevity is only slightly more in evidence in the case of females than in that of males but the same relation between the sexes is not found by any means all over Bengal. The proportions are illustrated in the case of males in diagram No. 53 and

in the case of females in diagram No. 54. Longevity in males is most noticeable in the Lower Delta, in Noakhali, Chittagong, Dacca, Faridpur, Bakarganj and Khulna and is high also in Chittagong Hill Tracts. Next come the rest of the districts which make up the eastern half of the Province, before the districts forming the western half, and the proportion of old men is lowest in Burdwan and Dinajpur. Langevity in females on the other hand is most noticeable in the Central and Western districts. Nadia and Howrah take the lead, followed by the adjoining districts to Nadia, Pabna,' Murshidabad and Faridpur in the middle of Bengal, the sonth-western districts Bankura and Midnapore, and Hooghly and Calcutta. The districts in which old women are fewest, and they are districts in some of which the proportion is hardly more than half what it is in Nadia and Howrah, are Dinajpur, Jalpaiguri, Bogra, Rangpar and Cooch Behar in Northern Bengal and the plains districts to the east of the Meghna estuary,


Tippera, Noakhali and Chittagong. Sikkim which has not yet been mentioned has phenominally high proportions of old people and, less noticeably, Darjeeling district follows it in this respect. Varying tendencies to exaggerate have no doubt much to do with the proportions in different parts, and it seems that there has been much exaggeration in Sikkim. One old lady living ai Singkik in that State gave her age as 140 and the Durbar made enquiries regarding her. She must indeed have been very old for her two surviving sons look even older than herself and she supports them by begging, but further information gathered regarding her, that she had had three sets of teeth and so on, can only have been fabulous and there was no real authentication of her claims to be as old as she stated. The proportion of old people fell
slightly between 1901 and 1911, the fall being more noticeable in the case of females than of males. During the last ten years in almost every part of the Province there has been a considerable decrease in the proportion for males, and still more for females. Old people did not suffer as great a mortality from the influenza epidemic as those in middle age, and, though they suffered no doubt as old people always have to suffer when there is increased economic stress, the figures must be taken as pointing to there having been less exaggeration of their age by old people at this than at previous censuses.

The figures given in columns 8 to 13 of Subsidiary Table V-A show that generally speaking it is among Muhammadans that the longevity of males is most noticeable and among Hindus that there is the greatest longevity of females. Neither among Muhammadans nor among Animists do females in Western and Central Bengal live longer than the females of other parts, and the proportion of old people of both sexes together among Hindus in Eastern Bengal is much higher than among Muhammadans. The great age to which Hindu widows often attain is a point which has been frequently commented upon, and the statistics of the present census supports this. Their existence is an ascetic and a comparatively peaceful one, in spite of the fact that a good deal of the household drudgery falls upon their shoulders. As they get older there may be a greater tendency to exaggerate their age than among married women, but their strength is not sapped, as is so often the case with married women, by too frequent child bearing and it would appear that the habits of their existence are conducive to long life.
144. Deaths and their causes.-In Subsidiary Table $X$ at the end of the chapter figures are given showing the numbers of deaths reported each year of the decade to have been due to cholera, fever, small-pox and plague. The diagnosis having been made usually by wholly uneducated persons, relations of the deceased, or by the village chaukidar himself who had the responsibility of making the report, the figures as absolute figures are not of very great value, but in so far as they may be used for the purpose of comparing one year with another they are not open to the same objection. Even the absolute figures are fairly reliable in the case of such diseases as plague and small-pox which even the villager can usually recognize. He would, however, put down many deaths to cholera which are due to other bowel and stomach disorders, and would call fever any disease with febrile symptoms which he could not at once recognize, though a qualified medical man might know it for influenza or pneumonia, and classify the cause of death more correctly. The villager may, however, be trusted to make the same mistakes to much the same extent year after year, and relying upon this and remembering that very large figures are being dealt with, we may safely use the figures for one year to compare with the figures of others. The total number of deaths put down to cholera in the decade. 839,402, is very much less than the $1,148,928$ reported in 1901-1910. Whether the deaths were really due to cholera or to other forms of diarrhoea the root cause of most of them lies in bad water-supply for drinking purposes, and the reduction of such deaths between the two decades by $29 \cdot 6$ per cent. spells real progress towards civilization, whether it is due to improvement in the water-supply available or to greater care in discriminating between water which is fit to drink and water which is not. Those who know the habits of the rural population are not likely to put it down to more careful habits in regard to the use of water, and would probably put the improvement down to real progress in the improvements in which District Boards and other public bodies have taken the lead. The greatest number of death from cholera took place in 1915 and in 1919. The disease appears everv year in almost every part of the country, but claims the greatest number of victims in April. Mav and 'June when the weather is hot and the rains have not vet come to replenish the water-supply, and excess mortality from this cause follows deficient rain fall in these months. Deaths from cholera in 1917. 45.021, and in 1920, 54,199, were fewer than in any previous years since the beginning of the century.

The $10,456,447$ deaths renorted in the decade as due to fever were more than in the previous decade, $9,856,105$, and were very many in 1918 and

1919 owing to the fact that most of the deaths from influenza were classified under this head. The conntry is never free from small-pox and the two out-breaks, in 1915, and in-1919 extending into 1920, raised the number of deaths from this cause slightly higher than in the previous decade, but the effect of vaccination is apparent in the reduction in mortality in the intervening years. The number of deaths remained below 10,000 for 6 years of the decade, whereas there were only two years in the decade 1901-1911 in which this was the case. Plague hardly touches Bengal for the reason that the mat-walled hats in which the population lives do not harbour rats as do the mud huts in use in other parts of India. The few cases reported, only 6,663 during the decade, were mostly cases imported to Calcutta and its neighbourhood. There has been a great improvement since the former decade in which 51,012 cases were reported. Since 1914 the disease has been practicall eliminated from the Province.
145. Vital statistics.-Statistics of vital occurrences are published annually by the Department of Public Health. Not only are such statistics for the previous decades useful as a guide to the analysis of the census statistics but the end of the decade is a time for squaring accounts. The statistics of vital occurrences are a current account of the population, which must be balanced from time to time, and the compilation of the census statistics affords an opportunity for auditing it. Accordingly it has been customary to include in the Census Report a brief review of the vital statistics for the period which has elapsed since the last census was taken. The statistics published annually for the years 1911 to 1920 are analysed and brought together in the Subsidiary Tables VII to $X$ at the end of this chapter, and the figures contained in them are for use in tracing the progress year by year, which has brought the population of 1911 to the number and distribution which the census of 1921 shows it to have reached. The census of 1911 has beeen used as a basis for the statistics of vital occurrences for 10 years and after the balance sheet of 1921, the census statistics, have been completed, they will form the basis of the vital statistics for the next ten years. The record of the actual number of births and deaths is not accurate, but the audit of the account will afford a means of estimating its degree of accuracy. The proportionate figures published during the 10 years, the birth-rates, the death-rates, etc., were based on the numbers of the population in 1911. Each year the birth-rate, for example, was given as the number of births per mille of the population in 1911, bnt in the point of fact the average population even for the year 1911 was not exactly the same as the population enumerated on March 10th of that year, and as the years passed by the probabilities were that the average population in each year was further and further removed from the population according to the census statistics. In England and in other Earopean countries some adjustment of the census figures is made each year before birth-rates and death-rates are calculated. In England the Regis-trar-General assumes that the population has changed each vear since-the census to the same extent as the census figures showed it to have changed on the average each year during the last complete intercensal period. The comparison between the excess of births over deaths recorded during the last intercensal period in Bengal and the increase of population between 1911 and 1921 which has been made in paragraph 35 supra, leads to the conclusion that the changes in the natural population which the vital statistics available in this conntry disclose are not so inaccurately presented that it would not be worth while to make some use of them to obtain estimates of the population during the intercensal period, before calculating the rates of birth and mortality to be published annually. The Registrar-General's * method is perhaps unsuitable to a country in which birth-rates are subject to such violent fiuctuations as in Bengal between favourable and unfavourable seasons, and the matter is discussed at length in a note printed as Appendix I at the end of this chapter. The figures in that note indicate, moreover, to what extent corrections may now be made in the birth and death-rates which have
been published during the past decade by revising the estimate of the population during each year in the light of the census statistics for the end of the period. The figures given in Subsidiary Tables VII and VIII at the end of this chapter are.the published figures based throughout the decade on the census population of 1911, and in the following paragraph these figures, and not figures corrected in the manner of the note, are discussed.
146. Crude birth-rates.-The birth-rates, numbers of male births per mille males and numbers of female births per mille females are given in Subsidiary Table VII for the Province and for each Division for each year from 1911 to 1920 , and the variations are illustrated in diagram No. 55. At
 the beginning of the decade in 1911 the birth-rates for the Province were about 3 per mille lower than the average for the previous 10 years. The difference was somewhat greater in Northern and Eastern Bengal where the average had been over 40 per mille, but in Central Bengal the difference was rather the other way. The tendency of the first six years of the decade was in the direction of a more or less steady reduction of the rate, more marked in Burdwan and the Presidency Divisions than elsewhere. In Rajshahi Division there was considerable increase before the reduction began to manifest itself and in Burdwan and the Presidency Divisions. Some recovery was made in 1914, but it disappeared in 1915, and the rate rose in 1916 only in the Chittagong Division. 1917 was a year of economic prosperity for the agriculturists and the birth-rate rose everywhere but it fell again as rapidly in 1918, and reached its minimum in 1919 during which year deaths exceeded births in every Division of the Province. The general level of birthrates for the decade has been highest in Chittagong Division; Rajshahi Division beats Dacca Division for the second place, and Burdwan Division comes after the Presidency Division, last. As explained in the note in Appendix I the rates as given on the basis of the census figures of 1911 overstate the rates towards the end of the decade in Chittagong and Dacca Divisions, where the population was decidedly greater at that time than in 1911, and understate them in Burdwan Division, where the population was decidedly less. That the number of male births per mille males in the population is greater than the number of female birtlis per mille females in the Province as a whole is due in part to the fact that, as will be seen in the next chapter, more males than females are born into the world. The fact that there is an excess of males in the population goes some way towards eliminating the effect of this upon the birth-rates for
males and for females, but does not do so completely. In the Presidency Division where there is a large excess of males in the population, the birth-rate for males runs considerably lower than that for females, as it does to a less extent in the Rajshahi Division, but in other parts especially in the Chittagong Division the rate for females is lower than the rate for males. It is because it is subject to variation according to the sex proportions in the population, as also in accordance with differences in age distribution from place to place, whether due to migration or other causes, that the crude birthrate is not wholely satisfactory as a measure of natural fecundity.
147. Crude death-rates.-The death-rates, numbers of deaths of males per mille males in the population and numbers of deaths of females per mille females, are given in Subsidiary Table VIII for the Province and for each Division, for each year from 1911 to 1920, and the variations are illustrated in diagram No. 56 . At the beginning of the decade in 1911 the rates were some 6 per mille below the aver-
 age for the 10 previous years, and 1911 was as noticeably a healthy year as far as each of the several Divisions were concerned. The death-rates rose in 1912 in every Division but especially in Western Bengal. They came down a little in 1913 in Central and Northern Bengal but rose a little in Dacca Division and considerably in Chittagong - Division. For the Province as a whole they rose in 1914 and 1915, though they came down somewhat in 1914 in the Chittagong Division. 1916 and 1917, and especially the latter, were healihy years and in 1917 the death-rate for the Province was lower than in 1911, and lower than in any year since the beginning of the century. This was also the case with the death-rate for each Division, except the Burdwan Division, which had had rather lower rates in 1909, 1910 and 1911. But the improvement did not last long, for the influenza epidemic in 1918 and 1919 raised the death-rate for the Province higher than it had ever been since the rates were first recorded in 1892. The abrupt rise in the death-rates in 1918 and 1919 is by far the most remarkable feature of the curves in diagram No. 56. The Province as a whole suffered rather more in 1918 than in 1919 , but in the Presidency Division, that in which the death-rate in 1918 exceeded that of 1917 by the greatest amount, the rates fell but very little in 1919. After the Presidency Division the Burdwan and Chittagong Divisions had the next greatest excess death-rate in 1918 while the Rajshahi and Dacca Divisions
came off comparatively lightly. These two aleo showed the greatest thondency to recuperate in 1919. 1020 was a year of improvement in all Divisions, but the death-rates were still well above the average for the first seven yors of the decade especially in the Presidency Jivision. For the reasons explained in the note in Appendix I the figures given on the basis of the census figures of 1011 overstate the rates towards the end of the decade in the !jacca and Chittagoug Divisions and understate them in the Burdwan Division. The death-rates for one sex do not follow those for the other as closely as in the case. of birth-rates, but the differences generally depend, as in the case of birthrates, upon the sex proportion in the population of each locality.
148. Death-rates by religion.-The variations of death-rates for both sexes, by religion, for each year from 1911 to 1920, are illustrated in diagram No. 57. Generally the death-rates for Hindus and for Muhammadans have
 run together very closely, those for Buddhists have been decidedly lower and those for Christians lower still, while those for other relyions made up mostly by Animists have run high. er than for any other section. The rises in the curves in the diagram in 1918 indicate that Animists suffered the greatest excess mortality when the influenza epidemic appeared in 1918, but they suffered more in the first outbreak than in the second and the rate fell by seven per mille between 1918 and 1919. Hindus and Muhammadans suffered about equally in 1918, but Muhammadans rather less in 1919. The rate rose for Christians in 1918 less than for Hindus and Muhammadans, but it had a further large rise in 1919. The death-rate rose less than half as lar between 1917 and 1918 for Buddhists, as for the population of the Province as a whole, but there was at least as great a further rise in 1919. Most of the Buddhist population live in out-of-the-way parts in the Hill Tracts to the east of the Province and in the Himalayas, and apparently the infection reached them late. The excess death-rate in 1920 over that in 1917 was greater in their case than in the case of any other community, and it is known that the influenza hung about the villages in the hills long after it had passed from the plains.
149. Deaths month by month.-Diagram No. 58 illustrates the correla-

tion between the rainfall, the price of common rice the staple diet of the people and the numbers of deaths month by month through the decade. The seasonal distribution of the rainfall is a matter of common knowledge. The price of rice is highest from July to November, and falls in anticipation of the winter harvest in November and December, though the new rice hardly comes into the market until the new year. Whether there is a continued ise in September and October depends upon the success or otherwise of the Aus crop which is reaped at the beginning of August. In the previous decade there was a sharp rise in the prices in 1905 and 1906, but the last three years were good years from the cultivators' point of view and prices fell.

They rose steadily till towards the end of 1013 and would have risen higher towards the end of 1914 than in September 1013 but for the effect of the war, which brought about a sharp fall in the price of jute in August 1914, and this was reflected in the price of all agricultural produce including rice. The figure reached in September 1015 was the highest for a long time, but the harvests of 1916 and 1017 were good ones and the price in the beginning of 1917 was as low as at the beginning of the decade, and lower than it had been before that since 1905. About the middle of 1918 India suddenly began to appreciate the fall in the value of money which was the world-wide effect of the war. The harvest of that year was not a good one and the price of rice rose by August 1018 to a level more than $2 \frac{1}{2}$ times as high as that touched at the beginning of 1918. . Very great hardship was caused to all those living on more or less fixed incomes, but the cultivators on the whole profited, though they suffered from the high price of salt, cloth and other commodities'which their land did not produce. The harvest of 1919 brought down the price of rice somewhat, but it rose almost as high again before the harvest of 1920.

With the seasons there are regular variations in the losses which the population suffers in mortality. The healthiest parts of the year are from May to September. The end of the rains and the beginning of the cold weather are the signals for the spread of malapia, and as in other countries the cold weather is usually the most trying season for old people. Mortality increases through October and November and reaches its height in December. In January and February it falls; but in. March and April commonly rises again. This is not on account of malaria, but because water supplies are running low and have become conthminated by the habits which the people have not learnt, in the cause of hygiene, to give up, and cholera and other bowel complaints are then rampant. Relief comes with the rain storms of April and May and the Rains, which break in June, make all clean again. . Allowance being made for the increase in population in the meantime, mortality is seen to have been reduced during the rains of 1916 and 1917 to a lower level than at the beginning of the decade or in any of the intervening years. 1918 did not begin as well as 1917 though there was no sign of disaster till September, but in $)$ October, November and December influenza carried off enormous numbers. In Décember 1918, 340,000 deaths were recorded, mortality during that month being at the rate of 88 per mille per annum, and it continued very much above the average through the first six months of 1919. Towards the end of 1919 there was the usual rise but it went higher in December than in the last month of any other. year but 1918 since 1902 . In 1920 there was some improvement.
150. Specific death-rates.-The recorded death-rates among males and females in the several periods of age are given year by year for the last
 Ti lecade in Subsidiary Table IX at the end of the chapter. The rates are the number of deaths of persons in each age at the time of death, per mille of the number in that age according to the Census of 1911. The average rates are illustrated by means of diagram No. 59. The deathrate both for males and females is very high in infancy but falls to its lowest by the age of 10 . Then for males it rises a little abruptly
to 20 , then steadily till about 45 and after that increasingly fast. As in all countries for which reliable statistics are available the mortality rates are higher among male children than among female children. As in Europe the rate among females rises somewhat higher than among males when they reach the age of child-bearing and in Bengal it remains higher till 35 is reached, after which the rate for females becomes more and more noticeably less than that for males. In England the risk which women run in bearing their first children is that which raises the female death-rate above that for males, and it would appear that of recent years this has not been less noticeable than it ased to be in spite of the improved methods of midwifery which have so remarkably reduced infantile mortality. In Bengal where marriage almost always takes place before the age of puberty in females, and most females, therefore, bear their first children at about the same age it might have been expected on the English analogy that the female death-rate after an abrupt rise about the age of 15 would have fallen again below the male death-rate much sooner than in England. This does not seem to be the case. The broken line in the diagram passes further from the unbroken line from 20 to 30 than between 15 and 20 and it would seem that the risk women run in child-birth is not so great with their first-born as later, when their strength has been broken by their having borne too many children at too short intervals.
151. Infantile mortality.-The variations in the rates of mortality among infants under one year, given in the sub-table, should not be read without reference to the birth-rates. As they are given they are deaths under the age of one year per mille children aged less than one year according to the Census of 1911. With the great drop in the birth-rate in the latter half of the derade, however, the deaths under one year took place among a smaller number of infants than there were in 1911, and the infantile mortality rate as shown in the table is therefore, an understatement after the middle of the decade. The total number of births recorded in the decade in Bengal, exclusive of Chittagong Hill Tracts, Cooch Behar and Tripura State for which there is no record, were $7,687,280$ males and $7,172,97{ }^{\circ}$ females, and the number of deaths under the age of one year were 1,665,579 males and 1,449,282 females, so that for the decade the infantile mortality rates may be taken to have been 216.64 per mille males and 202.0 per mille for females. The great majority of deaths of infants take place during the first few days or weeks of life. so that an estimate of the infantile mortality rates year by year as the number of deaths of infants each year per mille born in the year, will

|  |  | Kale.. | Yamales. |
| :---: | :---: | :---: | :---: |
| 1911 | $\ldots$ | $205 \cdot 4$ | $184 \cdot 8$ |
| 1912 | $\ldots$ | 220.6 | $203 \cdot 4$ |
| 1919 | $\ldots$ | 217.4 | $201 \cdot 2$ |
| 1914 | $\ldots$ | $227 \cdot 3$ | $215 \cdot 2$ |
| 1915 | $\ldots$ | $224 \cdot 4$ | $213 \cdot 1$ |
| 1916 | $\ldots$ | 203.5 | $186 \cdot 5$ |
| 1917 | $\ldots$ | 192.6 | $171 \cdot 0$ |
| 1918 | $\ldots$ | $235 \cdot 4$ | 220.2 |
| 1919 | $\ldots$ | $231 \cdot 4$ | $224 \cdot 9$ |
| 1920 | $\ldots$ | $212 \cdot 7$ | 201.8 | not go far wrong. The infantile mortality rates calculated in this way for each year of the decade are as given in the marginal table. The corresponding average figures for the decade 1901-1911 were $207 \cdot 2$ for males and $187 \cdot 9$ for females. It appears, therefore, that infant mortality has been greater during the last decade than during the previous one. The relation between the rate for males and the rate for females is always very much the same. In spite of the admitted and well-known fact that in this country greater care is taken of male than of female infants, the mortality among males under twelve months old is regularly some 20 per mille more than among females. This is a common feature of such statistics almost all over the world, for everywhere girl babies are less delicate than boy babies. In European countries great strides have been made of recent years to the improvement of the conditions under which children of all classes are born. In England the rate of infantile mortality for the ten years from 1876 and 1885 was 142 per mille. Improvement has come most quickly since the beginning of the present century, and the rate in 1920 was as low as 80 per mille. How far India is from realising the importance of the due care of mother and child at the time of birth, and how great is the waste of life which results from failure to realize this and to acquire the necessary knowledge to set matters right, is shown by the fact that the rate of infantile mortality is nearly three times as great in Bengal as in England, and there is so far no sign of improvement. It is likely, moreover, that the figures recorded are somewhat

short of the truth. It is certain that there are omissions in the revord on births and deaths, and it is very probable that those omissions include a latrge number of infants who died almost as soon as born and whose birth and death, was either unnoticed by those responsible for keeping the record, in rural areas the village watchmen, or forgotten before repurts were made.
152. The incidence of mortality at the time of the influenza epidemic according to age.-In the following table the specific death-rates for the first seven years of the decade 1911 to 1917 are contrasted with the corresponding rates in 1918 and 1919, based in each case upon the numbers of the population in each age according to the Census of 1911 :-


The contrast between the figures for the average during 1911-1917 and during 1918-1919 are illustrated by the curves in diagram No. 60.


The death-rate rose in 1918 above those for 1911-1917 in all ages. That the infantile death-rates appear above the previous average in 1918, and as far below it in 1919, is due in the main to the fact that they are given as deaths
of infant under a vear, per mille infants under a year according to the Census of 1911, and no allowance was made for the fact that the birth-rate was higher in 1917 than in any year during the decade, continued high at least at the heginning of 1918, and for the whole year was almost up to the average of the previous seven years, whereas it fell in 1919 very low indeed. The specific death-rate rose in 1918, over the average for 1911-1917, in the 4.- vom roske proportions given in the margin. Those for

|  |  | 20 | fem |
| :---: | :---: | :---: | :---: |
| 10 |  | 31 | the ages of early maturity suffered |
| 15 | -.. ${ }^{45}$ | ${ }_{68}^{69}$ | change, the rates for males between 15 |
| $c15-21340-30$ |  | 68 67 | rising almost in the proportion |
| 30-60 |  | ${ }^{65}$ | it seems that those in early maturity sufi |
| 40-310 |  | ${ }_{14}$ | more severely in the influenza epidemic |
|  |  | 6 | either chldren or old persons. Apparen | female mortality in the epidemic was greatest at an earlier age than male mortality. and old women hardly suffered at all, while old men suffered very much less severely than younger men. In 1919 death-rates fell somewhat between the ages of 20 and 50 , but old people suffered rather more severely than at the beginning of the outbreak. If it is assumed that the excess deaths in 1918 and 1919 over the average for the 7 previous years was due to the epidemic, then the figures give a total mortality from the epidemic of some 310 thonsand males and some 330 thousand females, and the deaths were distributed according to age approximately as follows:-


| Ared. |  |  | Malers | Temele |
| :---: | :---: | :---: | :---: | :---: |
| 1-6 | -.. | ** | 24,700 | 31.700 |
| 5-10 | ... | ** | 36,500 | 31,800 |
| 10-15 | -.. | ... | 28.210 | 24,200 ${ }^{\circ}$ |
| 15-20 | -* | -* | 41.310 | 45,500 |
| 20-30 | -.* | -.* | 90,200 | 93,400 |
| 30-40 | -.. | $\cdots$ | 76,400 | 52,800 |
| 40-50 | -* | -.. | 44.800 | 25,600 |
| $50-60$ | -.. | ... | 22,400 | 12,800 |
| 60 sod over | ... | ** | 24.600 | 13,000 |

153. The measure of the accuracy or otherwise of the returns of vital statistics.-The question how far reliance can be placed on the returns of vital statistics in such a province as Bengal is one on which various opinions have heen expressed. As has already been mentioned tests which have been carried out indicate that the returns from municipal areas are very, unsatisfactory and those for rural areas show varying degrees of inaccuracy. The calculations given in paragraph 49 in Chapter I of this report indicate that, as far as the excess of births over deaths is concerned, there is a measurable degree of accuracy, and the census figures indicate that this excess is underestimated by the returns only to the extent of some 6 per 10,000 per annum. The accuracy of the separate returns of births and deaths cannot be tested so satisfactorily, but there are means at hand which afford some check. The mean age based on the graduated age distribution has been shown in paragraph 141 above to be $23 \cdot 00$ years for males, in Bengal, and $23 \cdot 10$ years for females. These figures indicate death-rates of 43.37 per mille per annum for males and $43 \cdot 28$ for females, and this must be the general level of death-rates though the figures cannot be said to be the death-rate for any particular year. Comparing them with recorded average for the last ten years. $31 \cdot 7$ per mille for males and $30 \cdot 5$ per mille for females, they indicate that omissions must be very many indeed. They also indicate that omissions in the case of females are something like 1 per mille of the population more than for males. The graduated age distribution shows 3,678 males aged under one year, per 100,000 males in the population, and 3,652 females of the same age. The number born within a year of the census was somewhat greater, but if we accept the infantile mortality rates it is possible to obtain an approximate estimate of birth-rate, which will not be very greatly affected by inaccuracies in the infantile mortality rates adopted for purposes of
calculation. On an average for the last decade the returns show that 216 per mille male infants die within one year and 202 female infants. We have no statistics for the whole of Bengal showing how many of these children died within a month of birth, within two months and so on, but the investigations in Murshidabad district mentioned in Appendix III to this chapter showed that nearly a third of the deaths below one year in the area over which the investigations extended took place in the first month and the average life of infants who died within the year was about $2 \frac{1}{2}$ months. If we assume that the same applies to Bengal, an assumption which is reasonable and which if it is a little wrong will not affect the result of our calculations appreciably, it means that, for every 1,000 male infants alive and less than a year old on the census day, some $\frac{19}{2} \times \frac{10}{} \frac{10}{4} \frac{\pi}{4}$ or 218 more than 1,000 were born during the previous year: and for every 1,000 female infants alive and less than a year old on the census day, some $\frac{19}{24} \times \frac{8 \pi}{8} \frac{2}{8}$ or 200 more than 1,000 were born
 or 44.7 per mille per annum for males and $36.52 \times 1200$ or 43.8 per mille per annum for females, and the rates are comparable with the recorded birthrates for 1920 which were 30.8 per males and 29.8 for females. Yet another independent check on the birth-rate figures has been obtained through the enquiry the results of which are detailed in the note printed as Appendix II at the end of this chapter. The statistics produced by that enquiry show the birth-rate among the better educated classes in Bengal to have been $39 \cdot 6$ per mille in the case of males and 38.0 in the case of females, and that these rates are comparable with the average birth-rates for the last 20 years. The average of recorded rates for the last 20 years have been 36.6 per mille for males and 34.8 per mille for females, but these are the rates for the whole population and not for the better educated classes alone, in which probably the birth-rates are somewhat lower than for all classes.

In dealing with the age distribution of the population in 1911 the Actuary, Mr . Ackland, placed the birth-rate for Bengal at 46.7 and the death-rate 40.0 for $1901-1911$ against recorded averages of 38 and 34. His estimate, therefore, put the births which escaped being reported at nearly 9 per mille of the population and the deaths at 6 per mille, and the investigations of the Department of Public Health of which some account is given in Appendix III at the end of this chapter, although carried out in areas more than usually unhealthy and on too small a scale to give really reliable results, pointed to a similar conclusion that omissions were very serious.

Four checks have been applied in this paragraph to the figures of recent years, and the results may be brought together as follows. The first and most satisfactory check has shown the excess of births over deaths to have been returned for the last 10 years with an approach to accuracy, having in fact been understated by only 0.6 per mille. The second has shown the death-rates to have been understated by 11.7 per mille for males and 12.8 per mille for females. The third has shown birth-rates to have been understated by 13.9 per mille for males and $14: 0$ per mille for females. The second test has been applied before in India, e.a., by the Census Superintendents of the Central Provinces, the Punjab and Burma in 1911. The first and third tests would appear to be new ones now applied for the first time. The three results fit together very well and the conclusion that omissions in the returns of vital statistics are very numerous is inevitable. The result of the fourth test which gives birth-rates only among the better educated classes does not clash with the results of the other three and in fact closely bears them out. In the circumstances there need be little hesitation in accepting as facts the following statements-
(1) that at present in Bengal between 26 and 29 per cent. of the deaths of males which occur go unreported;
(2) that omissions in the case of female deaths are in the region of 2 per cent. more than in the case of males; and
(3) that the omission in the record of births are generally between 1 and 2 per cent. more than in the record of deaths.

## APPENDIX ITO CHAPTER V.

## A note on the manner of presentation of birth and mortality rates.

In the annual publications of the Department of Public Health fin Bengal as in other provinces of India, it is customary to state annual birth and death rates as the number of births and deaths per mille of the population according to the last census. Thus the report of the Department for 1917 gave the birth-rate as the number of births in 1917 per mille of the population in 1911, instead of per mille of the average population during the year 1917. As the population of 2 district increases through the decade this presentation of the birth and death rates overstates them year by year to an increasing extent. Even for the year 1911 the average population of a growing district for the year was a little above the population according to the eensus taken in March. The correction in the rates for 1911 which would be necessary to allow for the census having been taken before the middle of the year would be $a$ small one, and the difference between the population in March each year and the average for the year may ordinarily be expected to be much the same throughont the decade. Birth and death rates are only useful for purposes of the comparison of conditions in one year with those in another and the error introduced by assuming the population in March to be the average population during the year does not affect the use of the birth-rates for purposes of comparison. There is no cumulative effect here as there is in omitting to allow for the dxcess of births over deaths each year, and for the purposes of this note the difference between the population of the district in March and the average population for the year will be ignored in stating the birth-sate for 1912 in.terms of the population of March 1911, and ignoring the excess of births over deaths during the previous year a more serious error is introduced, and it becomes greater and greater as the practice is continued of setting out the birth-rate for 1913,' 1914 and so on, always in: terms of the census population of 1911. This erraf, accumulates through the decade until the estimate of the population is revised on the basis of a new census and the error eliminated in stating the birth-rate for 1921, for example, in terms of the population according to the 1921 census. The following table and diagram No. 61 are designed to show to what an extent the error introduced by this mode of presenting birth and death rates throughout the intercensal period affects the interpretation of the figures. The district of Mymensingh is taken as an example. The first column shows birth-rate according to the reports of the Department of Publie Health for the last 20 years, the secord column shows the birth-rate ${ }_{i}$ calculated on the basis of a population which increased each year from that of 1901 by a regular geometrical progression to the figure of the Census of 1911 and thereafter by similar progression to the figure of the Census of 1921:- . . :


The population of Mymensingh having grown fast from 1901 to 1911 the error introduced accumulated until in 1910 it threw the birth-rate out by as much as 5 per mille. According to the published figures it appeared that pirths. were adding to the population in 1910 as fast as they had been doing in 1901. In point of fact this was by no means the case. The birth-rate in 1910 was really reduced below that of 1901 in the proportion of 87 to 100 . The revision of the estimate of the population before stating the birth-rate for 1911 gave the impression that between 1910 and 1911 the birth-rate had fallen from 38.0 per mille to $30 \cdot 7$, had fallen in fact by as much as it had risen between 1907 and 1908. In point of fact the fall was a very much more moderate one, from 33.2 to 30.7 , a fall decidedly less than that in the previous year. During the decade 1911-1920 the population of the district did not increase so fast as in the previous one and consequently the accumulated error in the published birth-rates towards the end of the decade was much less than towards the end of the decade 1901-1910, but even so the report of the Department of Public Health for 1920 overstated the birth-rate in Mymensingh by nearly 2 per mille. In the case of Noakhali district the population of which has grown faster the accumulated error reached nearly 4 per mille, as the following table shows, and in districts like Birbhum and Bankura in which the population decreased during the decade the error has been in the opposite direction and the birth-rates published towards the end of the decade have been overstatements of the truth.


The corrected rates are in the case of this table as of the table for Mymensingh obtained on the assumption that the population changed in geometrical progression. How far the manner of setting forth the birth-rate in use at present can mislead is indicated by the figures in the last line of the table. According to the published figures the birth-rate in Noakhali in 1920 was almost 7 per mille higher than in Bankura, but in point of fact the rates were very nearly the same, that in Bankura being slightly the higher of the two.

Enough has been said to show that at the end of a decade when the new census figures are available they indicate that a good deal of correction, and by no means slight correction, can be made in the published birth and mortality rates especially for the years towards the end of the decade. In the last decade the population of the province as a whole increased comparatively little, but some correction in the published birth and death rates may be made. The following table gives the published birth-rates for Bengal (exclading Cooch Behar, Tripura State and the Chittagong Hill Tracts for which no record of vital statistics is kept) and the rates calculated on the basis of a population increasing in geometrical progression :-

| Yar. |  | Pablehed birtasum | Corrected blith-ritel | Terr. |  | Pablished Wrtbrater | Oorrected birth-rates. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1911 | ... | 35*0 | 35.0 | 1916 | - | 31*3 | 31.5 |
| 1912 | -.. | $35 \cdot 3$ | $35 \cdot 2$ | 1917 | -... | 36.9 | $36 \cdot 1$ |
| 1913 | ... | 33.8 | $33 \cdot 6$ | 1918 | - | 32-8 | $32 \cdot 3$ |
| 1914 | ... | $33 \cdot 8$ | $33 \cdot 4$ | 1919 | ... | $27 \cdot 5$ | $26 \cdot 9$ |
| 1915. | -• | 31.8 | 31-4 | 1920 | -** | $30 \cdot 3$ | $29 \cdot 3$ |

The corrected rates which have been given could not have been obtained -during the decade, for the estimate of the changes of population from year $\omega$ year is based as much on the figures for the Census of 1921 as on those for 1911. But the question suggests itself whether the Department of Public Health could not in some way have made a satisfactory estimate of the population from year to year instead of using the census figures for 1911 throughout the decade. In England such an estimate is made by the Registrar-General before the birth-rates and death-rates are calculated: The population is; assumed after each sensus to go increasing annually in the same geometrical progression as would fit in with the figures of the two previous censuses. In other words it is assumed that the progress since the last census has been at the same rate as during the previous decade and has been according to a. geometrical progression. If this method had been used in stating the birth-i rates for 1911 to 1920 in Mymensingh, the population of the district would. have been taken to have been as in column 2 of the following table and the: birth-rate would have been as shown in the column 5:-


The comparison between the excess of births over deaths recorded during the last decade in Bengal, and the increase of population between 1911 and 1921, which has been made in paragraph 49 in Chapter I of the Census Report, leads to the conclusion that this excess is a measure of the natural growth of the population which is by no means so inaccurate as not to be fit for use in such a matter as the estimate of population during the intercensal period. An estimate of the population of Mymensingh in 1912 as the population of 1911 plus the births and minus the deaths recorded in 1911 and so on would have given the figures of column 3 of the above table and carried through to the end of the decade would have given an estimate of the population of 1921 at 4,835,600 aguinst the $4,837,730$ disclosed by the census. It is by accident that the figures so very closely agree, for in most districts where the balance of immigration against emigration has kept about the same the estimate would work out rather more decidedly less than the census figure on account of there having been rather more omission in the return of births than in that of deaths In Mymensingh this has been counteracted by the increase in emigration which has taken place in the last ten years. The figures in column 4 of the table above are what the population would have been each year if it had increased in a regular geometrical progression. The figures in the remaining columns are the birth-rates which would have been obtained by the RegistrarGeneral's method, by the geometrical progression method based in the census figures for 1011 and 1921 by the adjustment of the population according to the recorded excess of birthe over deaths each year, and the published birth-rates.

The estimate of the population year by year (1) by the RegistrarGeneral's method, (2) by adding the number of births and subtracting the number of deaths recorded annually, and (3) according to a geometrical progression into which the census figures both for 1911 and 1921 fit, is illustrated in diagram No. 63. Obviously when the rate of growth of population in one
 decade is so much more than in the next as it has been in the case of 1901-1911 and 1911-1921 the RegistrarGeneral's method of estimating is not at all suitable. In the case of Mymensingh in the last decade it would have caused a misstatement of the birth-rate towards the end of the decade by as much as $\frac{1}{2}$ per mille. In Mymensingh it happens that the addition of the excess of births over deaths each year would have given a series into which the census figure for 1921 would have fitted almost exactly. This very close fitting was accidental, but the case of Mymensingh indicates how this manner of making the estimate may be more satisfactory even than the geometrical progression which can be set out only after the census figure for the end of the decade becomes available. The birth-rate having fallen off so much in the second half of the decade, the population for instance in 1915 was undoubtedly considerably above the estimate based on a constant birth-rate and a constant death-rate (or rather a constant rate of excess if births and deaths) throughout the decade.

In the following table are given the estimates of the population year by: year of three other districts, Noakhali with a rapid growth, and Bankura.
and Birbhum with large decreases; by the addition of the number of births and subtraction of the number of deaths, and according to geometrical progressions between the census figunes for 1911 and 1921:


In the case of Noakhali and Birbhum the two curves in diagram No. 62
 which illustrates these figures come together more closely at the end of the decade than about the middle, and birth-rates calculated on the basis of the annual estimate of population based on the recorded figures for births and deaths in previous years and the census figures for 1911 would have given a very close approximation to the truth. They would, in fact, have given a closer approximation than can be obtained after the census of 1921 is complete by means of a geometrical progression. There is further divergence between the two curves for the diagram for Bankura, and the reason is that; in adjusting the estimate of population year by year by means of the. recorded figures for births and deaths, no account is taken of: migration, and large numbers emigrate from Bankura. During the intercensal period there is no direct means of discovering how. the population of any part of the country has been affected by migration.

For the ordinary Bengal district as for Mymensingh, Noakhali and Birbhum it would be a great improvement. on the present manner of stating birth-rates and death-rates always per mille of the population according to the last census, if the estimate of popalation for the year were adjusted by means of the recorded figures for births and deaths in previous years before the rates were calculated. Such a method could not be used for Calcutta nor for Jalpaiguri, which are too much affected by migration, but if used for such a district as Bankura would give much more. satisfactory results than the present method. For the districts most affected by migration it is not impossible to devise a more satisfactory method. It has been seen that the streams of migration which affect the Province have generally flowed steadily in the same direction and with very much the same strength for a considerable period. To find a new stream setting strongly in a new direction is very ancommon. The effect of omissions in the vital statistics published, and migration, are between them responsible for the difference between the estimate 111,400 for the population of Bankura in 1921 based on the returns of the Department of Public Health for the previous ten years, and the census figures $1,019,914$. The difference 101,500 accumulated during the decade from these two causes. We should obtain a closer estimate of the poulation of Bankura in each year during the decade than we have yet obtained by assuming that this difference accumulated gradually at the same rate through
the decade. To do this we should be required to subtract 10,150 from the figure for 1912 given. in column 4 of the last table, 20,300 from the figure for 1913, 30,450 from the figure for 1914 and so on. Birth-rates and death-rates calculated on the basis of such estimates of the population year by year are the most satisfactory which can now be obtained for the years of the last decade, and for the next 10 years before the figures for the Census of 1931 are arailable, the best method of obtaining birth-rates and death-rates for Bankura will be by taking the population in a particular year to be the population according to the recent census, plus the births and minus the deaths in each previous year since the census; and apply the same correction 10,150 for each year, i.e., the population for 1922 would be taken as $1,019,914$, the census figure for 1921, plus the births in 1921, minus the deaths in 1921, and minus 10,150; the population for 1923, 1,019,914, plus the births in 1921 and 1922, minus the deaths in 1921 and 1922, and minus 20,300 , and so on. The corresponding correction for Mymensingh would be very small indeed, for Noakhali it would be 2,000 for each year and for Birbhum 2,300.

Bcfore leaving the subject a correction for the birth-rates and deathrates year by year of the last decade for the Province (or the parts of it for which a record of vital statistics is maintained) deduced in the manner explained in the last paragraph will be given-.


The rates given in columns 5 and 6 are the births and deaths returned per mille of the population as it actually was in each year (or as near as we can estimate it). Mistakes and omissions in the numbers of births and deaths returned have not, of course, been eliminated.

In writing this note I have borrowed ideas freely, with his permission, from a thesis by Captain (now Lieutenant-Collonel) C. A. Gourlay, I.M.S., and must acknowledge my indebtedness to him.

## APPENDIX II TO CHAPTER V.

## An enquiry regarding the fertility of marriages in Bengal.

(1) The mode of enquiry. - In order to obtain some figures as to the pesult of progeny of the average marriage and the manner in which the birth dates of children are distributed through the married lives of the parents, a special enquiry was made in connection with the census. The questions asked were made as simple as possible and as far as possible any question regarding age was avoided, for the Bengalis even the better educated of them have very vague ideas of their own or their sons' ages and still vaguer ideas of the ages of their women folk. Indians, moreover, are more likely to be offended than European races by enquiries into what they regard as family matters, and far more easily shocked by bluntly worded references in public to such subjects as the present one. In the hope that it would result in less reluctance to give answers, no names were asked and as it turned ont there was no instance reported in which any one appeared offended at being asked the series of questions, which was as follows:-
(1) Caste.
(2) Age.
(3) Duration of marriage from the time the wife first went to live with her husband.
(4) Number of children born alive-
(a) Male. (b) Female.
(5) Number of children still-born-
(a) Male. (b) Female.
(6) Number of children (excluding still-born infants): who died before the age of five-
(a) Male.
(b) Female.
(7) Number of children who survived the age of five-
(a) Male. (b) Female.
(8) Age of youngest child, or if dead, age to which it would have attained had it lived.
The questions were to be answered in reference to families the children of a husband by one wife, both husband and wife being still alive. The questions were printed on slips and bound in little books containing 50 each which were distributed to persons known to take an interest in public matters and likely to be willing to assist in such an inquiry as this. The object of the inquiry was explained in a letter printed on the cover of the book and they. were asked to get them filled up in respect of persons intelligent enough to be able to answer the questions accurately. To make sure of obtaining a sufficient basis for an estimate of the average complete fanfily it was asked that a good proportion of the slips might be filled up for families of which the mother was 45 years old or more. The second question the age of the husband was not used in preparing. statistics from the slips. The last question was asked sothat an indication could be obtained as to whether the family was complete or not. A family in which the youngest is 5 years old may be taken to be complete. It is not very common for another child to be born to its parents after an interval of 5 years, though such cases certainly occur. On the otherhand among the families in existence at any time there are very many instances in which the youngest child is only two or three years old, but ne other will be born to the same parents. It is necessary to adopt an arbitrary criterion by which to distinguish families which are probably complete, and this is one which has already been used in similar enquiries, for instancer, in those which were the subject of a paper upon the subject of Marriage Fertility read before the Royal Statistical Society in 1912. The final form of the slip was scttled after an experiment with another set of somewhat more complicated questions among the clerks of the Collectorate in the 24 -Parganas and in Dacca. Ten thousand books of slips were prepared and it was hoped that out of the five lakhs of slips it would be possible to get two lakhs returned filled up. This result was not attained for there were only 34,686 slips that could be used for statistical purposes, after a certain
small number had been discarded which had obviously been filled up wrongly. 34,686 is however by no means a small number, and statistics on broad lines based on an inquiry by which 34,686 families were covered are not to be regarded as based on insufficient data. The slips were separately dealt with for each of the five divisions of the province, and divided in each case according to caste into three lots-
(a) Brahmans, Baidyas and Kayasthas,
(b) Muhammadans,
(c) Other non-Mühammadans,
and each of these lots for each division sorted according to the number of years of duration of marriage. The number of children male and female born alive and still-born, and the numbers who survived the age of five, in the slips for each successive year were next added up. Finally all the slips in which the youngest was more than 5 were separated out and the entries added up for them also.
(2) Fertility and duration of marriage.-As might be expected some of the same peculiarities appeared in the statements for duration of marriage as appear in the age returns in the census schedules themselves-the preference for figures which were a multiple of 5 , for even rather than odd numbers and so on, but the statistics to be prepared were for "children per hundred families" for each "duration period" so that these anomalies did not seriously affect the result though in using the figures, some little allowance had to be made for the fact that those who gave duration as a round number of years, 20 or 30 , generally seemed to be those who overestimated the duration of their marriage. There were comparatively few slips for families in which the duration of marriage of the parents was less than 4 or 5 years, not sufficient in fact for the resultant figures to be of any use to disclose how often children are born within the first year or two of married life, but from 5 years duration onwards the number was always sufficient. The following table shows the number of male and female children per thousand families according to the duration of the marriage lives of the parents. 'It gives the number of slips available for each year and the members of children per hundred families found mentioned in them. It also gives against them the corresponding graduated numbers obtained by an arithmetical process and by "smoothing a curve." This table was prepared with reference to all the families dealt with whatever their caste:-

| $\qquad$ | Nember of ffangiol erneigel |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Cstode noumes |  | Gradiatis motere |  |
|  |  | Maka | Peaber | Make | Fenemer |
| 0 - | 48 | 4 | 8 | 2 | 2 |
| 1 - - | 131 | 7 | 7 | 13 | 12 |
| 2 --1 | 225 | 32 | $1{ }^{*}$ | 25 | 22 |
| 3 ... | 295 | 35 | 27 | 38 | 33 |
| 1 ... | 393 | 52 | 45 | 51 | 45 |
| 5 ... | 448 | 69 | 57 | 64 | 57 |
| 6 - 6 | 523 | 81 | 62 | 77 | 70 |
| 7. - ... | 463 | 87 | 81 | 91 | $83^{*}$ |
| 8 - ... | 663 | 93 | - 90 | 104 | 95 |
| 2 | 476 | 122 | 111 | 117 | 108 |
| 10 | 1,127 | 127 | 113 | 130 | 120 |
| 11 | 553 | 147 | 134 | 143 | 132 |
| 12 | 923 | 161 | 141 | 156 | 144 |


| Suration of matriagn yenra complota. | Number of fatmillion examinud. | NUMER OF OHILDREN fen 100 tammita |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Ontite yioumen. |  | GTadoatev vinonea. |  |
|  |  | Maloa. | Tematen | Mans: | ${ }^{\text {- }}$ Permakes |
| 18 ... | 699 | 170 | 153 | 169 | 156 |
| 14 ... | 721 | 184 | 167 | 182 | 168 |
| 15 - ... | 1,060 | 196 | - ${ }^{179}$ | 194 | $18!$ |
| 10 ... | 888 | - 173 | 189 | 207 | 193 |
| 17 ... | 883 | 216 | 212 | 210 | 204 |
| 18 ... | 871 | 232 | 215 | 231 | 216 |
| 19 ... | 517 | 256 | - 219 | 243 | 245 |
| 20 ... | 1,673 | - 243 | 221 | 255 | 235 |
| 21 :.. | 616 | 248 | - 249 | 266 | 244 |
| 22 ... | 880 | 285 | 247 | 275 | 253 |
| 23 ... | 598 | 304 | 271 | 283 | 260 |
| 24. $\quad$. | - 594 | 277 | 273 | 290 | 266 |
| 25. | 1,241 | 281 | 258 | 297 | 271 . |
| 26. | 548 | 319 | 254 | 302 | 274 |
| 27 ... | 604 | 316 | 283 | 306 | 277 |
| 28 *.* | 702 | 306. | 272 | 309 | 279 |
| 29 . $\quad .$. | 365 | 344 | 292 | 311 | 281 |
| 30 ... | 2,537. | 303 | 260 | 313 | 283 |
| 31 - 3 | 1,003 | 324. | 294 | 314 | 284 |
| 32 -.. | - 1,390 | 310 | 281. | 314 | 284 |
| 33 and. over | 10,642- | -34129 | 292.7 | *.*** | ***** |

After 32 years of married life a woman's age would, among Bengalis, ordinarily be 44 or 45 years, and she will have come to the end of the reproductive period of her life. Rather over a half the families covered by the enquiry were Brahmins, Baidyas or Kayasthas. Rather under a quarter were Muhammadans, and about a quarter other non-Muhammadans. Those who filled up the slips did so for the better educated families usually those of clerks, pleaders, Government employees, shopkeepers and the like. The statistics are, therefore, those for the middle class section of the population of Bengal. Such statistics as these are not immediately comparable with similar statistics for European countries on account of difference in the customary age of marriage. In European countries marriage always takes place after the woman has attained puberty and married life thus begins at varying intervals after its attainment. The reproductive period in the woman's life is cut short by the number of years in the interval, and age at marriage is therefore a factor of paramount importance in determining what shell be the result. In Bengal it is quite different. Aniong those regarding whose families enquiries were made,' a girl's marriage might have taken place at a very early age or have been delayed unitl she is 12 or 13 years of age, but, it may be taken as quite certain that if it was delayed until she reached puberty she was married forthwith. In every case she commenced married life with her husband as soon as she reached puberty, and the "duration of marriage "' which was asked of the parents was the number of years since they began life together as man and wife. The number of instances in which the girls' marriage is delayed beyond the age of 14 or so, except in the
case of girls who are either mentally or physically defeective is comparatively so small that it may be neglected. The "duration of marriage " in these statistics may, therefore, be taken for practical purposes as identical with the time which has elapsed since the wife began the reproductive period of her life. Ags at marriage therefore does not come in to affect the fertility of the marriage as in European countries. The curves in the diagram No. 64 below

represent the size of families according to duration of marriage of the parents. The continuous curve shows the number of male children and the dotted the number of female children.

In regarding the figures it must not be forgotten that they refer to families in which father and mother both survive. It does not follow from them that if a thousand young couples commence their married life together in A.D. 1923 they may be expected by A.D. 1933 to have had 1,300 sons and 1,200 daughters, by A.D. 1943, 2,550 sons and 2,350 daughters, and by A.D. 1953, 3,131 sons and 2,830 daughters. It means rather that if all the parents survive, these are the number of children they are likely to produce.

The straightness of the curves indicate continuous fecundity apparently little affected by long duration of marriage from 5 years to 20 years, and that during all these years 12 or 13 male children and 11 or 12 female children on the average are produced annually per 100 married couples in Bengal who suffer no casualties during the period. At about 15 years duration of marriage there is the first indication of a reduction in fecundity but it is not until 25 years have gone that its measure is reduced to half. Both parents having survived $\mathbf{E} 0$ years of married life they must have been among the healthiest of those who entered it at the same time. Thus the further one proceeds down the table just given and up the curves in the diagram, the more noticeably do the statistics refer to the farnilies of parents healthy above the average. This explains how it happens that the number of children of parents who have lived together 33 years and over are distinctly higher than the graduated figures appear to approach. arul hew it is that the curves in the diagran do not appreach the two stars which indicate the number of male and temalo children in families in which the duration of marriage is over 33 years.
(3) The average family.-Another measure of the fertility of the race than the number of children of parents who have both survived the whole of the reproductive period of the woman's life is given by the statistics of the 17,007 families in which the youngest child was not less than 5 years old. These gave 2,954 boys and 2,571 girls per thousand families. Thess are complete families whose productivity was not cut short by the death of either parent, and they include statistics for families in which reproduction stopped before the normal productive period of the mother's life had come to an end. As figures to represent the fecundity of the middle class section of the population of Bengal they offer a striking contrast with similar figures for the same class in European countries and indicate a fecundity double that of the same class in European countries in modern times. The figures obtained from the 6,465 slips for families in which the youngest child had been born not less than 5 years ago but the duration of marriage was less than 33 years are interesting. They show the number of boys born 2,516 and the number of girls born 1,087 per 1,000 families.
(4) An estimate of the birth-rate.-The statistics may be used to obtain an estimate of the crude birth-rate, to be used as a check against the admittedly imperfect vital statictics collected through the agency of the village chankidars and published annually by the Director of Public Health. The estimate will not, however, be an estimate of the average birth-rate for a definite number of years. It is based on the statistics of families in which the duration of marriage is from 0 to 32 years. It will not however be the average birth-rate for the last 32 years, but the average only for the families of parents who began their married life not more than 32 years ago. The families of parents who began to live together more than 32 years ago will have been excluded although children may have been born to them up till a much later date.

The age distribution of women is available from the census statistics for 1911. I propose to use this distribution in arriving at an estimate of the crude birth-rate in the families with which these statistics deal, and in the paragraph which follows to justify the use of this distribution and also the comparability of the estimate of the crude birth-rate obtained by their use with the average for the last two decades. From the graduated numbers of women living between the ages $X$ and $X+I$ out of the total female population of 100,000 in Bengal in 1911 given on page 176 of the Report for India in the Census of 1911, the number of females (per 100,000 females) living hetween the ages of-
$10-15$ was 11,730 .
15-20 was 10,363.
20 - 25 was 9,055 .
25-30 was 7,843.
$30-35$ was 6,727 .
35-40 was 5,700.
40-45 was 4,761.
From Table VII of 1911 for Bengal it appears that the number of women who were; married per thousand in the age period-
$10-15$ was 599 .
15-20 was 896.
$20-25$ was 834.
$25-30$ was 737.
$30-35$ was 734.
35-40 was 620.
$40-45$ was 473.
Thus per 100,000 of the total female population in 1911 the number of women who were between the ages of-

10 and 15 and married is 6,780 .
15 and 20 and married is 9,286

20 and 25 and'married is 8,052 .
25 and 30 and married is 6,540 .
30 and 35 and married is 4,940 .
35 and 40 and married is 3,534 .
40 and 45 and married is 2,252 .
As has been already mentioned the duration of marriage for which the statistics referred to in this note have been prepared may be taken to commence from the age of puberty, that is to say, from about the 13th year. When two years of married life have been completed the wife may be said to have completed her 15th year. Thus, the children born in- the first two years of the married life may be taken to be those which have been born while the mother was between the ages of 10 and 15, the children born in the 3 rd , 4th, 5th, 6th and 7th years of married life may be taken to have been horn while the mother was between the ages of 15 and 20 and so on. From the graduated figures given in the first table printed in this note therefore, the birth-rate per 100 married women between the ages of-


Applying these rates to the numbers of married women per 100,000 of the female population we get the male birth-rate per mille of the female population on account of married women aged-


Similarly, the female birth-rate per mille of the female population on account of married women is-


The birth-rate of males per mille of the male population is, therefore, 39.64 and of females per mille of the female population 37.97 and the birthrate per mille of the total population $38 \cdot 66$.
(5) The estimate comparable with the average for the last two decades.This is the average birth-rate in families of parents who began their married lives not more than 32 years ago, i.e., not before 1888. Assuming that affer

32 years the limit of the reproductive period of a woman's life bas been reached it is therefore an average which covers-
all the births in 1920;
all the births in 1919 except those to parents who began married life in 1887;
all the births in 1918 except those to parents who began married life in 1886 and 1887;
all the births in 1919 except those to parents who began married life in 1885-1887;
all the births in 1910 except those to parents who began married lifo in 1878-1887;
and so on.
To give an approximation of the proportion of the births in 1910 which were births ta parents who began married life in 1878-1887 we may use the graduated figures given in the first table of this note. Births to parents who have been married 22 years and over are 39 males and 31 females, against 275 male and 253 female births to parents who have been married from 0 to 22 years, i.e., 70 births against 528.

In this way we find that the average birth-rate which has been deduced covers out of 598 births in each year-

| 598 in 1920. | 510 in 1909. | 250 in 1898. |
| :---: | :---: | :---: |
| 598 ,, 1919. | 490 ,, 1908. | 234 ,, 1897. |
| 596 ,, 1918. | 468 ,, 1907. | 199 ,, 1896. |
| 592 ,, 1917. | 446 ,, 1906. | 174 ,, 1895. |
| 588 ,, 1916. | 423 ,, 1905. | 147 ,, 1894. |
| 583 ,, 1915. | 400 ,, 1904. | 121 ,, 1893. |
| 576 ,, 1914. | 375 ,, 1903. | 96 ,, 1892. |
| 568, 1913. | 350 ,, 1902. | 71 ,, 1891. |
| 556 ,, 1912. | 325 ,, 1901. | 47 , 1890. |
| 543,, 1911. | 300 ,, 1900. | 25 , 1889. |
| 528 ,, 1910. | 275 ,, 1899. | and 4, , 1888. |

The median of the figures in the columns above comes about 1909. Assuming an approximately steady birth-rate the average which has been extracted covers about as many births which took place since 1909 as took place between 1888 and 1909. The distribution of the population by annual periods and the percentage of women married can only have changed very little between 1909 and 1911, and we have been justified, therefore, in using the figures for 1911 to give the percentage of married women in each quinquennial period of their reproductive life in making the calculation. Similarly, the birth-rate in Bengal not having been changing very fast, round about the beginning of this century, we shall not be going far wrong in taking the estimate of birth-rate at which we have arrived, as comparable with the average for the last two decades.

This estimated birth-rate compared with the average recorded birth-rate for the last two decades as follows:-

|  | Recorded. | By this extrante. |
| :---: | :---: | :---: |
| Male births per mille of the total male population | $36 \cdot 6$ | $39 \cdot 64$ |
| Feunde birth per mille of the total female population... | 34•8 | 37-96 |

The estimate arrived at, therefore, exceeds the reported estimate by 8.3 per cent. in the case of male births and 9.1 per cent. in the case of female births. It is to be concluded that the number of births which goes
unreported is at least as great a proportion as this. That is somewhat greater is probable from the consideration that the estimate has been obtained from the families of better class people, in which births are commonly less than among the lower classes, although in India less so than in Europe, and from the fact that if there were mistakes on the part of parents in giving the number of their children they were probably due to a child, born and dead long ago, having been forgotten, than to any exaggeration of the numbers.
(6) The average family in different sections of the community. -The number of families of among-(a) Brahmans, Baidyas and Kayasthas, (b) Muhammadans, and (c) other non-Muhammadans, in each of the five divisions of the Province for which statistics were obtained, was not sufficient to make the comparison of figures for the size of families by annual periods of marriage duration profitable. The following figures giving the size of families of which the parents had been living together 33 years and over, and for families of which the youngest was not less than 5 years old (complete families) are, however, obtained from large numbers of slips, and will repry examination:-

|  | NOMGRR OPCHILDRET PER 100 PAYTLIES OF PAREMTS WHO RAVE BEEY <br> LIVINH TOGETHER MRR - 3 TEABS ASD OVER. |  |  |  | NUMEER OF CHILDREY PEM 100 COYPLETA FAMILES IN WHICA TEE YOUNGEAT CHILD IS 5 YRARS OLD. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Brahmans <br> Baidsm and Thytathe | Yuhme madnas. |  | All thres together. | Brahmone Baidyaz and Enyeathen | Mubammindars. |  | All throe |
| Mal | 389 | 30 | 319 | 889 | 288 | 280 | 976 | 239 |
| Bardmin Division -- $\left\{\begin{array}{l}\text { Pemale }\end{array}\right.$ | 208 | 290 | 35 | 278 | - $\mathbf{8 8 1}$ | 239 | 938 | 368 |
| f Man | 34 | 49 | 831 | 33 | 208 | 277 | 293 | 89 |
| (igabog Ditition $\left\{\begin{array}{l}\text { Femeio }\end{array}\right.$ | 200 | 309 | 972 | 383 | 259 | 988 | 255 | $8{ }^{6}$ |
| f Mals | 285 | 280 | 205 | 48 | 885. | 381 | 9\%0 | 980 |
|  | 208 | 205 | 251 | 288 | 256 | 267 | 885 | 241 |
|  | ast | 306 | 20 | 853 | 201 | 328 | 292 | 204 |
|  | 117 | 200 | 288 | 207 | 967 | 261 | 347 | 881 |
| (Mele | 49 | 401 | 265 | 84 | 591 | 248 | 11 | 318 |
|  | 208 | 208 | 288 | 308 | 257 | 290 | 200 | 20 |
| Protice as entie $\left\{\begin{array}{l}\text { Mab }\end{array}\right.$ |  | 869 | 381 | 41 | 596 | 316 | 284 | 235 |
|  | 208 | 202. | 269 | 208 | 281 | 258 | 360 | 35\% |

The size of the family among bhadralok Hindus is apparently very nearly the same everywhere, being only slightly higher in the Dacca Division than elsewhere. The size of the family among Muhammadans (it is to be remembered that the slips generally referred to better class families among both Muhammadans and Hindus) is distinctly lower than the level for bhadralok Hindus in the Presidency and Burdwan Divisions, but distinctly higher in Northern and Eastern Bengal. And the size of the family among other non-Muhammadans (in this case generally persons of the lower castes who have raised themselves above their fellow caste-men by education) is a little less than the average families of the bhadralok, but only noticeably so in Northern Bengal. In the Province as a whole the complete Muhammadan family ( 574 children per 100 families) is on the average larger than either the complete bhadralok family ( 557 children per 100 families) or the complete family among other Hindus ( 552 children per 100 families).

Half the slips obtained were from Brahman, Baidya and Kayastha families, and compared with the slips for Muhammadans and other nonMuhammadans they seem to have been more carefully written up, as indeed
was only to be expected. A comparison between the fertility in different periods of marriage dutation, between the Brahmans, Baidyas and Kayasthas, in Presidency and Burdwan Divisions against those in Dacca Division, may be made on the basis of the available figures. The graduated figures corresponding to those given in columns 5 and 6 of the table on page 221 (male and female children are this time taken together) are these :-

For Brahmans, Baidyas and Kayasteas.


These figures appear to indicate that marriage fecundity among the bhadralok in the Dacca Division is distinctly less than in Presidency and Burdwan Divisions in the first 10 years of married life, but that from about the twelfth to the eighteenth year the reverse is even more noticeable, so that by the ninteenth year there are 10 more children per hundred families in the Dacca Division than in Western Bengal and this difference is maintained until the reproductive period is passed.
(7) Still-born children.-In the questionaire printed in the slips it was asked how many male children and how many female children were still-born. If all that had been asked had been "how many male children and how many female children had been born?"' doubts would have arisen as to whether children should be counted who had been born dead. It was for the sake of obtaining uniformity in answering the more important question, quite as much as of obtaining figures regarding the number of still-births, therefore, that this question was asked. The resultant statistics are not perhaps as reliable as the others given in this note, for still-births are liable to have been forgotten when the duration of marriage has been long and the occurrence came early in its course. A few slips were found among those of Muhammadans and non-Muhammadans other than Brahmans, Baidyas and Kayasthas in which it seemed that the individuals who had filled them up must have misunderstood the English " still-born " and read it as " still living." These slips were not-used in compiling the statistics, but still the figures for Muhammadans and other non-Muhammadans showed more irregularity than those for Brahnıans, Baidyas and Kayasthas, and for this reason I prefer to analyse in detail only the statistics for the latter.

The following table shows still-births for 1,000 bhadralok females according to the duration of marriage of the parents :-

Brahmans, Baidyas and Kayasteas.

| Duration of martiege gearm | NOYEER OF MALEA ETILLDOBR PEB 1.000 74MILIEs. |  |  | NGMEER OF PEXALES 8TILLROMR PER 1.000 FAMLIEs. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cruda 4 [ures | Graduated Agures. | Percentage of total miale Bution. | Orude Alsures | Graduated Ggarth | Fervertage of total fomale birthe. |
| - m m m m | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
| $1 \times \cdots$ | $\cdots$ | " . . | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
|  | $\cdots$ | $\cdots$ | - | $\cdots$ | $\cdots$ | $\cdots$ |
|  | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ |
| ¢ . . $\quad \cdots \quad \infty \quad \cdots \quad \cdots$ | 74 | $\cdots$ | 1 ${ }^{\text {a }}$ | 48 | $\cdots$ | $\cdots$ |
| - $\quad . \quad \pm \quad \infty \quad \infty \quad-$ | 60 | 8 | 1.8 | 66 | 48 | 73 |
| ¢ . . . . . .o. - . | 6 | 6 | $8 \cdot 6$ | 89 | 57 | 74 |
| Y - $\quad \ldots \ldots$ | 5 | 74 | 77 | 78 | 68 | $7 \cdot 5$ |
| $\cdots \cdots$ | 40 | 87 | 73 | 67 | 79 | 78 |
| $8 \cdots$ ( $\quad \cdots \times \cdots$ | 115 | 100 | \% 2 | 83 | 89 | 78 |
| - m m $\quad \cdots \quad \cdots \quad \cdots$ | 15 | . 100 |  | A |  |  |
| $10 \times \infty \quad \infty \quad \infty$ | 104 | 114 | 8.1 | 08 | 99 | 7*7 |
| $11 \times \infty \quad \infty \quad \infty \quad \cdots$ | 181 | 128 | 85 | 108 | 110 | 7-7 |
| 18 ... $\ldots$ - ... ... | 154 | 143 | 83 | 186 | 181 | 77 |
|  | 111 | 189 | 84 | 194 | 181 | 78 |
|  | 141 | 170 | $8 \cdot 5$ | 69 | 140 | 78 |
| $14 \cdots \cdots$ |  | 18 |  |  | 148 |  |
| $18 \times \infty \quad \pm \infty$ | 200 | 188 | 84 | 211 | 148 | \% |
| $16 \cdots \cdots \cdots$ | 18 | 14 | $87{ }^{-}$ | 147 | 158 | 7-8 |
| 17 | 138 | 208 | $8 \cdot 7$ | 155 | 161 | 74 |
| $15 \cdots \cdots \quad \pm \quad \pm$ | 180 | 318 | 87 | 147 | 167 | 78 |
| $18 \times \infty \quad \infty \quad \infty \quad \infty$ | 203 | . 238 | 8.5 | 194 | 173 | 72 |
|  | 388 | 389 | 87 | 195 | $178{ }^{\text { }}$ | 71 |
|  |  |  |  |  |  |  |
| $11 \times \infty \times \infty$ | 818 | 248 | $8 \cdot 6$ | 208 | ${ }^{183}$. | $7 \cdot 0$ |
| 2t - - - m | 377 | 258 | $8 \cdot 8$ | 171 | 188 | 74 |
| 2 $-\infty \quad \sim \quad \pm 0$ | 248 | 280 | $8-5$ | 101 | 190 | 89 |
| $\boldsymbol{4}$ - . - - . | 281 | 398 | 84. | 217 | 103 | 8-9 |
| $25 \times \infty \quad \infty \quad \infty$ | 284 | 270 | 88 | 167 | $186^{\circ}$ | 8.8 |
|  | 267 | 371 | 81 | 901 | 128 | 68 |
| $17 \times 0$ | 517 | 878 | 87 | 148 | 200 | 68 |
|  | 318 | 480 | 8 | 800 | 201 | 68 |
| $\infty \quad \infty$ |  |  |  |  |  |  |
| $93-\infty \quad \pm \quad \pm$ | 290 | 293 | 83 | 288 | 203 | 697 |
| $\boldsymbol{0} \boldsymbol{0} \times \infty \times \cdots$ | 241 | 288 | 88 | 177 | $\cdots$ | $\cdots$ |
| 11 mmom | 288 | $\cdots$ | $\cdots$ | 163 | $\cdots$ | $\cdots$ |
| 8 - m - m me | 280 | - | - | 171 | $\cdots$ | $\cdots$ |
| 38 and over $\quad \rightarrow \quad \cdots \quad .0 \quad \pm$ | 245 | $\cdots$ * | $\cdots$ | 174 | $\cdots$ | $\cdots$ |
| Oomplote fatrilles mememen | -2480 |  | $\cdots$ | 186 |  | $\cdots$ |

In graduating the figures for columns 3 and 6 of the above table the original proportions from the slips for marriage duration of 30 years and over were left out of account, as it was apparent that they had been so much affected by still-births that happened long ago having been forgotten that they were not of any value.

The increase in the percentage of still-births with the duratiin if marriage is significant. That it is appreciably lower in marriages which have not gone back many years is no doubt partly to be ascribed to improved uses in the service of midwifery to which the bhadralok at least have access. It is in accordance with medical experience that male births are more difficult than female births, and that improved midwifery will produce a more marked effect in the case of male infants than female infants. It is probable, however, that an increased percentage of still-births in the case of older women is also indicated. This, however, is contrary to the expurience of European countries where still-births appear to be most frequent in the case of very young mothers.

Too much significance is not to be attached to the decreased percentage in the case of older marriages owing to the fact that still-births are liable to
have been forgotten. The percentage of still-births has been deduced from special enquiries regarding vital occurrences in Murshidabad, Jalpaiguri and Malda districts within the last decade, but though the enquiries have been carefully made, the number of births investigated has always been too small for the results to be reliable, and moreover the localities of the enquiries have been abnormally unhealthy. The statistics now published may be said to be the first to give reliable figures as to the percentage of still-births. Omitting the figures for families in which the duration of marriage was 30 years and over, among Brahmans, Baidyas and Kayasthas out of 24.362 male births there were 2,023 still-births and out of 22,478 female births there were 1,586 still-births. The percentage is 8.30 in the case of male births and 7.05 in the case of female births. How much could be done by improved medical and hygiene practice even among the bladralok is shown by the fact that these porportions are double the corresponding proportions in European countries.
(8) Mortality among infants and young children according to duration of marriage of parents.-In the encuiry the number of children, male and female, in each family who survived the age of 5 years was asked. The proportion of survivors among infants born alive can be discovered from the graduated age table printed as Subsidiary Table I-A to Chapter .V of the Census Report. This question was asked partly to give figures which might assist in the preparation of that age table, but mainly to discover how the infant's chance of surviving appeared to be connected with the duration of his parents married life at the time of his birth. The following table gives graduated figures showing the results:-

| Duration of marrince. |  |  |  |  |  | Male ohildren per 100 pamilies. |  |  | grmate chitidrin prit 100 familits. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Number who | Pereentage |  | Number who | Permentaga |
| 0 ... | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | ... |
| 1 ... | ... | $\cdots$ | ... | *- | ... | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | ... | $\cdots$ |
| 3 ... | $\cdots$ | $\cdots$ | -.. | ** | ... | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | ... |
| * ... | $\cdots$ | $\cdots$ | ... | -- | ** | 28 | $\cdots$ | ** | $\cdots$ | ** | *. |
| 4... | $\cdots$ | $\ldots$ | $\cdots$ | ... | $\cdots$ | 81 | 41 | - 19 | 45 | 36 | 20 |
| 8 ..- | $\cdots$ | ** | $\cdots$ | *** | ... | 64 | $\infty$ | 10 | 57 | 45 | 21 |
| 6 - | -* | -- | ... | $\cdots$ | $\cdots$ | 77 | 64 | 19 | - 70 | 83 | 21 |
| 7 ... | $\cdots$ | $\cdots$ | $\cdots$ | - | $\cdots$ | 21 | 75 | 19 | 82 | 45 | 21 |
| 8 ... | ** | ."• | ** | ** | $\cdots$ | 104 | 84 | 19 | P5 | 74 | 21 |
| - ... | *.* | $\cdots$ | ... | $\cdots$ | $\cdots$ | 117 | 96 | 10 | 107 | 84 | 99 |
| 10 ... | -• | ... | $\cdots$ | $\cdots$ | $\cdots$ | 130 : | 105 | 19 | 120 | 83 | 22 |
| 11 \|... | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | 143 | 115 | 20 | 133 | 108 | 23 |
| 12 ... | $\cdots$ | $\cdots$ | ** | ... | $\cdots$ | 156 | 126 | 20 | 144 | 110 | 23 |
| 13 ... | -.. | $\cdots$ | -.. | ... | ... | 169 | 134 | 21 | 156 | 191 | 24 |
| 14 ... | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - | 189 | 146 | 21 | 168 | 199 | 24 |
| 15 ... | ** | $\cdots$ | $\cdots$ | $\cdots$ | -.. | 194 | $153{ }^{\circ}$ | 21. | 181 | 137 | 23 |
| $16 \ldots$ | *.. | $\bullet$ | $\cdots$ | $\cdots$ | $\cdots$ | 207 | 161 | 89 | 193 | 144 | 25 |
| 17 ... | ... | $\cdots$ | $\cdots$ | *.. | $\cdots$ | 219 | 170 | 28 | 204 | 151 | 28 |
| 18 m | -.. | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | 231 | 179 | 23 | 215 | 188 | 26 |
| 19 ... | ** | $\cdots$ | *- | ... | ... | 245 | 188 | 25 | 293 | 164 | 97 |
| 20 ... | -* | -. | $\cdots$ | ... | $\cdots$ | 255 | 193 | 23 | 938 | 170 | 97 |
| 21 ... | ... | ... | ... | ... | $\cdots$ | 266 | 909 | 24 | $24{ }^{*}$ | 176 | 38 |
| 22 ... | $\cdots$ | ** | -- | $\cdots$ | ... | 975 | 209 | 24 | 253 | 182 | 23 |
| 23 ... | ... | - | .-- | ... | ... | 283 | 213 | 24 | 260 | 186 | 23 |
| 34 ... | ** | ** | *- | $\cdots$ | $\cdots$ | 290 | 217 | 28 | 261 | 101 | 98 |
| 35 ... | -* | - | ... | ... | $\cdots$ | 297 | 281 | 25 | 271 | 19 | 58 |
| 26 ... | *** | $\cdots$ | $\cdots$ | ... | $\cdots$ | 302 | 225 | 25 | 974 | 197 | 28 |
| 27 ... | $\cdots$ | $\cdots$ | .* | $\cdots$ | $\cdots$ | 306 | 298 | 86 | 977 | 109 | 2s |
| Nomplet | famı | 8 | ... | $\ldots$ | $\ldots$ | ** | ** | 24.6 | $\cdots$ | $\cdots$ | $27 \cdot 1$ |

The statistics from which the graduated figures in columns 3 and 6 were obtained are not the statistics of the same fanilies as those from which the
figures from columns 2 and 5 were obtained. In the original statistics the figures in column 2 against the duration period 5 were obtained from the same families as those in column 3 against.the duration period 10. Afters however the figures have been graduated, this introduces only an error of a higher degree of smallness than would be apparent in such a table as this, and it is therefore legitimate to prepare the table in this way.

It will be seen that both in the case of boys and girls the mortality in infancy and early childhood increases with the time that the married lite of the parents has run, and the increase is a very decided. one. This may be due in part to improvements in methods of hygiene and the care of infants. They have probably not however been sufficient, even among bhadralok families, to reduce the death-rate among infants and young children to the extent which the above table shows, and it is therefore necessary to admit that the figures show the mortality among infants born later in the lives of their parents distinctly greater than among infants born earlier.
that the mortality is higher among girls than among boys is abnormal. In almost every civilised country the male infants die in greater number than female infants, and that more care is expended upon boy babies than upon that female infants are ordinarily the healthier. In Bengal it may be said to be universally true that male infants are more welcome to their parents than female-infants, and that more care is expended upon boy babies than upon girl babies. The figures in the above table indicate that among the bhadralok has been enough appreciably to affect the comparative mortality between the two.
(9) Birth control.-I cannot leave this subject without a reference to the delicate subject of " Birth Control." The figures obtained during this enquiry, indicate continuous fecundity apparently little affected by long duraton ot marriage, for the first 20 years. This is enough to show that there is probably little practice of birth control, but in this connection the statisticis of the families in which the youngest child was five years old but the duration of marriage was less than 33 years are interesting., These are families in which reproduction stopped sometime before the 27 th year of marriage. The number of children per 1,000 such families is-

> 4,295 in the Burdwan Division,
> 4,520 in the Presidency Division,
> 4,260 in the Rajshahi Division,
> 3,748 in the Dacca Division,
> 4,225 in the Chittagong Division, and
> 4,196 in the Province as a whole.

In the Presidency Division which might be expected to be the most sophisticated the size of such families is larger than elsewhere. It is considerably smaller in the Dacca Division than in others. Among Indians every husband wishes to have a male heir. If birth control were attempted at all, the exercise of it would therefore be postponed until at least one son had been produced, and would most commonly be practised thereafter. It might therefore, be expected that in families in which there has been some birth control the number of male births per thousand female births would be above the average. The 6,465 families examined in which the youngest was five years old but the duration of marriage was less than 33 years show 1,108 male births per 1,000 temale births which is higher than the proportion discovered in the estimate of the birth-rate obtained above. According to that estimate the proportion was 1,094 male births per thousand female births. The difference is however small, and may easily be accounted for by female infants who were born long ago and died young having been forgotten. This is to be accepted as the explanation of the high proportion of male births given by the figures for families in which the duration of marriage is above 33 years. It is, however, significant that in Dacca Division the families early complete show a proportion of no less than 1,214 male births per 1,000 female births. The conclusion is that the statistics give no indication of any exercise of birth control except possibly in the Dacca Division.

## APPENDIX III TO CHAPTER V.

## A note on the tests of the accuracy of vital statistics which have been carried out of recent years by the Department of Public Health in Bengal.

A special enquiry carried out between August 1006 and July 1909 in a portion of thana Galsi in Burdwan district with a population of some 53 ,(1)( persons was the basis of the conclusions which appear on page 80 of the Census Report for Bengal, Bihar and Orissa for 1911, that the omissions in the returns of births and deaths were few, and that the vital statistics were vitiated mainly by errors regarding still-births. At the same time it was considered that " in the towns the higher level of intelligence and the fear of legal penalties tend to make registration more accurate than in rural areas." The conclusions reached at the same time by the Sanitary Commissioner of Eastern Bengal and Assam were diametrically opposite. Investigations by the Police Department in Sibsagar district between 1901 and 1905 had shown comparatively few omissions, but verifications by inspectors of Vaccination in the same district in 1905 showed 27 per cent. of the births omitted from the returns and 21 per cent. of the deaths. Later verifications by the vaccination staff in several districts produced similar results, while others, for example, one by 5 Inspectors in Bakarganj who in 1909 found less than 1 per cent. omissions in verifying 116,739 occurrences, pointed to a different conclusion. By 1911 the investigations had reached a stage in which the suspicion that there was a large proportion of omissions was confirmed, but the method of verification was held to be unsatisfactory. In the case of towns the inaccuracy of the record was proved up to the hilt by investigations made from door to door, such as that which in 1910 showed that 12 per cent. of the deaths and 25 per cent. of the births in Gaubati had not been reported, that which in 1911 showed that 35 per cent. of the deaths in Chittagnog had not been reported, and that which in 1912 showed that 40 per cent. of the deaths in the first 6 months of the year in Dinajpur had been omitted. When Bengal was again united in 1912 it was recognised that satisfactory verification could only be obtained through the agency of a qualified medical staff. The Sanitary Department, now called the Department of Public Health, was however most interested in investigating and dealing with the possibility of affording the people protection from malaria. Further investigation of the accuracy of vital statistics went hand in hand with the investigations made regarding malaria with the result that the areas in which vital statistics have been tested during the last decade have not been normal areas, but specially unhealthy areas. Before the repartition however an investigation was undertaken on a sufficiently large scale to afford valuable results in an area comprising the whole of Keraniganj thana in Dacca district with a population of 240,000 . Three Assistant Surgeons. whose work was partly in the nature of a campaign against malaria, tested the record of vital occurrences between September 1911 and August 1912: " During the investigation it was found that omissions on the part of chaukidars to record births numbered about 6 per cent. of the whole and about 4 per cent. of the deaths were not recorded. The figures, however, give a false impression because at the beginning of the enquiry a much larger proportion of omissions was detected. But later the chaukidars became much more careful in their reporting and many births and deaths which they had at first failed to note were subsequently recorded by them sometimes a very long time after they had occurred.'"* Enquiries on somewhat similar lines showed omissions of 21 per cent. in Galsi thana of Burdwan, 26 per cent. in Keraniganj again and 19 per cent in thana Nator of Rajshahi. These enquiries dealt carefully with the classification of the causes of death, but the area was too wide for investigations in respect of malaria to be close enough, and when further investigation was undertaken it was made more intensive but restricted to a much smaller area, so that, as far as the purpose of testing the returns of vital occurrences was concerned

[^5]they were really of little value. Especially malarious localities were chosen for investigations, and the following are examples of results obtained:-

| Armend date of enquitry. | Dmlevions of bdrthan | Omblioss of deathre | Remarks |
| :---: | :---: | :---: | :---: |
| 4 Circles in Jalpaiguri : May 1913-April 1914 <br> ... <br> ... | 11 per cent. | 8 per cent. | Still-birthe found to be $7 \cdot 9$ per cent. |
| Weatern Duara Tea-gardens, Jalpaignri : July 1913-June 1914 ... | *-0.** | . | Infantile mortality found to bo 251.4 per mille. |

An ares with a population of 18,000 in $20 \cdot 4$ per cent. $13 \cdot 5$ per cent. Still-births only 3 per cent ; infantile mortality $165^{\circ} 2$ per mille.

In 1917 a more important enquiry intended to extend over 5 years was started. Three circles were formed in Murshidabad, each with a population of some 5,000 and one including Jangipur town. This enquiry gave the figures for birth-rates and death-rates compared with the figures given against them for the whole of Murshidabad district in the table below:-

|  |  |  | Ix tay |  | RETURNED Fo | ashidabad |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | - | Birthernta | Deach-rute. | Birth-rate | Death-rate. |
| 1917 | .-* | ... | 47.69 | 32-92 | $43 \cdot 4$ | 34.5 |
| 1918 | *** | ** | 48.06. | 59.27 | , 36.6 | $58 \cdot 3$ |
| 1919 | *** | -** | 45.65 | 60.48 | 28.9 | 47.3 |
| 1920 | -** | *** | $46 \cdot 80$ | 42-90 | $34 \cdot 9$ | 37-4 |

The area dealt with is too small for it to be possible to draw wide conclusions, nor is the proportion of omissions in the returns a useful guide to the probable proportion elsewhere. To have an enquiry extended over a considerable time, affords an unsatisfactory test of the proportion of vital necurrences ordinarily omitted from record, for the reporting agency, the chaukidars in rural areas, is stimulated to greater efforts than it normally makes when it realizes that its work is being tested. In Jangipur town however, where, as in other municipalities, it is the duty of the public to report vital occurrences, it is interesting to note that the omissions to report were as many as the figures given in the margin


Abont 20 per cent. of the infants who died under a year had lived over 6 months. The investigations into the cause of death were carefully carried out and their results are interesting, but it is unnecessary to quote them here. Some very interesting figures were, however, obtained in respect of the age of mothers at birth. In 1917 there were 775 births in the 3 circles and 6 cases of deaths of the mother in child-birth. In 21 cases the mothers age was below 15, in 258 cases between 15 and 20 , in 396 between 20 and 30 , in 94 cases between 30 and 40 and in 6 cases over 40 . These figures gir : an average age of the mother at child-birth about $23 \frac{1}{2}$ years, at which age or an average
of the females in England are yet married.
 of each sex among Hindug and Muhammadaks.


SUbSidiary table I. A.-Graduated distribution of 100,000 of persons by annual age periods.



|  |  |  |  |  |  | Hixno. |  | GUHAMMADAR. |  | Iment rowernet. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Malon | Fernal. | Male. | Yatmen, | Main. | Yemalar |
| 1 |  |  |  |  |  | 2 | 2 | 4 | $\leqslant$ | , | 7 |
| 0-1 | - ${ }^{\prime}$ | ... | -* | ** | $\cdots$ | 12,684 | 14,187 | 17,00t | 16.879 | 16,845 | 15.679 |
| 0. 0 | ** | -. | ** | .. | $\cdots$ | 11,512 | 11,780 | 14,182 | 14,000 | 12,0014 | 13.077 |
| 19-14 | ** | ... | ... | ... | $\ldots$ | 10,663 | 80,70\% | 17,409 | 12,201 | 11.504 | 11.512 |
| 15-19 | $\cdots$ | .' | ** | *.. | ** | 9,064 | 9,012 | 10,639 | J13,484 | 10,232 | 19, 131 |
| 20-34 | $\cdots$ | ... | .* | $\cdots$ | ... | 0,501 | 0,210 | 9.364 | $\mathbf{8 , 4 4 2}$ | 2.477 | 0.723 |
| 26-20 | $\cdots$ | ** | ** | $\cdots$ | ** | 8.949 | 8,888 | 6,041 | 8, 132 | B,44 | 9,879 |
| 30-34 | ** | ** | ** | . 0 | $\cdots$ | 8,167 | 7,08t | 8,849 | 6,958 | 7,420 | 7,370 |
| $38-39$ | $\cdots$ | $\cdots$ | ... | $\cdots$ | $\cdots$ | 7,230 | 7,986 | 8,723 | 4,829 | 6,382 | 6,242 |
| 40-4 | $\because$ | *- | $\cdots$ | ** | *." | 6,156 | 6,909 | 4,700 | 4,816 | 6,342 | 4,342 |
| 48-40 | ** | ** | $\cdots$ | ** | ** | 4,697 | 4,672 | 2.724 | $\mathbf{1 , 7 7 2}$ | 4.168 | 4.178 |
| 80-64 | ** | ** | " | $\cdots$ | $\cdots$ | 8,359 | 2,405 | 2,791 | 2,789 | 8,000 | 3,065 |
| 65-30 | $\cdots$ | $\cdots$ | ** | ** | $\cdots$ | 2,248 | 2,488 | 1,025 | 1,08! | 2,113 | 2,166 |
| 10-064 | ** | ** | $\cdots$ | $\cdots$ | $m$ | 1,840 | 1,718 | 1,261 | 1.256 | 1.419 | 1,489 |
| 85-09 | -* | ** | ... | ** | ** | 1,065 | 1,136 | 718 | 76 | 878 | 984 |
| 76-74 | -• | ** | ** | ** | ... | 678 | 038 | 289 | 408 | 473 | 500 |
| 88-79 | ** | ... | ** | $\cdots$ | $\cdots$ | 286 | 285 | 208 | 315 | 288 | 968 |
| 80-84 | $\cdots$ | ... | ... | ** | *** | 92 | 98 | 68 | 74 | 70 | 36 |
| $85-88$ | $\cdots$ | $\ldots$ | $\cdots$ | ** | $\cdots$ | 18 | 14 | 10 | 11 | 18 | 12 |

SUBSIDIARY TABLE II.-Age distribution of 10,000 of eace sex in Bengal, Begar and Orissa and Natural Divisions in Bengal.

PART 1.


SUBSIDIARY T'ABLE II.-Age Distribution of $10,(\mu)$ of each bex in the Province of Bengal.

PART II.


SUBSIDIARY TABLE III.-Age disíribu'cion of 10,000 of eace Sex in each Main Religion.

PART I.
BENQAL, BIHAR AND ORIBEA.

| Aas. |  |  |  |  | 1991. |  | 1011. |  | 1801. |  | 1801, |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Maken. | Pemation. | Male. | Fatmike | Makes. | Yomalen, | Malse. | Femalces. |
| 1 |  |  |  |  | 1 | 3 | 4 | $\checkmark$ | 6 | 7 | 8 | 8 |
|  | (0-8 ... | $\cdots$ | $\cdots$ | $\cdots$ | 1.109 | 1,200 | 1,200 | 1,348 | 1,253 | 1,340 | 1,298 | 1,398 |
|  | ${ }^{5} 510$ | $\cdots$ | $\cdots$ | $\cdots$ | 1, 1,18 | 1,449 | 1,478 1,183 | 1,430 | 1,433 | 1,400 | 1,403 | 1.118 |
|  | ${ }_{10}^{10-70} \times$ | $\cdots$ | $\cdots$ | $\ldots$ | 885 | yis | ${ }_{848}$ | 850 | 875 | 871 | ${ }^{83} 9$ | 809 |
|  | $\left\{\begin{array}{l}20-10\end{array}\right.$ | ... | $\ldots$ | … | 3,206 | 3,274 | 8,241 | 3,436 | 8.143 | 3,167 | 8,088 | 8.150 |
|  | ${ }^{40} 000 \times$ | $\cdots$ | $\cdots$ | $\cdots$ | 1,609 | ${ }^{1,659}$ | $\begin{array}{r}1,838 \\ \hline 458\end{array}$ | 1.848 | 1.613 468 | ${ }^{1,608}$ | 1,533 478 | 1,609 |
|  | ( ${ }^{\text {anmpuched }}$ |  | $\cdots$ |  | 43 | $\ldots$ | ... | ... | ... |  | ... | ... |
|  | Mean | 4 | ... | ... | $20 \cdot 7$ | 250 | 24.5 | $25^{\circ} 0$ | 24.8 | 25.3 | 24.8 | 25.4 |
|  |  | $\cdots$ | $\cdots$ | $\cdots$ | 1.808 | 1,488 | 1.467 | \$,601 | 1,461 1.601 | ${ }_{\substack{1,873 \\ 1,638}}^{1.65}$ | 1.654 | 1.683 |
|  |  | $\cdots$ | $\cdots$ |  | 1,701 | 1,718 <br> 1,004 <br> 1 | 1,643 1,943 | 1,686 1,008 | 1,883 | 1,638 | 1,845 | ${ }^{1.069}$ |
|  |  | $\cdots$ | ... | $\cdots$ | ${ }^{1806}$ | 1,001 | 8879 | 968 | ${ }_{8} 83$ | 342 | 701 | -691 |
|  |  | $\ldots$ | ... | $\cdots$ | 8,041 | 8,185 | 9,098 | 8,074 | 8,703 | 8 8,084 | 3,208 | 3,039 |
|  |  | $\cdots$ | $\cdots$ | ... | 1,383 | 1.419 301 | 1,367 | 1,298 | 1,392 | ${ }^{1.284}$ | 1.493 | 1,397 |
|  |  | … | $\cdots$ | $\cdots$ | ... | ... | ... | ... | ... | ... | ... | ... |
| mean $\operatorname{le}$ |  |  | -. | $\cdots$ | $23^{\circ}{ }^{\circ}$ | 22.4 | 228 | 22.4 | 230 | 22.8 | 23.1 | $23^{\prime 2}$ |
|  |  | $\cdots$ | $\cdots$ |  | 1,315 | ${ }_{1}^{1,388}$ | 1.638 | 1,688 |  | - | 1,008 | 1,674 |
|  |  | .. | $\cdots$ | $\cdots$ | 1, 1.654 | ${ }_{1}^{1,340}$ | 1,497 1,312 | 1,574 | 1,362 | 1,947 | 1,315 | 1,1793 |
|  |  |  | $\cdots$ | ... | 1.498 | ${ }_{0}^{1,354}$ | ${ }_{8} 8.314$ | ${ }_{8} 871$ | ${ }^{867}$ | 1919 | ${ }^{889}$ | ${ }^{878}$ |
|  |  |  | ... |  | 3,084 | 3,038 | 8,160 | 3,019 | 8,174 1,373 | -3,009 | ${ }^{3,078}$ | 9,973 |
|  |  | $\ldots$ | $\cdots$ | $\cdots$ | 1,408 | 1,208 | ${ }^{1,317}$ | 1,468 | ${ }^{1300}$ | ${ }_{4} 4$ | ${ }^{369}$ | 439 |
|  |  | $\ldots$ | $\cdots$ | $\cdots$ | 2 |  | $\ldots$ | ... |  | ... | $\cdots$ | -- |
| mean ato |  |  | .. | $\cdots$ | 23.0 | 22.8 | 22.7 | 22.4 | 231 | 22.5 | 827 | $22^{3}$ |
|  | (0-5 |  |  |  |  |  | 1,573 | 1,644 | 1,517 | 1,612 | 1,828 | 1,735 |
|  |  | $\cdots$ | $\ldots$ | $\cdots$ | , 1,788 | 3,693 | 1,756 | 1,696 | 1,816 | [1,915 | 1,1498 | 1,767 |
|  | $10-18$ <br> 15 <br> 10 | $\cdots$ | $\ldots$ | $\cdots$ | 1,345 | 1,9199 | 1,301 890 | 1,134 | 1,980 | 914 | 1,918 | R38 |
|  | 20-40 | … | $\ldots$ | $\cdots$ | 2,898 | 8,006 | 2,837 | 2,978 | 9,692 | 8,881 | 2,638 | 2,767 |
|  |  | $\cdots$ | $\cdots$ | $\cdots$ | 1.488 |  | 1,310 374 | 1,818 | 1,394 | 1,928 | 1, 403 | 1,478 |
|  |  | $\cdots$ | $\cdots$ | $\cdots$ | aso | $\ldots{ }^{.08}$ | ${ }^{\text {.. }}{ }^{78}$ | ... ${ }^{488}$ |  | $\cdots$ | -- | ..- |
|  | Mean ste |  | ..* | ... | 22.7 | 22:8 | 28.1 | 22.1 | 21.7 | $22^{\circ}$ | $21 \cdot 6$ | $27 \%$ |

scbsidiant table ill-hag distribctiox of 10,000 of bach sex in each uf the Mais Rbligioss.

PART II.
ternall


SCbsidiary table iv.-Age distribctios of 1,000 of bach sbx is certary Castes.


SUBSIDARY TABLE IV A.-Proportion of childdren under 12 and of persons over 40 TO Those aged lis-40, also of married females aged $15-40$ per 100 females.

bubsidiary table v.-Pboportion of childien under 10 and of persons over 60 to those aged $15-10 ;$. $\Delta$ lso of mabried feyales 4 ged 15- 10 Per 100 females.

sulshdialiy table V. A.-Propohtion of chlldren cider 10 and of persons over 60, To thorlaged 15-41) ; al so of marmed females aged li-40 fer 106 females.



| Natchal mimena. | Ierrod. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Alf Mges. |  | $0 \rightarrow 10$. |  | 10-15. |  | $15-30$. |  | 40 - 60. |  | 60 and over. |  |
| 1 | \% |  |  | 3 |  | 4 |  |  |  | ${ }_{0}$ |  | 7 |  | 8 |  |
| leman llar | $\begin{aligned} & 1981-1831 \\ & 169-1801 \\ & 1981-7901 \\ & 1911-1921 \end{aligned}$ |  | …$\cdots$$\cdots$$\cdots$ | ++++ | $\begin{array}{ll}+ & 75 \\ + & 78 \\ + & 80 \\ + & 88\end{array}$ | +++ | $\begin{aligned} & 9.8 \\ & 6.8 \\ & 9.3 \\ & 1.2 \end{aligned}$ | + 17.5 |  | $+\quad 78$ <br> $+\quad 84$ |  | 92 |  | -78$+\quad 1 \%$ |  |
|  |  |  | - $15 \%$ |  |  |  |  | 8.4$+\quad 8.8$ |  | 8.7 |  | 12$+\quad 0.9$ |  |
|  |  |  | $\because$ |  |  | $\stackrel{+}{4}$ |  | 8.8 | $+$ | ${ }_{5} \cdot 3$ |  |  | - |  |
|  |  |  |  |  | $\begin{array}{ll} + & 4 \cdot 3 \\ + & i \\ + & \vdots \\ - & \cdots \end{array}$ |  | $\begin{array}{r}7.5 \\ +\quad .54 \\ +\quad 154 \\ \hline\end{array}$ |  | + <br> + <br> $+\quad 0 \%$ |  |  |  | + <br> + <br> $+\quad .1$ |  | - 11 |  |
|  |  |  | 7$+\quad 0.5$$+\quad 0.8$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | +$\pm$ |  |  |  | + |  | 162$+\quad 03$$+\quad$ |  | 1.9 |  |  |  |
| (muleal berinal |  |  |  |  | $\begin{array}{ll}+ & 3.3 \\ + & 3 \\ + & 31 \\ + & 0.1\end{array}$ |  | $\begin{array}{ll}  \pm & 13 \\ \pm & 17 \\ \pm & 13 \\ \hline \end{array}$ |  | $\begin{array}{lr} + & 76 \\ + & 118 \\ + & 2.3 \\ + & 18 \end{array}$ |  | $\begin{array}{ll} + & 5.9 \\ + & 89 \\ + & 9.3 \\ + & 3.8 \end{array}$ |  | $\begin{array}{ll}+ & 19 \\ \pm & 7 \% \\ + & 1 \%\end{array}$ |  | - 9.2 |  |
|  |  |  | $:$ |  |  |  | 9.4 3.9 |  |  |  |  |  |  |
|  |  |  | - |  |  |  | $8 \cdot 1$ |  |  |  |  |  |  |
| Nursh wawn |  |  |  |  |  | $\begin{array}{lr}  \pm & 110 \\ + & 63 \\ \pm & 143 \\ \hline \end{array}$ |  | $\begin{array}{lc} + & 201 \\ + & 110 \\ + & 10 \\ + & 90 \end{array}$ |  | $\begin{array}{ll} + & 7.3 \\ + & 65 \\ + & 6.0 \\ + & i 0 \end{array}$ |  | $\begin{array}{ll}- & 16 \\ + & 1 \cdot 4 \\ + & 6.7 \\ + & 1.3\end{array}$ |  | $\begin{array}{ll} - & 8 \cdot 6 \\ \overline{+} & 8 \cdot 4 \\ + & 8 \cdot 1 \\ - & i \cdot 2 \end{array}$ |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sestratigal |  |  |  |  |  | $\begin{array}{lr} \\ + & 16.5 \\ + & 110 \\ + & 1.3 \\ + & 50\end{array}$ |  | $\begin{array}{ll} + & 114 \\ + & 187 \\ + & 00 \\ + & 130 \end{array}$ |  | $\begin{array}{ll} + & 161 \\ + & 1+1 \\ + & 141 \\ + & 101 \end{array}$ |  | $\begin{array}{ll}+ & 70 \\ + & 90 \\ + & 8.7 \\ + & 9 .\end{array}$ |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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sUbSidiary table vif.-Reported bibte-bate by sex and natural divibions.
benaal.

scbsidiary table ViIf-Reported deate-rate by sex and natural divisions.
benall


Subsidiary Table IX.-Reported death-rate by bex and age in the degade per mlle living at the bame age according to the Census of 1911.

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## CHंAPTER VI.

## Sex.

154. Introductory.-The statistics of the sex distribution of the population according to this and previous censuses are given in Table II of the Census Tables Volumes, for the several castes in Table XIII, according to age in Table VII and by age for selected castes in Table XIV. The subsidiary tables appended to this chapter contain comparative and proportionate figures drawn from the census tables and the record of vital statistics as follows:-
I. The general proportions of the sexes in the several parts of the Province.
II. The number of females per 1,000 males at different age periods by religion for each of the last three censuses.
III. The number of females per 1,000 males at different age periods by religion in the natural divisions of the Province.
IV. The number of females per 1,000 males for certain selected castes by age.
V. The actual number of births and deaths of each sex for the last three decades.
VI. The number of deaths of each sex at different ages during the last decade.
155. Excess of males.-There is a considerable excess of males over females in Bengal as there is generally in India. Bengal has but 932 females per thousand males. The sex proportion in the several districts is given in column 2 of the first subsidiary table at the end of the chapter and is illustrated by the map in diagram No. 65. Females are considerably in excess.

only in Chittagong district from which there is much periodic migration of males to Burma and other parts who take very few of their women-folk with them, and in slight excess in Bankura, Birbhum and Murshidabad. The balance is exactly even in Malda and the deficiency of females is only 6 per mille males in Noakhali, 9 in Midnapore and 12 in Dacca. The deficiency is in the region of 5 per cent. in the other districts on either side of the Ganges and its estuary, from the sea almost to the point where the river enters the Province. It is 47 per mille males in Bakarganj, 49 in Tippera, 40 in Faridpur, 34 in Pabna, 54 in Bogra, 46 in Nadia, and 59 in Rajshahi. Towards Calcutta it is much greater, 73 in Jessore, 82 in Khulna, 76 in Hooghly, 136 in Howrah and 163 in the 24-Parganas, while in Calcutta itself males out-number females by more than two to one. Further away from the Ganges to the north and east also, the deficiency of females increases. In Mymensingh it is 73 per mille males, in Rangpur 96 , in Dinajpur 98, in Cooch Behar 123, in Jalpaiguri 140, in Darjeeling 104,. in Tripura State 115 and in the Chittagong Hill Tracts 143. The excess of males has become much more noticeable in the last half century. According to the Census of 1872, the deficiency of females in the Province as a whole was only 8 per mille males and 6 in 1881, but since that time it has grown to 27 in 1891, 40 in 1901, 55 in 1911 and 68 in 1921. The same phenomenon has manifested itself in every Division of the Province as the figures given in the following table will show:-


Generally, the proportion of females to males was shown to have increased between 1872 and 1881, but it is probable that the increase which the Census of 1881 showed was due to deficiencies in the enumeration of females in 1872, when the census was a new thing and as such was feared by the unsophisticated rural population who did not understand the reasons for taking it. The wildest rumours got about in some parts as to why Government wanted to know the number of women as well as the number of men who would pay a head tax if anything of the sort were imposed, and it was thought at the time that a number of women had not been returned in such districts as Tippera, Noakhali, Bakarganj and Khulna.
156. The sex proportion in Bengal compared with that of other provinces and countries.-The sex proportion in the great provinces of

India and in England and Scotland are as follows and the proportions are illustrated in diagram No. 66 :-


|  | Pemalee per 1,000 maice. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| England • -... | $\cdots$ |  | 1,101 |  |
| Scouland | ... |  | 1,078 |  |
| Bibar and Oriasa ... | ** |  | 1,027 | * |
| Madras | ... |  | 1,023 |  |
| The Central Province: | - |  | 1,002 |  |
| Burma ... | ... |  | 955 |  |
| Bengal ... | ... |  | 932 |  |
| Assam ... | -** |  | 926 |  |
| Bombay ... | $\ldots$ |  | 919 |  |
| The United Mrovinces | ... |  | 907 |  |
| Rajputans Agency ... | - | 1 | 899 |  |
| The North-West Frontier vince. | Pro- |  | 848 |  |
| The Puajab $\quad . \therefore$ | *** |  | 828 |  |

The average for India is 945 females per 1,000 males which is lower by 9 than it was in 1911. The proportion for Bengal is therefore distinctly lower than the average for India, which is now just what it was in Bengal in 1911.

Certain European statisticians, the leaders of whom were the Germans, Mayr and Kirchoff, have cöst doubts on the Indian Census Statistics because they show an excess of males while there was an excess of females in almost every European country except the Balkan States even before the war. The counterarguments advanced in the chapters on Sex in the reports for India and the provinces on the Census of 1911 were, however, convincing. What finally laid this German bogie was the fact that at successive censuses after 1881 in Bengal, and later censuses in other parts, each of which, as the people got more used to the idea of being counted, was undoubtedly an improvement upon the previous ones in point of accuracy, showed an increasing excess of males.
157. The sex proportions in the natural population:-In a province like Bengal which receives more immigrants than it sends out, the fact that those who migrate include very many more males than females tends partly to obscure the natural proportion of the sexes. For this reason it is profitable to examine the sex proportion in the natural population, the people returned as having been born in the Province no matter where they were found at the time of the census. Among those born in Bengal and still living in the

Province or in other parts of India, there are 954 females per 1,000 males; the proportion for each district and State is given in column 2 of Subsidiary Table $I$ and illustrated in diagram No. 67. By taking the natural

population, the deficiency of females in Bengal is reduced from 68 to 46 per mille males, and the sex proportion throughout the districts of the prowince. generally becomes less uneven than when the actual population is taken. Malda is the only district which now has a considerable excess of females, 23 per mille males, in its natural population, though there is an excess of 7 per mille males in the case of Murshidabad. The apparent excess of 121 in Sikkim is not to be accepted without suspicion, for part of the male population horn in the State. sufficient to disturb the figures, may have gone into Tibet, Nepal and Bhutan where no census was taken. Females are in least defect in the natural population of the Western Bengal districts. The general tendency is towards greater and greater deficiency as one proceeds north and east, though there is an exception to this in the fact that there are as many as 76 females per 1,000 males in defect in Jessore and in Khulna. The deficiency is more than 5 per cent. in Dinajpur, Rangpur, Mymensingh and Tippera, more than $7 \frac{1}{2}$ per cent. in Cooch Behar, Tripura State and Chittagong Hill Tracts and more than 10 per cent. in Jalpaiguri. In the small natural population of Calcutta City it is as much as 20 per cent.

Increased immigration has, in some measure, accounted for the reduction in the proportion of females in Bengal, but there has also been a steady decrease in the proportion of females per 1,000 males in the natural population from the figure 1,013 at which it stood in 1881 to 995 in 1891, 982 in

1901, 970 in 1911, and 954 in 1021. The excess or deficiency of females per 1,000 males in the natural population of the several divisions has been as follows:-


The reduction of the proportion of females in the natural population, as fast as it has been reduced in Bengal, is a curious phenomenon and one for which it is not easy to find an explanation. The proportion depends jointly upon the sex proportions at birth and the rates at which mortality affects the two sexes as individuals pass through life. But before passing on to the discussion of the effect of these two it will be well to examine the sex proportions according to religion, according to age and according to caste.
'158. Sex proportions by religion.-The number of females per 1,000 males among the Hindus, Muhammadans and Animists found in Bengal for 1921 and 1911 is as follows :-

Hindus: 1821-916, 1911-931.
Muhammadans: 1921-945; 1911—958.
Animists: 1921-973; 1911-967.
The proportion is greatest in the case of Animists among whom there is a deficiency of only 27 per mille males. It is 55 per mille males in the case of Muhammadans and 84 in the case of Hindus. The greater deficiency in the case of Hindus is largely due to the fact that most of the immigrants to the Province are Hindus and there is always a large excess of males among those who migrate. In Western Bengal the sex proportion is about the same in the two religions. In Central Bengal, where there are such large numbers of immigrant Hindus and from whence a number of Muhammadans have migrated to North Bengal, the deficiency of females is 51 more per mille males for Hindus than for Muhammadans. In North Bengal there is a deficiency of 55 in the other direction only partially accounted for by the migration from Nadia and Murshidabad to Rajshahi and Malda and from Mymensingh into Rangpur and Cooch Behar. It seems there is a greater real deficiency of females among. Muhammadans than among Hindus in North Bengal which may perhaps indicate that the Hindu cultivators there are more closely akin to the aborigines with their large proportion of females than Hindu cultivators in other parts. In Eastern Bengal the deficiency in females in much less marked than in Northern and Central Bengal and is rather greater among Hindus than among Muhammadans partly on account of the larger body of Muhammadan emigrants, who leave Chittagong and Noakhali for Burma and other parts, thougb to counterbalance this there is the large stream of bhadralog Hindu males
which goes out from Dacca Division to Calcutta and elsewhere. The statistics of the natural population by religion are not available, but it would seem that the deficiency of females per 1,000 males among Hindus born in Bengal is some 15 per mille greater than among Muhammadans born in the Province.
159. Sex proportion and age.-The inaccuracy of the age statistics especially for females is so great and a small variation in the sex proportion between one age period and another or between one locality and another is a matter of such significance that it is impossible for a conscientious statistician to place much reliance on the ratio of females to males in each age period. The proportions are given in Subsidiary Tables II, III and IV, but it is not proposed to discuss the figures in detail, though it is worth while to point out how it comes about, that according to the figures the ratio changes so frequently with age. More males than females are born in the Province, but on the other hand the mortality among male infants is much greater than among females infants. This should not be sufficient to reduce the number of males below one year below the number of females, however, though the figures for each division of the province except Central Bengal show more females under one year than males. That the female proportion increases through the ages 1, 2 and 3 is in accordance with experience; that, according to the figures, the proportion aged 4 falls below the even balance is due to nothing more than the fact that 4 is not a favourite number, and for females there has been more plumping for the greater favourites 5 and 3 than for males. The very great drop in the proportion of females in the ages $10-15$ is due to the understatement of the age of unmarried girls and the overstatement of their ages as soon as they have attained puberty. The high proportions between 15 and 25 are due partly to the understatement of the age of women getting beyond their prime and partly to the exaggeration of the age of men in early maturity. Enough, however, has been said to show how unprofitable it is to attempt to draw any reliable conclusions from the figures or to discuss the matter further.
160. Sex proportion by caste.-In respect of the proportion of females to males among them, the non-Muhammadan castes, tribes and races of the Province, stand in the following order, the number given after each being females per 1,000 males:-

| Baisnab | ... | ... | 1,167 | Jagi or Jngi | $\ldots$ | ... | 966 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bhuiya (Adimist) | ... | ... | 1,145 | Baidya ... | ... | ... | 965 |
| Magh ... | ..- | ... | 1,039 | Kaora ... | ... | ... | 963 |
| Bhumij | ... | ... | 1,006 | Malo | ... | ... | 962 |
| Bauri ... | ... | ... | 1,001 | Pod | ... | ... | 961 |
| Bagdi | ..- | ... | 997 | Bhnimali | ... | ... | 961 |
| Sontal (Animist) | $\ldots$ | ... | 992 | Manda (Eindu) | ... | ... | 956 |
| Khambu | ... | ... | 989 | Bhotia ... ${ }^{\text {- }}$ | $\cdots$ | $\cdots$ | 955 |
| Limbu ... | ... | . 2 - | 988 | Shaha ... | $\cdots$ | ... | 953 |
| Kami ... | ... | ... | 985 | Subarnabanik | ... | ... | 953 |
| Jalia Kaibartia | -.. | -. | 985 | Patni - ... | ... |  | -946 |
| Chasi Kaibartte | $\cdots$ | ..- | 985 | Koch - . | ... | $\cdots$ | 941 |
| Santal (Hindu) | .- | ... | 985 | Kumbar | ... | ... | 938 |
| Lepcha | ..* | ... | 984 | Aguri ... | ..- | ... | 936 |
| Mal ... | ... | ** | 981 | Sunri ... | ... | ... | 931 |
| Tambuli | ... | ... | 980 | Lohar (Hindu) | *. | ... | 928 |
| -Dom ... | -. | ... | 975 | Damai ... | ... | ... | 928 |
| Garang | ... | ... | 975 | Napit ... | ... | ... | 926 |
| Tiyar ... | -.. | ... | 974 | Barui ... | ... | ... | 925 |
| Sadgop ... | ... | ... | 973 | Rajbansi | $\cdots$ | ... | 925 |
| - Kapali ... | ... | ... | 972 | Kamar ... | ... | ... | 924 |
| Tipara ... | ... | ... | 971 | Sutradhar | $\ldots$ | ... | 923 |
| Namasudra | $\cdots$ | ..0 | 969 | Dhoba ... | ... | ... | 914 |
| Hari | $\cdots$ | ... | 968 | Kayastha | ... | ... | 911 |
| Garo ... | ... | ... | 967 | Mangar | ... |  | 903 |
| Murmi ... | $\cdots$ | -. | 967 | Chatma | ... | ... | 901 |
| Otacn (Animist) | $\cdots$ | $\cdots$ | 966 | Kalu ... | ... | .. | 901 |


| Gaudrabnnik | ... | ... | 890 | Goala ... | ... | ... | 407 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lothar (Animint) | -." | ... | 884 | Bhuiya (Hitudu) | .. | ... | 801 |
| Mayra ... | ... | ... | 88.4 | Sowar ... | ... | ... | 745 |
| 'Tanti or Tatwn | ... | ... | 881 | Kırıui ... | ... | ... | 7.5 |
| Munda (Anitnist) | ..- | ... | 874 | Cliamar | ... | ... | 6.44 |
| Oramo (Hindu) | ... | ... | 473 | Kahar ... | ... | ... | 6.13 |
| Marung | ... | ... | 851 | Nuriala ... | $\ldots$ | ... | $: 93$ |
| Muchi ... | ... | ... | 848 | Jinjput (Chhatri) | ... | ... | 658 |
| Brathinan | ... | ... | 845 | Dumadh ... | ... | ... | 417 |
| Buder ... | ... | ... | 843 |  |  |  |  |

The Baisnabs, who lead, are not like other castes. They include people from a number of castes who have adopted the Vaishnava form Hinduism. The proportion of women among them is so great for the reason that many loose women who have been out-casted from the saciety to which their forefathers belonged now call themselves Baisnabs. The sex proportion for Maghs is given in reference to the Maghs found in Chittagong, the Chittagong Hill Tracts, Tripura State and Bakarganj only, and from Chittagong especially a number of Maghs have gone out to seek employment as corks leaving their women-folk at home. The peoples that have the highest proportion of females are generally aboriginal tribes of the parts adjoining Chota Nagpur and tribes like the Bagdis who are known to be closely related to them. The Himalayan Hill Tribes and the Tiparas and Garos follow them close, and along with them the Doms, Haris and Bhimalis and certain cultivating and fishing castes, Chasi Kaibarttas and Jalia Kaibarttas, Mals, Tiyars, Namasudras, Malos and Pods. Tambulis come high up in the list and so do Jugis, but the Hindu functional castes which are not generally considered as closely connected with the aboriginal peoples of Bengal, Napit, Sutradhar, Dhoba, etc., come much lower down. The mercantile classes come about half way up the list. Baidyas have a fairly high proportion of women, but the much larger Kayasth caste has only 911 per 1,000 males and the Brahmans only 845. The figures for many of the castes low down in the list and for all those at the very bottom have been affected by the immigration of an excess of males. The general conclusion to be drawn from the figures is that the sex proportion is highest in the aboriginal races and falls as the caste is further and further removed from any relationship with the peoples who mist have formed the indiginous population of the country before the coming of the Aryans. Indeed the figures of the sex proportions may prove of considerable ethnological value as a means of classifying the castes according to their origin. If, as we suppose, the excess of males is the result of a process of evolution in which the families and races which have bred most males have been able to survive at the expense of those who have not, the result is only what would be experted. The process of evolution, we may supnose, went on in the cradle of the Aryan race in Central Asia even before India was invaded and has been carried furthest in the high castes and less far in the aboriginal races of India whose development is backward. The fact that among the Muhammadans there are as many as 945 females per 1,000 males, considerablv more than among the high caste Hindus, is snme evidence in support of the theory that the Muhammadan population of Bengal was largely recruited from the indigenous peoples of the country.
161. Masculinity at birth.-It is a well-recognised fact that in almost all parts of the world more boy-babies are born into the world than girl-babies. Explanations of such a phenomenon in the present condition of human knowledge must be hazardous in the extreme, but the process of evolution may afford one. Parents to-day are anxious for male children and in earlier stages of civilization this has been more obviously true: The favourite wife was the wife who bore sons to her husband, and the father of many sons established his race at the exnense of others. Thus families in which there was a tendency to breed male offspring survived while others did not. A process in such a manner probably helped to evolve the human race which at present seems to produce something like 21 hovs to 20 girls. and its different development would produce what statisticians have found to exist. namely, different ratios between the sexes at birth in different races. There is evidence
of this in the higher proportion of women in certain aboriginal and Hill Tribes in Bengal than among the great mass of Bengalis, but vital Statistics are not prepared according to race and within the Province, therefore, it is not possible to compare the actual proportion between female births and male births according to race.

Apart from groping in the dark to find explanations of the facts of the case, there are incidental variations of " masculinity at birth ", the term used by statisticians to express the ratio of male births to female births, which have been and are being investigated. A proposition which was advanced during the earlier part of last century was the "Hofacher-Sadler Law." It laid down that masculinity is slightly higher among the first-born than among others, and held the field for many years, but has been shown to have been based on insufficient data and to be unsupported by the figures for large numbers of instances.

The proportion of female to male births in Bengal since 1894 obtained from Subsidiary Table IV, at the end of this chapter, is illustrated in diagram No. 68 on this page. The figures for 1892 and 1893 are not tiaken into account because 1852 was
 the year in which the statistics were first collected for rural areas, and it seems that the system took a little time to be set in working order, for the number of vital occurences returned in 1892 was very much smaller than in subsequent years. The number returned in 1893 was not small, but the ratio of female births to male births was much lower than for the next 20 years and it may well have been that the , machinery was not yet running quite smoothly. After a year or two longer, the proportion went to rather above 940 females per 1,000 males and remained at that average level till it fell about 1908 and maintained till 1913 an average about 937 . The average for 20 years from 1894 to 1913 was 939 . The proposition that war raises the proportion of males at birth was first advanced many years ago, and was supported by statistics for Sweden at the time of the war with Russia in 1789-1790 examined by Düsing. Subsequent investigations by others found less support for it in the statistics relating to later wars, and the material to which statisticians had access has in almost every case been ludicrously inadequate. The great war of 19141918 has put the theory to the decisive test. As far as Bengal is concerned the vital statistics for the war period bear out the proposition in a very remarkable manner, for the proportion of females born per 1,000 males after standing at an average of 939 for 20 years, fell in 1914 to .930 and this was the average for the next five years. Even in Bengal, whose people suffered no casualties in the actual fighting, there has been this remarkable increase in the proportion of male children born. A similar phenomenon has been noticed in the case of the non-belligerent countries of Holland. Switzerland and Denmark, as well as in the countries actually at war. It seems, therefore, that not only has Nature been mysteriously replenishing the wastage of male lives which the war has caused in producing more males to the races which lost so many in casualties, but it has been doing the same in the races which, though they suffered some of the hardships resulting from war conditions, were only spectators, as Bengal was, in the actual fighting. The rise in the proportion of males born in 1914 in Bengal is curious. All the infants born in that year must have been begotten before the outbreak of hostilities and Nature was apparently anticipating the sequence of events. which brought war aboutl

Another proposition which has been advanced and is supported by statistics from all parts of the world, from England and Wales, Ireland, Austria, the Netherlands, the United States of America, Uruguay and South Africa, is that there is a higher proportion of males born in rural than in urban areas. The statistics for Bengal do not support this proposition, for during the decade from 1911-1921, there were 303,987 births of males reported in the municipalities of the Province against 274,634 births of females, giving only 903 female births per 1,000 male births, against 933 in the Province as a whole. The corresponding proportion in respect of the births recorded in Calcutta was 887 females per 1,000 males. In European countries, in the United States of America and in the British Colonies, there is cornmonly a higher proportion of females in the population of urban than rural areas. In India, the opposite is the case. It is, therefore, possible to reconcile the apparent contradiction which the figures for this country give to the proposition under examination. The presence of a large excess of males in towns in Bengal, as in rural areas in other parts, is indication of the fact that it is males who are wanted in the towns just as it is males who are wanted at the time of a great war. May it not be that both the propositions which have just been examined are parts of a much more far-reaching proposition, viz., that Nature attempts to adjust the proportion between males and females at birth according as males or females are wanted at the time or place of birth?
162. Sex proportion in deaths.-The number of deaths of females per 1.000 deaths of males according to the published returns is given for each year since 1891 in the last column of Subsidiary. Table V, Part I, and the figures are illustrated in diagram No. 69 for the years from 1894 to 1920 . The figures for 1891- 93 have not been put in for the same reason as in the case of births.


It will be seen that the variations in the sex proportion in the case of deaths are much more erratic than in the case of births. A difference of 10 between the proportion of female births per 1,000 male births is the largest difference found between one year and the next throughout the period of 26 years, and, except for the change at the beginning of the war, a drop of one year has generally been followed by a rise the next year. The number of deaths of females per 1,000 deaths of males however changed between 1915 and 1916,
by as much as 27 , between 1897 and 1899 by as much as 31 , and in the 3 years between 1901 and 1904 by as much as 34 . There seems to have been a strong tendency from about 1897 till the beginning of the war for the proportion of female deaths to rise, and the rise shown by the figures is a very great one, so great that in spite of the fact that successive censuses have shown the proportion of females in the population to have decreased it arouses a suspicion that the statistics are not reliable, that there must have been a great many more omissions in the returns of the deaths of females at the beginning of the period than later. According to the statistics the proportion of female deaths fell considerably as soon as the war began, though there is no reason apparent to account for this.

There is much the same objection to the reliability of the statistics of the sex proportion in deaths in the several periods of age as: there was to the reliability of those for the sex proportion in the population living at each age period. The estimate of age at death is given by the relations of the deceased, and the very vague notions of age, which the people of Bengal have, therefore, reflect themselves in the statistics of age at death as in the census statistics themselves. But there is some difference. The element of guesswork is as great in the one set of statistics as in the other, but it may fairly be expected that the tendencies to deliberate exaggeration or understatement are less in
the statistics of age at death than in the crude age statistics obtained at the time of the census. The deceased has left the vanities of the world behind him and there are certainly not the same inducements which result in the exaggeration of a young man's age, the under-statement of the age of females who have passed their best and of young nnmarried girls, after they are dead as when they were still alive. It is such tendencies that upset the sex proportions according to age rather than the element of guesswork which affects the statistics for males and females in much the same manner. It is, therefore, not altogether unprofitable to discuss in some detail the sex proportion in deaths at different ages. The statistics are given in Subsidiary Table VI appended to this chapter, and the sex proportion through the several age periods on the average for the decade, taken from the last column of that table are illustrated in diagram No. 70 in which are also shown the corresponding proportions for England and Wales for 1910-12 just before the war. That the sex proportions given in the last column of the table are very close to the proportions in the corresponding table given on page 313 of the Census Report for Bengal for 1911 is additional ground for placing some reliance on the statistics. For convenience of reference the statistics are given in the following table :-



We may take it that on the average through the decade the proportion of females to males in the population was 943 per mille. The proportion of female to male deaths appears to be very well below this figure throughout life except at two points. It touches it in early childhood between the ages 1 and 5 , and it passes very far above it between the ages of 15 and 30 . The contrast
between the high proportions of deaths of females per 1,000 deaths of males between 15 and 30 and the low proportions both in childhood and later maturity is very remarkable indeed. The proportion is, it will be notified, bigher although not much higher between 15 and 20 than between 20 and 30 arid the same was the case before 1910. It would appear then that there is a phenomenal.excess of female mortality in Bengal during the first part of a woman's reproductive age-period. In England the proportion of females to male deaths is higher at the beginning of the same period than it is later, but it is still strongly in favour of females. Whereas in Bengal, the females chance of living from 10 and 15 was better than the males in the proportion of 4 to 3 , the proportion is reversed in respect of the chance of living from 15 to 20 . This result is brought about mainly by the difficulties of child-birth under the conditions which are in use in this country, and to the after-effects of child-birth upon the woman's health. Deaths in child-birth are perhaps not remarkably numerous, but the number of women who suffers from disorders which are traceable to the time of the birth of their children is enormous. Much has been said and written of the evfls of infant marriage, resulting in the survival of child-widows condemned to a life of austerity and very often of drudgery and so on, but to the critic of these statistics the evil which does far more harm to the women of this country is the custom that ordains, that a woman must not only be married but live the life of a married woman immediately she attains puberty. It is not suggested that the women themselves are not partly responsible for the existing popular feelings in the matter. That scandalous tongues are at work at once on any instance in which the common practice is not followed is indeed proof of that is so.' It may be said that the custom of deferred marriages which prevails in Europe is the artificial, and the Indian custom the natural one, but there seems no doubt which is the less harmful to the health of the female population.
163. Sex proportion at birth and at death in the several divisions.-The complete statistics of births and deaths according to sex for the several divisions of the Province during the decade are given in Part II of Subsidiary Table $V$. In the following table the sex proportions at birth and in death are set against the sex proportions in the population living in 1911 and in 1921 :-

'The table enables us to see at a glance what part has been played in veducing the sex proportion in the several quarters of the Province by masculinity at birth, by mortality and by other causes, e.g., migration. In Western Bengal, the proportions of females to males both at birth and in death have been rather higher than on the average throughout the Province,

[^6]SU3sidLARY table I, -General proportioy of the sexlis by Natural Divishons and Districts.


## SUBSIDIARY TABLE II.

Part I.-Number uf Females per 1,000 Males at different age periods, by Religions at each of the last three Censuses.


Part II.-Number of Fegales per 1,000 Males at different agb periods, by Religions.


SUBSIDIARY TABLe IIL.-Number of Females per 1,000 Males at diffehfat periods by Religions and Natural Divibions (Cenbus op 1921).

BENGAL.


SUBSIDIARY TABLE IV.-Numbeb of Femades per 1,00j Males for certain selected Castes.


SCbSidiary table $\nabla$ (Part I)-Actual number of Bibtes and Deathe reported
for bach sex dubling the decades 1891-1900, 1901-1910 and 1911-1920.


SUbSidiary table $\nabla$ (Part II).-Actual numbrb of Birthe and Deaths reported for each sex according to Natural Divisions durivg the decade 1911-1921.

subsidiary table VI.-Number of deaths of each sex at diffehent ages.


## CHAPTER VII.

## Civil Condition.

164. Introductory.-Census Table VII gives the number of married, unmarried and widowed persons according to age by sex and religion in each district, and Table XIV statistics of Civil Condition according to rather different age periods for certain selected castes and tribes. Appended to this chapter will be found five subsidiary tables which give proportionate figures based on these tables and set forth comparative figures to show:-
I.-The distribution by Civil Condition of 1,000 of each sex, religion and age period at each of the last four censuses.
II.-The distribution by Civil Condition of 1,000 of each sex at certain ages in each religion and Natural Division.
III.-The distribution by main age period, and Civil Condition of 1,000 of each sex and religion.
IV.-The proportion of the sexes by Civil Condition at certain ages for each religion and Natural Division.
V.-The distribution by Civil Condition of 1,000 of each sex at certain ages for selected castes.

The instructions regarding the entry of Civil Condition at this census was the same as at former censuses, viz., that all persons were to be shown either as unmarried, married or widowed. Divorced persons were to be shown as widowed and a woman who had never been married was to be shown as unmarried even though she was a prostitute or concubine. Persons who were recognised by customs as married were to be entered so, though they had not gone through the full ceremony, e.g., Muhammadan women who had taken a second husband according to the custom known as nika marriage.

165!. Universality of marriage.-The most striking fact brought out by the statistics of marriage by each successive census is the universality of the institution especially in the case of females. Excluding those suffering from serious bodily or mental affliction, the number who go through life unmarried is extremely small. This, combined with the early age at which females especially, are married, results in a much smaller proportion of the total population being umarried than in European countries. In Bengal 518 per mille males are unmarried and 343 per mille females. Of those aged 15 and over the proportion unmarried is only 211 per mille for males and 18 per mille for females, while the corresponding proportion in England and Wales according to the Census of 1911 were 403 unmarried per mille males over 15 and 390 unmarried per mille females over that age. The proportion in each Civil Condition, in each quinquennial age period, according to the census
statistics for Bengal, are as given in the following table and illustrated in diagram No. 71:-



Such statistics are little affected by the anomalies which appear in the age returns. The element of guess-work enters to the same extent into the age returns whether for unmarried, married or widowed persons of each sex, and therefore does not much disturb the proportions between them. The understatement of the age of unmarried girls no doubt increases the proportion of females unmarried between 5 and 15 to a certain extent, and the
tendency to exaggeration of the age of young adult males also increases the proportion of males unmarried round about the age of 20 , but there is very seliom any doubt as to whether an individual should be returned as married er not, and otherwise than in these two instances the proportions may be taken to be substantially correct.
166. The Contrast between Bengal and England.-The contrast between the statistics of Civil Condition in Bengal and in England and Wales in 1911 is brought out by the following figures and by diagram No. 72, in which they are shown graphically:-



The effect of the understatment of the age of unmarried girls and overstatement of that of young adult males have had the effect of moving the curve for females in Bengal somewhat to the right between the ages of 5 and 10, and that for males probably rather more to the right about the age of 20 , so that it is probable that correctly the curve for males in Bengal should not cross and should perhaps barely touch the curve for males in England about this age. Still the diagram indicates that in respect of males in the age period round about 20 in which the majority of their marriages take place, the proportion unmarried and the average age of marriage is not very different in the two countries. Earlier in life there is a contrast for, whereas a certain number of boys are married below the age of 15 in Bengal, none are so married in England. There is a great. contrast later in life for in Bengal 8 out of 10 males have been married by the age of 28, while in England it is not much more than 7 out of 10 who are yet married. The curve for males in England continues to fall gradually from 30 onwards mainly through marriages taking place, but partly owing to the fact, which seems to be properly authenticated, that mortality among bachelors is greater than among married men. In Bengal on the other hand females are in excess and marriage has embraced so large a proportion of the female population that there is no possibility of many more males being married after 30. The contrast between the Civil Condition of females in the two countries is much greater. In Bengal 9 out of 10 girls have been married before the age of 16 when none at all have yet been married in England.' All but 3 in a hundred have been married by 20 , at an age when only a little more than 4 out of 10 have been married in England. After about 25 the number of women in Bengal who are not mentally or physically defective and remain unmarried is infinitesimal. In England on the other hand one in five is unmarried at the age of 35 , and even at the age of 60 one in every nine is still in the same condition. The greater proportion unmarried among females than among males in England after the age of 30 is due mainly to the excess of females in the population, as the converse in Bengal is partly the cause of the proportion of unmarried being greater in the case of males than females, but in both instances the relative mortality on the married and the unmarried affects the figures. There is some indication in the figures for Bengal in the ages over 70 to show that old maids and bachelors are longlived, but there is so much exaggeration of age towards the end of life that little reliance can be placed on such a conclusion.
167. Age at marriage.-There being no registration of marriages in India there are no statistics which enable us to ascertain directly the average age of the bride or bridegroom when marriage takes place. The census statistics, however, show us the proportion of the population that has been married and that has not been married at each age, and by making certain assumptions we can use them to estimate what are the average ages at which marriage takes place. I will give here the calculation for the average age of the bride and bridegroom at marriage for all religions together. The reader who is interested in the subject may work out for himself the average in each religion.

If $u_{x}$ is the number of females whether unmarried, married or widowed at the age of $x$, i.e., between $x$ and $x+1$ years old, and $p_{x}$ is the proportion between the ages of $x$ and $x+1$ returned as married or widowed, then $p_{x} u_{z}$ is the number of femalos between $x$ and $x+1$ who have been married. Assuming that mortality rates are the same for married as for unmarried females and that the age distribution of females remains the same for a year, then of the females between $x$ and $x+1$ who bad been
married $\frac{u_{x}+1}{u_{x}} \times p_{x} u_{x}$ or $u_{x+1} p_{x}$ survive a year and the number of married females between the ages of $x+1$ and $x+2$ is $u_{x+1} p_{x+1}$. The difference between these two
quantities $u_{x+1} p_{x}$ and $u_{c+1} p_{x+1}$ must be the number of marriages which took place during the year among the women who were at the age $x$ at the beginning, and the average' age at which these marriages took place must have been almost exactly $x+1$ years. We, therefore, acconnt for all the marriages which took place in the year by the series $\Sigma u_{x+1}\left(p_{x+1}-p_{x}\right)$. The marriages $u_{x+1}\left(p_{x+1}-p_{x}\right)$ took place at the average age $x+1$, the number $u_{z+2}\left(p_{x+3}-p_{x+1}\right)$ took place at the average age $x+2$ and 80 on.

Thas the avarage age at which the marriages took place is:-

$$
\frac{\sum u_{x}\left(p_{x}-p_{x-1}\right) x}{\sum u_{x}\left(p_{x}-p_{x-1}\right)}
$$

The actual calculation for the average age of the bride and bridegroom in Bengal is given in the following two tables. The proportion $p_{x}$ in column 2 is obtained by running a smooth corve similar to that given in diagram No. 72 for females in Bengal through the points determined by the proportions unmarried in quinquennial age periods and the figares in column 3 are taken from the graduated age distribution for females given in Subsidiary Table IA to Chapter V.-

Calculation of the average age of the bride at marriage.


The figures in colomn 4 become very small after the age 27 and we need carry the series no further.

Then $\frac{\sum u_{x}\left(p_{x}-p_{x-1}\right) x}{\sum u_{x}\left(p_{x}-p_{x-1}\right)}=\frac{27,579}{2,292}=12.03$ and the average age of the bride at marriage in Bengal is 12.03 years.

Calculation of the avoragn age of the bridegroom at marriage.


Here $\frac{\sum u_{x}\left(p_{x}-p_{x-1}\right) x}{\sum u_{x}\left(p_{x}-p_{x-1}\right)}=\frac{37,976}{1,832}=20.73$ and the average age of the bridegroom is 20.73 years.

What has been done to obtain the results the average reader should be able to follow without the afe of the Algebraical notation at the head of each columen. The notation has only been ased to assist in the condensation of the argament to a shorter length.

We can go further and from the figures in column 4 of each table obtain a statement of the proportion of marriages which took place when the bride or the bridegroom was at a certain age. If $v_{x}$ is the entry in colvmn 4 in the first table then out of $\Sigma v_{x}$ marriages which take place within a year, the number in which the bride is between 0 and 5 is approximately $v_{0}+v_{1}+v_{2}+v_{3}+v_{4}+\frac{1}{2} v_{5}$, the number which takes place when the bride is between 5 and 10 are approximately $\frac{1}{3} v_{5}+v_{6}+v_{7}+v_{5}+v_{9}+\frac{1}{2} v_{10}$ and so on. I do not, however, propose to carry the investigation further.

These calculations which have given the average age at marriage for females in Bengal 12.03 years and for males 20.73 years have involved two assumptions (1) that the age distribution does not change appreciably from year to year and (2) that mortality rates are the same among the married as among the unmarried. The first assumption is not far from the truth. We bave not used the differences between the proportions of the population at one age and at another and if the distribution does change slightly it will not appreciably affect the result. The second assumption is not quite true. Undoubtedly the mortality rates are rather higher in the ages of early maturity in the case of married females than of unmarried. But the number who are married and survive a year would only be affected by a small amount, of the
same order of smallness as the result of applying for one year the differenoe between the mortality rates for married and unmarried to the number of persons in each age, and the calculation cannot, therefore, be seriously affected. The results are no doubt more seriously afiected by the fact that understatement of the age of unmarried females has resulted in an underestimate of the proportion married in the ages about 9 to 13 which has brought down the average age of the bride at marriage somewhat. Similarly the overstatement of the age of young men has raised the proportion unmarried from 16 to 17 to 27 and thus raised the estimate of the average age of the bridegroom at marriage. The average disparity of age is probably, therefore, less than the 8.7 years which our estimate has given. For practical purposes we may take it that the average age of the bride in a marriage in Bengal is $12 \frac{1}{2}$ and that of the bridegroom rather under 20.

- 168. Marriage statistics in different religions.-The universality of marriage is equally noticeable among the adherents to each of the religions which have the greatest numbers. The number aged between 40 and 60 unmarried per 1,000 in each religion is as given below:-

|  |  |  | NTXEER pER MILLE AfED 40-6] who are ceskaried. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Malen | Femates. |
| All religions | ... | ... | ... | 21 | 6 |
| Hindus | ... | ..* | ... | 27 | 5 |
| Muhammadans | ... | ... | ... | 14 | 6 |
| Animists | ... | ... | ... | 21 | 14 |
| Chrintians | -.. | ... | $\cdots$ | 73 | 73 |
| Buduhists | ... | ... | ... | 37 | 13 |
| Brahmos | ... | ... | ... | 79 | 48 |

The corresponding proportions in England are 115 for males and 122 for females. The Christians and the Brahmos have the greatest numbers who go unmarried, but even among them the proportion is much lower than in European countries. Twice as many Buddhist and Animist females remain unmarried as among either Hindus or Muhammadans in which the proportion unmarried between 40 and 60 is only about one in 200. Twice as many Hindu as Muhammadan males go unmarried and this is by reason of the greater excess of males among Hindus, for it is uncommon now-a-days for a man to have more than one wife living at the same time.

There is a somewhat greater difference among the adherents to the different religions as to the age of marriage. Marriages in which the bride is less than 10 and the bridegroom less than 15 are not common and most marriages take place while the bride is between 10 and 15 and the bridegroom between 15 and 25. The following table shows the proportion married or widowed in the age periods $15-20,20-25$ and $25-30$ for male and $10-15,15-20$ and 20-25 for the female adherents to each religion :-


In the case both of Hindus and Muhammadans the bride is almost always married before she is 20 . In the case of Hindus two-thirds of the females are married before the age of $\mathbf{1 5}$ and in the case of Muhammadans more than

It is apparent from these figures that both in Bengal and in the t wo provinces together there has been a steady rise in the average age at which marriage takes place. This age both for mates and fernales is very inuch lower in Bihar and Orissa than in Bengal, but in both it is rising and the rise has apparently been more decided during the last decade than in previous ones. This may have been due in part to the fact that the last few years were hard times, and the greater difficulty of seraping together the money necessary to be spent on the price to be paid for the bridegroom, the dowry and ornaments for the bride and the actual expenses of the ceremony may have caused some marriages to be postponed, but the tendency of public opinion to favour later marriages has been a significant one. It has not made any appreciable impression on the rule that a girl must be married as soon as she has attained puberty, for the proportion of girls unmarried between 15 and 20 is still only 55 per mille, and only 39 per mille in the case of Hindus, but the practice of marrying girls very much before they reach puberty is stearily becoming less common.


The above figures taken from Subsidiary Table V show that among the Hindus the bhadralok represented by the Brahmans and the Baidyas take the lead in postponing marriage both for males and for females, and have raised the age of marraige much during the last 10 years. The Baidyas are married later than the Brahmans and the proportion of females unmarried after the age of 12 among them has been almost doubled since 1911. Among the Brahmans the greater advance in postponing the age of marriage has been in respect of males though it has been conspicuous also in the case of females. The Bencali marchant class represented by Shahas follow the Brahmans closely, but the upcountry $\mathrm{mer}^{\mathrm{r}} \mathrm{c}$ hants represented by the Agarwalas strongly favour early marriage. Since 1911 they have raised the age of males, but have apparently made a move in the opposite directiou in respect of females and practically all their girls are married before 12. The Jugis have made a conspicuous advance in postponing the marriage of females, but the Chasi Kaibartta representing the Hindu cultivating classes, though they have raised the age for males, have not touched the age for females. The Koches, more closely allied to the aborigines of the country, favour rather later marriage for girls
and during the last 10 years have raised the age for boys considerably. The Jalia Kaibarttas follow the Chasi Kaibarttas very closely. The Bauris, typical of the labouring alasses of Western Bengal, have since 1911 raised the - age of marriage for boys. Their habit years ago was to delay the marriage of their girls until they had grown up, but they now imitate the rest of the Hindus in marrying their girls young, and during the last 10 years the tendency to do so has continued to increase. The Doms representing the sweeper castes have raised the age of marraige for both sexes of recent years.

|  |  | SCYber |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Mates. |  | Pexales. |  | - |
|  |  | 1021. | 1911. | 1891. | 1911. |  |
| Saptal (Biudu) | $\cdots$ | 824 | 744 | 418 | 370 |  |
| Santal (Animiat) | $\cdots$ | 856 | 789 | 466 | 412 |  |
| Tipara (Hindu) | $\cdots$ | 849 | 853 | 413 | 488 |  |
| Chakma (Bnddhist) | ... | S83 | 916 | 650 | 642 |  |

The aboriginal tribes, as the figures for the Santals, typical of those from forthe Santals, who are Hindus, and those who still retain their tribal beliefs vince, marry much fewer of their girls very young than the Hindu castes of the plains of Bengal.

The influence of Hinduism is shown by the contrast between the figures for the Santals, who are Hindus, and those who still retain their tribal beliefs. The influence of Hinduism is in the direction of promoting early marriage, especially of females, but in the case of both Hindus and Animists the tendency of the last 10 years has been in the direction of raising the age of marriage. 'The case is different with the Tipara tribe in the Eastern Hills. Among them the Hindu influence has been working in the last 10 years to reduce the age of marriage especially among females. The Chakma tribe, who are Buddhists, marry their girls very much later even than the Animist tribes, and the last 10 years has seen little change in their custom. Among the Muhammadans the Saiyads are typical of the better class. The number per 1,000 males aged 12-20 unmarried among them was 810 in 1921, and 732 in 1911, and the corresponding number per 1,000 females, 236 in 1921, and 184 in 1911. Apparently during the last 10 years the age of marriage among them has risen more than among the Muhammadan community as a whole.
171. Widows and widowers.-The proportion widorred among the male population is 38 per mille and among the female population 179. The proportion was just the same in England and Wales in 1911 in the case of males but in the case of females only 71 per mille. In England, therefore, there were almost twice as many of the female population widowed as of the male population but in Bengal there are five times as many. The contrast has arisen on account of two facts-first the very early age especially of girls at the time of marriage, and second that among Hindus at least widows may not marry again. The statistics of widowhood among males in India are not abnormal, but the proportion of widowed females is peculiarly large and the statistics of widowhood among females are, therefore, worthy of closer examination.

The proportions widowed per 1,000 females in each quinquennial age period among Hindus, Muhammadans, Buddhists, Christians and Brahmos, and among the total population, are compared with one another and with
the corresponding proportions in England and Wales according to the Census of 1911, in the following table:-


The figures are illustrated in diagram No. 74. The curve for Brahmos

has not been shown but it follows very closely that for Buddhists. The effect of earlier marriage among the Hindus and Muhammadans is shown by the great height to which the curves for both rise above the curves for Animists and Buddhists, and still greater height at which they stand above the curve for the female population in England. Up to the end of the reproductive period of a woman's life the proportion of widows among Hindus is many times as great as among females in England, and generally twice as great as among Animists, Buddhists and Brahmos among whom marriage takes place at a later age. Throughout life the curves for these three run about half way between the English curve and the curve for Hindus. The different configuration in the curves for Hindus and for Muhammadans is significant and interesting. It is caused by the re-marriage of Muhammadan widows. The number of Hindu widows who remarry is very small indeed and among all but the lowest classes is infinitesimal. Much has been talked and written on the policy of encouraging widow marriage among the better classes of Hindus, but up to the present nothing has come of it. The individual bhadralok Hindu dares not face the condemnation of the orthodox which
would fall upon his head if he married a widow. Two or three such marriages have taken place recently, but they are talked of and reported as nine-day wonders, and for statistical purposes may be ignored. But for the marriage of Muhammadan widows, the curve for Muhammadans would generally follow the Hindu curve, remaining slightly below it on account of the fact that the average age of Muhammadan girls at marriage is rather higher than that of Hindu girls. But for the remarriage of widows we may take it that the curve for Muhammadans would follow roughly the line of the stars in the diagram. The comparison between the position of this line of stars and the curve for Muhammadans incidentally enables us to make a rough estimate as to how many Muhammadan widows do marry again. At any point the ordinate to the curve of the stars represents the proportion of Muhammadan women at the particular age who have once been widowed, and the ordinate to the curve for Muhammadans being the proportion of Muhammadan women at that age who are living as widows, the difference between the ordinates must represent the proportion of Muhammadan widows who are living in wedlock with a second husband per mille Muhammadan females at that particular age. From the diagram we are able to obtain the following tigures. They are of course only very rough, but they are interesting as giving the first estimate which has been published of the estent to which remarriage of widows does take place among Muham-madans:-

 each sex, religion and main age period at eacil of tife lasf five censtobs.

BENGAL, BIHAR AND ORIB8A.


SUBSIDIARY TABLE 1 (PART I).-DigTribution by civil condition of 1,000.0F each ex beligiox and mans age period at each of the last five censuses-concld.

BENGAL, BIHAR AND ORIB8A-conclided.


SUBSIDIARY TABLE I (PART II).-DIstbIbUTION RX CIVIL CONDITINN OF 1,000 OF EACH gex, Religion and main age Periods in 1921 and 1911 for Bengal.


SEBSIDIARY TABLE I-(PART II).-Distribution by civil condition of 1,000 of eack sex, beligion and main age periods in 1931 . and 1911 por Bexgal-concluded.

subsidiary Table II.-Distribution by Civil Condition of 1,000 of eace sex
at certain ages in the main Religions and in each Nateral at certain ages in the main Rfligions and in each Natural Uivision.


SUBSIDIARY TABLE III.-DIStRIbCTION BY MANN AGE PERIODS AND CIVIL CONDITION OF 10,000 of each Sex ind religion, 1921.


SUbSidiary table IV.-Proportion of tee sexes by civil conditions at certain - AGES FOR THE MALN RELIGIONS AND NATURAL DIVISIONS.

Number of females per $\mathbf{1 , 0 0 0}$ malas.



Ubsidiary mable v－Dintribution by civil conidtion of 1,000 of eade sex at ceitain ages for selegted castes－coneluded．

| Oastin． | Locality． | digtriaution of 1000 pryalb of bajh abe by divil condition． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Alla ambs． |  |  | 0－3． |  |  | $8-12$. |  |  | 18－20． |  |  | 80－40， |  |  | $\infty 0$ and ovar． |  |  |
|  |  | 宮 | 安 |  |  | $\begin{aligned} & \dot{\vec{j}} \\ & \stackrel{\rightharpoonup}{E} \\ & \vec{y} \end{aligned}$ | $\begin{aligned} & \text { 产 } \\ & \text { E } \\ & \text { B } \end{aligned}$ | $\begin{aligned} & \mathrm{Z} \\ & \text { E } \\ & \text { 咅 } \end{aligned}$ | $\begin{aligned} & \dot{\vec{y}} \mathbf{~} \\ & \underset{y}{E} \end{aligned}$ | $\begin{aligned} & \dot{\overrightarrow{0}} \\ & \stackrel{\rightharpoonup}{\mathbf{b}} \\ & \stackrel{\rightharpoonup}{k} \end{aligned}$ |  |  | $\begin{aligned} & \dot{8} \\ & \frac{3}{8} \\ & \vec{E} \end{aligned}$ | $\dot{\circ}$ E 吕 |  | 等 |  | 安 | $\frac{8}{8}$ |
| 1 | \％ | 31 | 38 | 98 | 24 | 28 | 96 | 97 | 28 | ＊） | 80 | 81 | ${ }^{5}$ | ＊ | 4 | ${ }^{3}$ | 16 | 37 | 5 |
| I．agammala（Hindu）．．． | Onlcuta ．．．．．． | 88 | 114 | 188 | 933 | 7 | ．．． | 017 | 77 | ＊ | 28 | $\boldsymbol{*}$ | 18 | 7 | 000 | 2 | － | 146 | 410 |
| 2．anglo－indian（Carlo （1nn）． | Beagat ．．．．．． | 45 | 4 | 4 | 1，000 | ．．． | ．． | 1，000 | $\cdots$ | ．．－ | 889 | 108 | 3 | 210 | 150 | so | 108 | 48 | 14 |
| a．bauri（Hindu）．．．．．． | Dengal ．．．．．． | 804 | 47 | 215 | 024 | － | 1 | $8 / 2$ | 183 | － | 191 | ${ }^{800}$ | 11 | 11 | 778 | 210 | － | 311 | 68 |
| 4．Daidya（Hionlu）．．．．．． | Beugal ．．．．．． | B63 | 415 | 197 | 029 | 2 | ＊＊ | des | 32 | 1 | 870 | 080 | 80 | 11 | 783 | 184 | － 1 | 818 | 617 |
| b．batshnat（hindu）．．． | Beugal ．．．．．． | 24 | 405 | 82 | 098 | 5 | 3 | 788 | 187 | 16 | 07 | 706 | 107 | 18 | 607 | ${ }^{178}$ | 10 | 101 | 799 |
| 6．ditabigan（Himu）－ | Beugal ．．．．．． | 114 | 48 | 287. | 989. | － | ．．． | 892 | 100 | 8 | 141 | 183 | 76 | 0 | 737 | ${ }^{3} 1$ | 4 | 14 | css |
| 7．Bhahe | Dengal＇．．．．．． | 840 | 12 | 141 | 1，000 | ．．＊ | ．．． | 838 | 48 | ．． | 882 | 105 | 49 | 291 | 618 | ${ }^{\circ}$ | 4 | 019 | 440 |
| 8．OHAEMA（Butablut）．．． | Olittagong 1111 Trauta． | 602 | 40 | 6 | 1，000 | $\cdots$ | ．．． | 908 | 2 | ．．． | ¢6 | 319 | 1 | 93 | \％ 1 | 97 | 7 | 871 | 331 |
| D．DOM（Hidala）．．．．．． | Bengal ．．．．．． | 261 | 113 | 28 | us0 | 10 | ．．． | 743 | 199 | 8 | 130 | 808 | 64 | － | － 769 | 231 | － 1 | 289 | 703 |
| 10．indian ohristian ．．． | Bougal ．．．．．． | 472 | 615 | 130 | ${ }^{093}$ | 7 | $\cdots$ | 883 | 17 | 1 | 563 | 410 | 18 | 78 | 709 | 123 | 10 | 103 | 46 |
| 11．JUGi Oll Joar（Hinda）．．． | Dongnl and Silkilu | 504 | 440 | 24 | 883 | 8 | 1 | 832 | 161 | ${ }^{6}$ | 118 | 815 | 69 | 0 | 740 | 201 | － | 273 | 339 |
| 19．Kaidalitta （anhiaya）（hlodu）．$_{\text {Ollast }}$ | Bengal ．．．＇．．． | 271 | 431 | 271 | 0.0 | 8 | 2 | 744 | 204 | 12 | 75 | 931 | 104 | 16 | 870 | 314 | － | 267 | 738 |
| 18．maibartta jaliá（adt Xaltarta）（Hitadu）． | Dengal ．．．．．． | 802 | 41 | 257 | DPi | $\bigcirc$ | 3 | 840 | 146 | 9 | 116 | 800 | 78 | 10 | 687 | 893 | － | 84 | 71 |
| 14．EHAMSHO（Hindu）．．． | Daryoollug ．．． | 808 | 402 | 8 | 1，000 | $\cdots$ | $\ldots$ | 996 | 4 | $\cdots$ | 881 | 34 | ． 5 | 142 | 798 | 89 | 17 | ${ }^{616}$ | 343 |
| 18．EOOII（Htada）．．．．．． | Dengal ．．．．．． | 302 | 472 | 180 | 985 | ＇ 11 | 1 | 883 | 111 | 8 | 140 | 680 | 40 | 14 | 015 | 171 | 6 | 800 | 830 |
| 18．LBPOHA（Buddatat）．．． | Darjocltng．．．． | 420 | 47 | 101 | 1，000 | ．．． | $\cdots$ | ${ }^{988}$ | 13 | ．． | 887 | 178 | ．．． | 148 | 805 | 53 | 5 | 667 | 809 |
| 17．MAGH（Bualdhlat）．．．．．． | Orittagong ．．． | 400 | 401 | 208 | 990 | 1 | ．．． | 868 | 85 | 8 | 608 | 885 | 83 | 25 | 717 | 108 | $\bullet$ | 884 | 680 |
| 18．SONTAL（Hindu）．．．．．． | Bengal ．．．．．． | 407 | 44 | 148 | 892 | 7 | 1 | 048 | 52 | 1 | ． 410 | ${ }^{6} 4$ | bs | 34 | B4 | 148 | 10 | 44 | ${ }_{68}$ |
| 10．SONTAL（Animist）．．． | Mengal ．．．．．． | 412 | 451 | 187 | 997 | 8 | $\cdots$ | 964 | 38 | 4 | 466 | 499 | 4 | 87 | 816 | 188 | 19 | 460 | 529 |
| 30．SAIYAD（Yumiman）．．． | Bengal ．．．．．． | 878 | 450 | 108 | 088 | － 11 | 1 | 895 | 100 | 5 | 236 | 313 | 4 | 21 | 814. | 168 | 6 | 304 | ${ }^{810}$ |
| 31．SMAHA（Hida）．．．．．． | Beugal ．．．．． | 809 | 44 | 242 | 298 | 4 | 1 | 891 | 104 | 6 | 120 | 824 | ＊ | 0 | ． 71 | 930 | 8 | 989 | 888 |
| 32．TIPARA（Eludu）．．． | Tripura state ．．． | 418 | 474 | 107 | 948 | 2 | ．．． | 965 | 45 | ．．＊ | 418 | 671 | 18 | 36 | 807 | 169 | 11 | 835 | 354 |

## CHAPTER VIII.

## Literacy.

172. Introductory.-This chapter is commentary upon the statistics contained in Tables VIII and XIX of the Census Tables Volume. In the former the number of persons who are illiterate, literate, and literate in English is shown by age periods for the Province as a whole and for each religion returned, and also for the main religions in each district and city. In the latter the same statistics are given for the whole Province, or a part in which a particular section is numerically important, for the castes, tribes and races for which separate statistics are given by districts in Table XIII. Seven subsidiary tables are appended to this chapter setting forth statistics of :-
I.-Literacy by age, sex and religion.
II.-Literacy by age, sex and locality.

JII.-Literacy by sex, religion and locality.
IV.-Literacy in English by age, sex and locality.
V.-Progress of literacy since 1881.
VI.-Literacy by caste.
VII.-Number of institutions and pupils according to the returns of the Education Department at the time of each of the last four censuses.

A change, it will be noticed, had been made in the mode of presentation of the proportional figures in these subsidiary tables since 1911, for in those at the end of this chapter the proportion literate, instead of being given per mille of the whole population of any locality or the total number of any section, has now been given per mille aged 5 and over. The change has been made under the instructions of the Census Commissioner in order to bring the Indian statistics of education into line with those of European countries. In order to arrive at the proportions it has been assumed that all those who were literate were more than 5 years old, and their number has been divided by the number who gave their ages at more than 5 . The assumption must be very near the truth, but objection may be taken to the change which has been made on the ground that it introduces into the statistics of literacy the very serious element of uncertainty as to age among children. This uncertainty, however, has produced much the same anomalies in the age returns in every part of Bengal and amongst almost every section of the community at each successive census, and for comparative purposes the introduction of the element of uncertainty as to age is not as dangerous as it might have been.

When the comparative statistics of literacy shown by successive census enumeration are under examination it is necessary for the student of the figures to bear in mind the history of the return of "iteracy on each occasion; In 1881 individuals were returned as "Illiterate," "Literate" and "Learning", and the same classification was used in 1891. Instructions were issued that all those who were under instruction either at home or at school or college were to be returned as "Learning,',' whatever stage their education had reached; those who had left school or college or given up learning at home and who could read and write were to be returned as "Literate," and the rest of the population as " Illiterate'." It was found however that the numbers of those returned as "Learning" was far less than the statistics compiled by the Education Department revealed as under instruction in schools and colleges, for
there were very strong tendencies for children who had only just beguil going to school to be returned as "Illiterate" and for those whose education had reached a later stage to be returned as "Literate" as indeed they were. Therefore, it was decided at the Census of 1901 to divide the population into two categoriés only," Literate " and " Illiterate, ${ }^{\text {" }}$ but no criterion was adopted to decide whether an individual should be considered literate or not, and the decision was left in the hands of the enumerators. Another change was made in 1911; a definite standard was adopted; and instructions were issued that only those should be returied as literate who were able to write a letter to a friend and read the ánswer to it. The change affected the return materially in the early ages as will be seen from the figures printed helow, but it does not appear that it affected the returns in later ages in the same manner; though there is undoubtedly a large number, especially in the ${ }^{-}$ stnall shopkeeper class, whose accomplishments do not go futher than to enable them to sign their names and keep accounts :-


The prescribed standard if strictly applied should have excluded this large: body, but it seems probable that it has not done so and that such persons have generally been included among the literates.'. The same standard has been' applied at the last census and the returns of 1921 are strictly comparable with those of 1911, though not without some adjustment with the returns of 1881, 1891 and 1901.
173. Extent of literacy- In Bengal 181 per mille of the male population aged 5 and over is literate and 21 per mille of the female population above the same age. Taking both sexes together the proportion is 104 per mille. Compared with European standards it is extremely low, only one in ten of the population excluding children ander 5, but compared with Indian standards it is comparatively high. Thanks to the free instruction imparted in the monasteries and the absence of the parda system which hampers the education of females in other parts, Burma is far ahead of the other provinces in the matter of education. The number literate per mille males and females aged 5 and over in the greater provinces of India at each of the last three censuses is given in the following table, and their relative position in this, respect at present is illustrated by diagram No. 75 :-




The great provinces stond in exactly the same order in respect of the extent of literacy in 1001 both for males and females as they stand now, but, the order was changed in 1911 for Madras made great strides between 1001 and 1911 and went alhead of Bengal. It established at the same time a long lead oves Bombay. Iming the last 10 years, however, it has Leen Bengal that has made the greatest progress. In respect of primary education of its males it is now ahead of Madras again, and in respect of that of its fermales it is drawiug up cluse to Madras. Bomnay has made very litile progress in male education in the last 20 years, but the spread of education anong its females has pre'ressed faster and in this respect it is still ahead of Bengal, though in respect of male education it is now very far behind. Education has progressed nearly twice as far in Bengal as in Bihar and Orissa and nuch more than twice as far as in the Punjal and the Conited Provinces.
174. Variations according to locality.-The proportion literate in each of the several quarters of the I'rovince is to be seen from diagram No. 76 above, which illustrates figures giveu in Subsidiary Table II. In the matter of the education of boys, Central Beugal aud Western Bengal stand on much the same level and both are well in advance of Chittagong Division with Tripura State, which comes before Dacca Division by as much as Dacea Division comes before Northern Bengal. In female education Central Bengal has a considerable lead over other parts which is due to the fact that female education has attaimed some measure of popularity in Calcutta, where 27 per cent. of the female population aged 5 and orer can read and write. This is 13 times as high as in the rest of the I'resideney Division and raises the level of female eduration there twice as high as in the rest of the Province.

The map in diagram No. 77 below indicates variatoons in the proportion literate among the two sexes together from district to district, and in order of their priority in the matter of primary education the distrits stand as follows, the figures aiter each being the number literate per mille of both sexes aged 5 and over:-

| Calcuttn | $\cdots$ | .- | 450 | Cunhineliar | $\ldots$ | ... | 91 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inewrals | $\cdots$ | ... | $1 f, R$ | Јirajprir |  |  | 40 |
| 24. Pugranas | $\cdots$ | ... | 1.20 | Yoak ${ }^{\text {lina }}$ | ... | ... | 38 |
| lfogerily | $\ldots$ | ... | 145 | Jobrore | .. | ... | 66 |
| Bakarganj | $\ldots$ | ... | 134 | Chittheour | .., | ... | 84 |
| Tariecling | $\cdots$ | ... | 125 | Tripura state | ... | ... | 82 |
| Kimina | $\cdots$ | $\cdots$ | 124 | Murshidabad | ... | $\cdots$ | 8.1 |
| Midmapore | $\cdots$ | $\cdots$ | 122 | Pabin | $\ldots$ | $\cdots$ | 76 |
| Buthium | $\cdots$ | $\cdots$ | 116 | Nadis | ... | $\ldots$ | 73. |
| Surimen | $\cdots$ | $\ldots$ | 114 | Mancpur | $\ldots$ | $\cdots$ | 68 |
| "lippera | $\cdots$ | $\cdots$ | 113 | Jalpaiguri | ... | ., | 05 |
| Hacra | $\cdots$ | $\cdots$ | 102 | Chitagrong H |  | ', | 64 |
| Rogra | $\cdots$ | $\cdots$ | 99 | Rajsitahi | ... |  | 62 |
| Farndiur | $\cdots$ | $\cdots$ | 99 | Mymeneing | ..' | ... | 60. |
|  | $\cdots$ | $\cdots$ | 91 | Malda | ... | ... | 55 |



The proportion in Sikkim is 45 per mille aged over 5 , considerably lower than anywhere in Bengal. The variations in the level of female education follow those in the level for male education very closely, but the actual variations are proportionately somewhat more abrupt in the case of female education. This is only what would be expected. There is really very little demand for female education until male education has made its impression on a considerable number. The only locility where more than half the males over the age of five can read and write is in Calcutta. There their accomplishment has so stimulated female education that the proportion among females is more than a quarter. The level of female education is, however, so low in such districts as Malda, Rangpur, Jalpaiguri, the Chittagong Hill Tracts and in Sikkim State where the level of male education is low also, that it can hardly be said to have gained a footholifat all, less than one per cent. of the females over 5 in these parts being able to read and write. One is justified in the comment that there is very little demand for female education anywhere outside Calcutta. It is the parda system which is responsible for this. There are girls' schools teaching beyond the primary standards in all towns of any size and a few in rural areas; the total number is 92 and the number of prpils about 14, 000 , but mery few girls inded are allowed to continue their schooling after the age of 10 or 11 and in some towns where there are schools teaching beyond the primary standards it is sometimes found that the numbers attending are liable to fall off, and the parents expect not only to be allowed to send their girls to schools practically arotis. but to have a closed vehicle belonging to the school call for them in the moming and take them home in the evening. Still girls' schools have multiplied, for not only has the Government done its berst to stimulate them, hut enlightened Indians have seen the necessity for educating the female as well as the male sex if the race is to make real progress, and have siven their surport to the movement.
175. Literacy and age.-The statistics of literacy have been set forth so as to show the number of literates between 0 and 10 years of age, between 1s and 15, between 15 and 20 , and 20 and over. It has been assumed in prepariug the subsidiary tables at the end of the chapter that all those who were returned as literate under the age of 10 must have been over the age of 5 , and the number has been divided by the total number of children between the ages of 5 and 10 to give the proportion of literates per mille aged 5 to 10 :-

|  | Literate pki mille malei momo - |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $5-10$. | 10-35. | 15-20. | 90ad over. |
| Weit Bengal | 69 | 198 | 257 | 273 |
| Central Bengal ... | 67 | 184 | 273 | 275 |
| Nortl Bengal $\quad$... : ... | 31 | 103 | 156 | 123 |
| East Bengal (Dacca Division) ${ }_{\text {, }}$ (... | . 87 | 129 | 191 | 194 |
| East Bengal (Chittagong-Divisiou add Tripura State) <br> ... | 35 | 122 | 240 | 228 |
| Whole Province . ... . ... | 45 | 144 | 214 | 225 |

The above figures would appear to indicate that education makes a rather greater impression at an early age, even when compared with the impression it makes on the population of all ages, in Western and Central Bengal than in Eastern Bengal. There are twice as many literate between 5 and 10 in these two divisions as in the rest of the Province, though there are by no means twice as many literates in later ages. It might have been expected that almost all who were to attain literacy would do so before they reached the age of 15. The country is making a great effort to improve its education, educational institutions are being multiplied, and although adolence is reached very early there is practically no provision for educating adults by means of evening classes; ete., such as were tried with so much success in Germany. I muct strike one as congruous therefore that the propor.tion literate among those over 20 should be shown greater than the proportion between 15 and 20 , and so much greater than the proportion between 10 and 15 as 225 to 144 . The village boy when he leaves school in Bengal and takes his share in the cultization of his father's land has very little inducement to keep up his knowledge, even the most elementary knowledge of reading and writing. He reads no books or newspapers, and hardly ever even sees the written 'word. The family keeps no accounts, no shopkeeper's name is inscribed - over the few shops to be found in rural areas, po articles forisale are marked with the price, and there are no hoardings: Not even an advertisement - catches his eye. The only written or printed papers which are to be found in a cultivator's house are the rent receipts given by his landlord, a document or two which his reference to his land written in legal phraseology in sucb - a manner that it is the last'thing a stumbling reader would wish to tackle, ${ }^{1}$ and perhaps some copies of evidence or a judgment in English in some case ini which $h$ he has beer an interested party: The newspapers published in the towns have a very small circulation in the towns themselves and none outside, largely for the reason that the topics upon which they are exercised generally refer to party faction in which but a limited number of persons of the town itself are interested. . They contain nothing of interest to the villager. In the circumstances it. is inevitable that there must be much lapse from - literacy. An attempt was made, of which some accotant is given in an appendix to this chapter, to discover the bearing of the census figures on the extent of-lapse from literacy, but it proved abortive. The census figures do not in fact indicate that there is any great lapse from literacy in Bengal. The result may be partly explained by the fact that a number of men employ--ed as durwans and peons and in other capacities in which they are kept waiting about for long periods without much to occupy them, do teach themselves to read after they have reached maturity. Such persons are the
employees of persons who use the art of letters, they realize the advantage of being able to read and write, appreciate the fact that they can only rise higher in the employment of their masters by acquiring some education and take steps to do so. In Eastern Bengal moreover a bearded Muhammadan school boy is not a very uncommon sight, and a class in a vernacular school often includes one or two whose age is half as much again as the average for the class. But still the conclusion is inevitable that-the return of literacy in adult ages is not accurate. The man who reached the census standard of literacy when he was at school will not admit that his knowledge has slipped from him, and perhaps, not having tried his hand for a very long time, is quite unconscious that this has happened. The enumerator has no time to examine each person he enumerates, and adults would resent any attempt on his part to do sa. He can read and write himself and very often he has known those whom he is to enumerate all his life. He remembers that so and so was at school in the same class as himself or his brothers and assumes that he has retained his knowledge as himself has retained it. The fact that the prescription of a standard of literacy for the first time at the Census of 1911 made little difference in the proportion of literates bver the age of 20 though it made some at earlier ages; points to the probability that the staudard is not strictly applied to adults, and the conclusion is inevitable that the census statistics gravely exaggerate the number of adults who are literate.

The figures for females as given below do not show a similar increase in the proportion of literates with ages-


Literacy is attained early by females if they attain it at all, for the proportion literate between: the ages of 5 and 10 is more than half as muchias the proportion in all ages over 20, and the proportion literate between 10 and 15 is decidedly higher han the proportion in all ages over $20:$ Indeed in the Province as a whole and in Central, Northern and Eastern Bengal it is a shade higher in the ages $10-15$ than in the ages $15-20$; a fact which is eloquent of the early age 'at: which female education is suspended. That it is much lower in the ages above 20 is due partly to the fact that female education is a comparatively new departure in this oountry and partly to lapse from literacy. Such lapse does not 80 often pass unnoticed in the case of females as in the case of males, for the only females who receive any education belong to families of which the men have themselves received a good education, families in which reading and writing are put to ! practical suse. The cultivator may forget all he knew and not-discover the fact-or-if he does he may conceal it, but the husband whose wife received some education when she was a child, and who answers the enumerator's questions when he comes round to fill in the census schedules, will know whether his wife really attains the census standard of literacy or not and will answer accordingly. It is probable, therefore, that there was not the same exaggeration of the number of literates among adult females as among adult males.
178. Literacy and religion.-The relative standard of education among the adherents to the main religions of Bengal are compared in Subsidiary

Table I and III appended to this chapter and illustrated in diagram No. 73 below :-


Naturally European Christians and the Brahmos take a long lead from others, but even Indian Christians are well ahead of other religions in the elementary education of their males, and very far abead in that of their females. Literacy is more than twice as frequently found among Hindu than among Muhammadan males aged 5 and over, and $3 \frac{1}{2}$ times as frequently found among Hindu than among Muhammadan females. It is this coutrast which is mainly responsible for the advantage which Western Bengal with its large Hindu element has over Eastern Bengal in its proportion of literates. Among Hindus the proportion of males who can read and write is fairly level through the districts of Western and Central Bengal but falls low in Northern Bengal except in Pabna and Bogra. The Eastern Bengal standard among them is higher than in Central or Western Bengal. 416 per mille of the Hindus in Bakarganj are literate, a proportion which is surpassed only in Calcutta, and Tippera 346, Chittagong 344, Noakhali 333, Dacca 327, Pabna 307, and Faridpur 305, all have more than 3 in every 10 Hindu males aged 5 and over able to read and write. The proportion is higher among Muhammadans in the western districts where they are in a minority than in the rest of the Province. It falls very low in the districts on either side of the Ganges, Nadia 49, Faridpur 72, Pabna 79, Rajshahi 80, Dacca 83, Malda 85, but is higher in Rangpur 96 and Bogra 161. In Bakarganj 159, Tippera 120 and Noakhali-117, also it is high again, but it is very low in Mymensingh 59. Nearly 27 per cent. of the Hindu women over 5 in Calcutta are literate, a proportion which is nearly four times as great as in the localities which come next on the list, Dacca with 71 per mille and Bakarganj with 70. The proportion falls very low in Sikkim, the Chittagong Hill Tracts, Jalpaiguri, Darjeeling, Malda, Dinajpur, Tripura State, Midnapore, Bankura, Birbhum, in all of which less than one female in 50 over the age of 5 can read and write. The proportion among Muhammadan females is miserably low everywhere except in Calcutta, 84 per mille, Chittagong Hill Tracts (a small minority of the population) 34 and Darjeeling (again a small minority) 22. Elsewhere it is below 1 per cent. except in Hooghly and Howrah where it just touches that figure. The proportion in the case of Animist males is generally but half that in the case of Hindu females and education has not touched Animist females at all. Buddhists are numerous only in Darjeeling, Jalpaiguri, Chittagong Hill Tracts, Chittagong, Tripura State and Sikkim and the level of education among them is generally about half way between that for Hindus and for Muhammadans throughout the Province.

The statistics of literacy given below according to age reveal a remarkable contrast between Hindus and Muhammadans:-


The former reach the stage in their education when they can read and write very much earlier than the latter. In the ages $5-10$ the proportion literate is more than four times as great for Hindus as for Muhammadans; in the age of $10-15$ it is just over three times; in the age of 15-20 about $2 \frac{1}{2}$ times; and over the age of 20 but a little more than twice. This is partly due to the fact that before he is taught anything else the Muhammadan child is usually taught to say his prayers by rote and perhaps to repeat some parts of the Koran. This delays his secular education at the start, as further on in the progress of school education the necessity for him to take up another language, Arabic, as well, gives the Hindu boy an opportunity of getting ahead of him in English. Moreover, whatever may be the reason for it, it seems that the average Muhammadan develops intellectually later than the average Hindu. Those who have had much experience with the clerical labour of the poorer class in Bengal have often remarked upon this fact. A Muhammadan clerk often seems to improve considerably after the age of 25, whereas a Hindu clerk though he becomes more experienced does not often ishow much intellectual expansion after the age of 20. An examination of the statistics of literacy, on the same lines on which those for Civil Condition were examined to discover the average age at marriage in §167-shows that the average Hindu boy who learns to read and write attains the art at about the age of $8 \frac{1}{2}$ but the average Muhammadan boy does not reach the same standard till he is about $11 \frac{1}{2}$.

It is the return of literacy among Muhammadans that has been mainly responsible for the phenomenon already noticed that in the whole population the proportion of males who are literate is greater above the age of 20 than between 15 and 20. It is true that the grown up school boys sometimes found in Eastern Bengal are all Muhammadans but there is no doubt that it is among Muhammadan cultivators that there has been the greatest exaggeration of the number of adults who are literate. The result of the very early termination of a girl's schooling is equally apparent in the statistics for literacy among Hindus and among Muhammadans. In both communities the proportion literate is greater between the ages of 10 and. 15 than between the ages of 15 and 20 , and very much greater than among females whose age is more than 20 as shown below:-

| . |  | ' | Litrate fier mille jexales agid- |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $8-0$. | $\begin{array}{r}10-15 \\ \times \\ \hline\end{array}$ | 18-20. | 80 and orer. |
| Bindu | -.* | - ... | . 19 | 53 | 51 | 35 |
| Muhammadan | $\cdots$ - | $\cdots$ | 4 | 9 | ${ }^{8} 8$ | 5 |

177. Literacy and caste.-The proportion literate per mille of each sex, aged 5 and over in all the castes, tribes and races of great numerical importance in Bengal are given in columns 2, 3 and 4 of Subsidiary Table VI at the end of this chapter from the statistics of 1921 and in column 5, 6 and 7 from those of 1911.

Statistics in the form of Census Table XIV showing the number of each caste in each age period are available only for a selected number of these castes. In preparing this subsidiary table for those castes for which age statistics are not available the proportion over the age of 5 was taken to be the same as in the whole body of adherents to the same religion in order to obtain the number literate per mille age 5 and over. The castes stand in the following order in respect of the extent of literacy in both sexes in each :-

|  | Luteracy per milie 8 of both witces. ind exch canto. |  |  |  | Literaoy per mille of both sexes agod each carte. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baidya | ... | 662 | Subarnabenik | - | $\ldots$ | 383 |
| Agarwala (Calenta oaly) | ** | 542 | Gandhabanik | ... |  | 344 |
| Brabuma | ** | 484 | Shaha | ** |  | 342 |
| Kayasths -.. | ... | 413 | Indian Christian | ** |  | 288 |




The bhadralok castes, Baidya, Brahman and Kayastha come first, then generally speaking the shopkeeper castes, represented by the Subarnabaniks; Gandhabaniks, Shahas, Telis and Sunris, and the Indian Christians. The industrial castes Kamar, Jugi and Tanti come before any of the cultivating classes, and Kalus, Sutradhars, Kumhars and Kapalis comparatively high up. Of the cultivating castes those belonging to Central Bengal and the delta parte of Western Bengal the Pods-and the Chasi Kaibarttas are considerably ahead of those which belong-to Eastern and Northern Bengal, the Namasudras, Rajbansis and thè Mühammadan Shekhs. Most of the Himalayan races come in between; and the fisherman and boatman castes, Patnis, Jalia Kaibarttas and Tiyarsare?little behind the Eastern Bengal cultivators. Considering their disadvantages the Tiparas of Tripura State nccupy an unexpectedly high position and they have attained it mainly by the remarkable progress which the returns, show. them to have made during the last 10 years. It is almost unbelievable that the proportion literate among them should now be more than ten times what it was in 1911, and it may be that the standard of literacy was placed peculiarly low at the time of the census enumeration in the State. At the bottom of the list come the castes lowest in the social scale, Bhumalis, Chamars, Muchi and Haris, the Muhammadan sections, Jolaha, Kulu and Behara, and the aboriginal tribes and their nearest relatives, Bagdis, Bhuiyas, Garos, Bauris and Santals. It is perhaps rather curious that the Napits should be so far in advance of the Goalas and the Dhobas. The case of the Goalas is an example of the effect produced on such statistics as these by the efforts which the more advanced of some castes made at the time of the census to get themselves returned by something else than the name by which their caste is commonly known. Goalas-who had received some education and improved their position refused to be entered in the census schedules as Goalas and put themselves down as Sadgops. As iveing cultivators, the latter would be expected to show a level of education about the same as that of other cultivating classes, but as a result of what was done they show a much higher one, while the Goalas appear to occupy a less' advanced position than they should. The contrast between the Dhobas and the Napits is explained by the fact that the latter are almost exclusively $a$ functional caste, whereas the Dhobas in Midnapore and in Tippera and Noakhiali, where they are most numerous, can never have been exclusively: washermen, but must originally have been races of cultivators in these two localities. Consequently their level of education conforms more closely ta that of the cultivating classes than of the functional castes.

In the matter of female education the Baidyas are far in advance of any other community, and besides them, the Brahmans, Kayasthas, Indian Christians and some of the mercantile castes, Subarnabanik, Shaha and Gandhabanik, there are no other castes in which education has made any considerable impression on the female population. The little impression that has been made in other castes is, however, generally proportional to the extent of literacy among males in each caste.
178. Progress of education.-The changes which have been made in the manner of return of statistics of literacy from cencus to census from 1881 to 1911 render it somewhat difficult to obtain an accurate estirate of the prógress of education, but the proportionate figures given in Subsidiary Table V give a means of obtaining an approximate estimate of actual progress and an. impression which can be wholly relied upon in comparing the relative progress of one locality with another. In order to make use of the statistics of 1881 and 1891 it was necessary to make some arbitrary division of the numbers returned as " learning " at those two censuses. The statistics were presented at the time separately for the age periods $5-15$ and $15-25$, and what has been done in preparing this subsidiary table has been to treat those returned as " learning " over the age of 15 as " literate" and those learning under the age of 15 as "illiterate. "For the Province as a whole the proportion literate.
has increased from 187 per mille males aged 5 and over in 1881 to 181 in 1921 and frour 4 per mille females in 1881 to 21 in 1921.


The progress in male education does not appear from the statistics to have been at all even, but an explanation for the apparent irregularities before 1011 may lie in the changed manner of the successive returns. There has however been no such change between 1911 and 1921 and but a minor change between 1901 and 1911 and we may safely compare the statistics of 1911 and 1921, and with comparative safety the statistics of 1901 and 1911. The progress of the last 20 years in the several quarters of the Province is summed $u_{p}$ in the following table:-

|  |  LOED B AND OVEM. |  |  | Pripoationate proonsis. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 100. | 191. | 1031. | 1201-101. | 1911-1801. |
|  |  |  |  | Per cent. | Por cent. |
| Weat Beogal (Burdwan Division). | 214 | . 216 | 230 | 1 | 6 |
| Central -Bengal (Presidency. Divinion). | . 378 | 203. | 232 | 15 | 14 |
| North Bengal (Rajohalii Divi.siou and Cooch Belar). | 95 | 111 | 134 | - 13 | $\cdot 21$ |
| Eastern Beugal (Dacca Division). | 121 | 136 | 154 | . 12 | - 13 |
| Chittagong Division and Tripura state. | - $136^{\circ}$ | : 152 | 169 . |  | 11 |
| Whole Province | . 147 | 161 |  |  | 13 |

The prescription of a standard of literacy caused a slight reduction of the apparent progress between 1901 and 1911, but it seems certain that in the Province as a whole the progress which has been made in the last 10 years is certainly as great as in the 10 years before. . Western Bengal which made little apparent advance between 1901 and 1911, has made better progress since, but its advance has not been at the same rate as that of other parts of the Province. Whereas it was well in advance of other parts of Bengal 20 years ago it now falls behind the Presidency Division. In the latter the progress of the last 10 years has been rather less than in the previous decade but it has been greater than elsewhere in the Province except in the backward Rajshahi Division. The latter has made great strides towards making up leeway during the last 20 years, and has made quite as much real progress since 1911 as between 1901 and 1911., The two divisions in Eastern Bengal have progressed at about the same rate which is slightly above the average for the Province for the 20 years. The separate examination of the progress in the several districts and States shows some of those which were comparatively backward to have made great strides since 1911, especially Tripura

State, in which progress has been very. remarkable indeed, Dinajpur. Rangpur and Bogra. But on the other hand other backward districts such as Malda, the Chittagong Hill Tracts, Nadia,-Jalpaiguri, and Mymensingh have either made very little progress or gone back. . The same contrast is to be found between some of the more advanced districts. Bakarganj, Tippera, Noakhali, Khulna, Faridpur; Bankura, Birbhum and Calcutta have made great strides, but Chittagong, Cooch Behar, Burdwan and Howrah have failed to do so. Calcutta keeps its long lead, with twice as many literates among its male population as any district. Even in 1881 it had a proportion 50 per cent. higher than any outside district has yet reached.

Except in Calcutta, education had hardly touched the female population 40 years ago. Only one woman in-every- 250 could read and write in 1881. There has been steady progress during every decade since, in almost every district and State in the Province. Calcutta's lead over the rest of Bengal is more remarkable in the case of female than in the case of the male education, and progress in Calcutta has now carried the art of reading and writing to more than a quarter of the women who live in the city compared with only one in eight 20 years ago. Everywhere there has been decidedly more progress in the last 20 years than in the 20 vears before, 1901 and in most districts progress since 1911 has been greater than it was in the previous decade.
179. Progress of recent years according to caste.-The extent of literacy among males of the bhadralok castes seems to have reached its limit. Practically all Baidya males have had the opportunity of acquiring the art of reading and writing Bengali and most of these who cannot do so are either not yet old enough or are defective. Brahmans and Kayasthas are rather behind the Baidyas, but among them too, elementary education has gone no further than 1911; in the case of all three, the last decade has shown great progress in female education. The Gandhabaniks seem to have made no progress in either sex in the last 10 years. Other castes have generally made some in the education both of their males and females of recent years', 'but there are exceptions, for example, the cases of the Pods, Tantis and Bauris. Those noted below, are among the castes which have made greatest progress in the education of their males :-

|  |  | - | Nomabr literate pro mitial MALES AGED 5 AND OTER. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| . - |  |  | 1981. |  | 1911. |
| Tiparas | ** | -." | 173 | , | 16 |
| Patnis | ... | ... | 130 |  | 38 |
| Tiyars. | :.. | ... | 103 | $\cdots \cdots$ | 47 |
| Garob | - ... | - ... | . 25 |  | 6 |
| Murmis | ... | .. | 177 | - | 104 |
| Lepchis | - | -. | 93 |  | 64 |
| Goalas | ... | ... | 203 |  | 149 |
| Malos | :.. | ... | 93 |  | 61 |
| Koches | ... | ... | 72 | . | 39 |
| Kapalis | -.¢ | $\ldots$ | 215 |  | 137 |
| Jimders | -- | ... | 203 |  | 149 |
| Saiyade | ... | -* | 412 |  | 309 |
| Jalie Kaibarttas | -** | - | 123 |  | 95 |
| Sanris | ... |  | 346 |  | 278 |
| Barais | - $*$ | . | 398 |  | 326 |

The phenomenal progress of the Tiparas has already been mentioned. Among the others mentioned there are a number of the Eastern Bengal aquatic castes who are socially rather looked down upon, Patnis, Tiyars, Malos and Jalia Kaibarttas. In the hills to the north the Buddhist tribes, Murmis and Lepchas, have made more progress than others. The progress of the Saiyids and the Baruis is in part fictitious. Many Muhammadans who have risen in the world, and among such there is naturally more than the average education, take to calling themselves Saiyads. Some of the Baruis in 1911 tried to make themselves out to be Kayasthas and individuals returned themselves
so, but on the occasion of the last census the claim was not pressed as rigourous$1 \mathbf{y}$, and no doubt the Baruis now get the credit for the literacy of a number of the more advanced of the caste who called themselves Kayasthas ten years ago. The figures for Sunris given in 1011 referred only to Western and Central Bengal, those for 1821 refer to the whole Province so that the figures are not strictly comparable.
180. Literacy in English.-It is indeed remarkable that in a country where but 18 per cent. of the males aged 5 and over can read and write their own language as many as $3 \cdot 4$ per cent. should have acquired as much proficiency also in a foreign language. Yet this is the case in Bengal : 339 per 10,000 of the males aged 5 and over can read and write English and 23 per 10.000 of the females. The knowledge is school-acquired knowledge, for very few of those who have learrt it have ever heard it spoken by an Englishman, though some may have picked it up partly from hearing it used by their elders in conversation. The reason for the comparatively advanced stage to which secondary education has been pushed in this country, while primary education has still not touched the great mass effectively, lies mainly in the caste system which divides the population between a section, whose tradition requires in them a knowledge of letters and whose traditional occupations are clerical, and the great mass whom caste jealousy in the past has helped to keep in outer darkness. The first. and smaller section has had some education for a very long time and an enthusiasm for acquiring more. There is no possi-

- bility for an individual of it to slip down from his pedestal in time of adversity or fall back for a means of livelihood on one of the occupations which engage the great mass. He must follow an occupation becoming his social position or starve. He therefore receives primary education as early as possible, and, to equip himself as well as he can for the competition which is daily becoming keener to find such employment as his caste traditions permit him to accept, he continues his education to the secondary stage. This is the key to the enthusiasm for secondary education while there is comparatively little enthusiasm for primary education among the masses. The smaller section is the vocal section and its importunities in the past have led the Government to devote a disproportionate effort and expenditure to forwarding secondary education, disproportionate at least by comparison with the efforts of the Governments of other countries which have turned their attention first to offer primary education to all their subjects, and only afterwards to assist private enterprise in fostering seconadry education. In Bengal in 1921 there were no less than 333,930 pupils accommodated in High English and Middle English Schools workine under the Fducation Demartment, more than a quarter the number of pupils, $1,181,531$, in primary schools.

In respect of English education Bengal takes the lead of the other provinces of India as the figures of the following table illustrated by diagram No. 83 will show :-



The Burmese though they are so far ahead of the other peoples of India in vernacular education, have not taken to English education to the same extent, and twice as many of the males in Bengal have learnt English as among the males in Burma. In Burma, however, female education in English has progressed the further. Bengal is well ahead of Bombay and Madras which come close together, but Bombay has more females educated in English than either of the other two. The Punjab, the United Provinces and Bihar and Orissa are far behind.
181. English education in the several parts of the Province.-Calcutta is far ahead of any of the districts outside it. In the city half the 53 per cent. anong males over the age of 5 , who can read and write at all, can also read and write English. The variation in the proportion from district to district are illustrated by the map in diagram No. 81.


Hooghly and Howrah come next to Calcutta in respect of the knowledge of English. Burdwan, the 24-Parganas, Darjeeling and Dacca follow, and the districts in the centre of the Province, Khulna, Nadia, Faridpur and Pabna, come before Murshidabad, Birbhum and Bankura on the west and Chittayong. Bakarganj and Tippera on the east. Northern Bengal, except for Darjeeling and Pabna, is very backward in this knowledge, as are also Midnapore, the Eastern Hill Tracts and Sikkim. The knowledge of English among females generally varies in the same direction from place to place as among males, but Calcutta has a longer lead over rural districts in the matter of English education among females even than among males and Darjeeling is very far in advance of any plains district,' mainly because there is no purdah system among the hill people to cut short the girs' schooling as in the plains.
182. English education and age.-The explanation of the return of the proportion literate in English, so high in the ages between 15 and 20 compared with the proportion over 20 as indicated below, lies in the great strides which English education has, made in the last few years :-

| 4 |  |  | Nuxarr frr 10,000 mitrrate in Englise in eage age |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 5-10. | 10-15. | 18-30. | 20 add orer. |
| Mules | $\bullet$ | - ... | 48 | 315 | 614 | 384 |
| Femalea | - ${ }^{-}$ | .-• | 9 | 32 | 31 | 24 |

English is acquired at a comparatively early age for apparently the standard of literacy is reached, among those who learn it, about the average age of $12 \frac{1}{2}$. It is not probable that many who have once properly acquired the language forget it, for Bengalis educated in English appreciate the facilities which the language gives them, especially int the expression of abstract idea, and in common speech they lard their conversation in Bengali with a plethora of English abstract nouns. That the custom of che country requires girls to leave school at a very early age is emphasized again by the fact that the proportion literate in English is greater among females between the ages of 10 and 15 than between the ages of 15 and 20 .
183. Progress of English education.-Thirty years ago only 76 per 10,000 of the male population over the age of 5 in Bengal could read and write English. The proportion doubled between 1891 and 1901 and increased by 50 per cent., from 157 to 228 , in the next decade. During the last the increase has again been 50 per cent.. The increase from 157 to 228 was sufficiently remarkable, but that in the next decade there should have boen the same proportionate increase on the top of it is very remarkable indeed. The actual number of males educated in English now is well over five times as many it was 30 years ago, and it is not surprising that a knowledge of English is not the key to open the door to remunerative employment that it used to be. In spite of the fact that the proportion knowing English among the females is so low, it has increased only at the same rate as the corresponding proportion among males. A knowledge of English in fact of very little use to women.
184. English education and caste.-The castes numerically of the greatest importance stand in the following order according to the prevalence of knowledge of English among their male population :-

|  |  | $\underset{\substack{\text { Sum } \\ \text { mal } \\ \text { Ove } \\ \text { Het }}}{ }$ |  |  |  | $\begin{gathered} \text { Mamt } \\ \text { mane } \\ \text { orer } \\ \text { rit } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baidys | ... | .-. | 5;130 | Saiyad | ... | -.. | 921 |
| Brahman | ... | ... | 2,774 | Barui | ... | ... | 802 |
| Kayastha |  | ... | 2,560 | Teli | $\cdots$ | ** | 671 |
| Subaraabanik |  | ... | 2,189 | Sadgop | ..' | ... | 587 |
| Indian Christian | ... | ... | 1.535 | 'Tantt | ... | -. | 535 |
| Agarwala (Calcutta | only) | ... | 1,338 | Kamar | . $\cdot \stackrel{ }{ }$ | ... | 469 |
| Shahe |  | ... | 1,134 | Sudra | $\cdots$ | ... | 376 |
| (handhabanit |  | ... | 1,128 | Suari | $\cdots$ | ... | 371 |



The proportion is illustrated for the castes which have as many as 2 per cent. of their males literate in English in diagram No. 82. A comparison between the list of castes in this order and the list in paragraph 177 above will show how accurately the impression which English education has made in each caste follows the impression which vernacular education has made, but the more' advanced castes have much more a monopoly of English education thau they have of vernacular education, for the proportion literate in English among the Baidyas is 19 times as great as in the first cultivating class met with in the table just above, the Chasi Kaibarttas, while as regards literacy in the vernacular the proportion who have it among the Baidyes is only five times as great as among the Chasi Kaibarttas. More than half the Baidya males over 5 understand English, and this caste has a long lead over the Brahman and Kayasthas among whom the proportion is only a little over a quarter, while the three are further in advance of the mercantile classes in the knowledge of English than in respect of verinaiblar education, and Indian Christians have
paseed the latter. English education is now denied to no section of the community for there are even 138 Doms, 169 Bhuimalis and 100 Haris who bave learnt the language.

The Baidyas have five times as great a proportion of their females literate in English as the Kayasthas who stand next to them, and very few but bhadralok females have acquired the language.

## APPENDIX TO CHAPTER VIII:

## Account of an abortive attempt to test the extent of lapse from literacy.

It has been explained in Chapter V that to obtain an age distribution of the population by annual age periods, slips for about 100,000 persons of each sex and religion were sorted by annual age periods instead of by the quinquennial periods required for Imperial Table VII. The results are given in Subsidiary Table I to Chapter V. The slips for males in the ages 10 to 29 were then sorted to separate literates and illiterates in the hope that by comparing the number of literate in each age per 100,000 of the total male population with the annual statistics of the Education Department showing how many scholarg were studying in each year for the last two decades in the classes in which literacy is ordinarily attained in the schools, some indication might be obtained as to how many boys lose the art of letters after they leave school. The result of the sorting is disclosed in the following table:-

Number of lilerate males in each age per 100,000 males in all ages.


The figures have of course been affected in the same way as the crude age distribution dealt with in Chapter V, but they may be graduated by a mechanical process in the same way as the age distribution was graduated to give the resalt shown in Subsidiary Table I-A to Chapter V. Such a graduation for Hindu male literates and for the whole Hindu male population in Eastern Bengal are compared in the following table :-

|  |  |  |  | Oratustad tains ot Aerntel is each ago Denticm |  | Proportipa flenm per 1.000 in elech anf |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 |  | $\cdots$ | $\cdots$ | 600 | 2,449 | 245 |
| 11 |  | .- | ... | 620 | 2,394 | 259 |
| 12 |  | ... | $\ldots$ | 628 | 2,340 | 268 |
| 13 |  | - | $\cdots$ | 630 | 2,286 | 275 |
| 14 |  | $\ldots$ | $\cdots$ | 628 | 2,232 | 284 |
| 15 |  | $\cdots$ | $\ldots$ | 620 | 2,179 | 286 |
| 16 |  | $\ldots$ | ... | 608 | 2,126 | '286 |
| 17 |  | $\ldots$ | $\cdots$ | 594 | 2,074 | 287 |
| 18 |  | $\ldots$ | 6 | 580 | . 2,022 | 289 |
| 19 |  | $\cdots$ | $\cdots$ | 570 | 1,971 | 291 |
| 20 |  | ... | - | 558 | 1,920 | 295 |
| 21 |  | $\cdots$ | ... | 551 | 1,870 | 300 |
| 22 |  | ... | $\cdots$ | 546 | 1,820 | 306 |
| 23 |  | ... | $\cdots$ | 542 | 1,771 | 312 |
| 24 |  | $\ldots$ | ... | 538 | 1,723 | 318 |
| 25 | - | -.. | $\cdots$ | 533 | 1,675 | 322 |
| 96 |  | $\ldots$ | ... | 525 | 1,628 | 327 |
| 27 |  | $\cdots$ | $\cdots$ | 517 | 1,581 | 327 |
| 28 | , | ... | -- | 502 | 1,535 | 327 |
| 29 |  | $\ldots$ | ... | 488 | 1,490 | - |

The apparent conclusion is that the proportion literate steadily increases from the age of 10 right up to the age of 27 . It is possible that mortality is greater among the illiterate than among the literate and that a certain number teach themselves to read after they have reached maturity, but the result is an onexpected one, and must, I think, be taken as pointing to the conclusion that whether there has been lapse from literacy to any great extent or not, it has not been admitted in filling up the census schedules. The figures up to this stage of the investigation have been given but it does not seem worth while to elaborate them further.

SUBSIDIARY'TABLE I.-Education by age, Sex and Relfifon.


- Botweed the ages 5 and 15.

SUBSIDIARY 'I'ABLE II.-Education by Age, Sex and Locality.

| Digthiot and Natural Divisions. | Nowbrr per mille fio Ahy lithates |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 and orer. |  |  | $6-10$. |  | 10-15. |  | 15-90. |  | 20 and aver. |  |
|  | Total. | Mala. | Pomale | Msle. | Femalo. | Mato, | Femate. | Hnie. | Pemuk. | Male. | Fermal. |
| 1 | 1 | 8 | 4 | 6 | 6 | 7 | 8 | - | 10 | 11 | 12 |
| EImaAl ... ... ... ... ... | 104 | 117 | 21 | 46 | 11 | 144 | 28 | 214 | ${ }^{\prime} 28$ | 228 | 21 |
| WRGT BRNGAL (BURDFIN DIVION). | 127 | 280 | 18 | 89 | 10 | 188 | 24 | 257 | 20 | 275 | 18 |
| Burdmad ... ... ... | $115^{\circ}$ | 202 | 20 | 60 | 10 | 100 | 47 | 232 | 98 | 231 | 1 |
|  | 114 | 216 237 | 18 11 | 72 71 | $?$ | ${ }_{103}^{803}$ | 20 14 | 268 268 | 120 | 248 291 | 11 |
|  | ${ }_{118}^{125}$ | 237 218 | 11 | 88 | 9 | 183 | 15 | 227 | 17 | 374 | \% |
| $\begin{array}{lccc}\text { Hoonty } \\ \begin{array}{l}\text { Howrab }\end{array} & \ldots & \ldots & \ldots\end{array}$ | 118 | 248 291 | ${ }_{36}^{38}$ | 78 98 | ${ }_{20}^{17}$ | 221 280 | 41 | 241 816 | 43 46 | 290 217 | s |
| ogntral hengal (Pamstdexcr Division). | 145 | 232 | 36 | 07 | 20 | 14 | 51 | 278 | 49 | 278 | 381 |
| 24-Parg anga ... ... ... | 150 | 989 | 26 | ${ }^{68}$ | 12 | ${ }_{\text {dis }} 108$ | - ${ }^{31}$ | 88888 | ${ }_{3} 35$ | 803 640 | 280 |
| Calculte $\quad-\cdots \quad .0$ | 450 | 130 120 | ${ }_{98}^{271}$ | ${ }_{98} 8$ | ${ }^{14}$ | ${ }_{86} 88$ | ${ }^{37}$ | 859 129 | ${ }^{37}$ |  |  |
| Madin $\quad$ Murabidabad $\quad . .$. | ${ }_{80}$ | 142 | 18 | 41 | 10 | 109 | 34 | 168 | 28 | ${ }^{177}$ | ${ }^{1 k}$ |
|  | 12 | 181 214 | ${ }_{10}^{16}$ | ${ }_{68}^{48}$ | : | 188 181 | 89 | 230 77 | 23 | 184 280 | 13. |
| YORTE BENGAL ... ... | 78 | 138 | 10 | 31 | $\theta$ | 103 | 17 | 185 | 16 | 173 | 10 |
| majbiabi divimion ... .. | 75 | 184 | 10 | 30 | © | 102 | 17 | 186 | 18 | 171 | 10 |
| Rajahahi ... ... ... | 02 | 109 |  |  |  |  |  |  | 19 | 142 |  |
|  | ${ }_{85}$ | 181 118 | ${ }_{8}^{10}$ | 8 | 8 | 178 | 10 | 128 | 19 | 118 | ${ }^{\text {b }}$ |
|  | 124 | 311 | 2 | 40 | 14 | 140 | 41 | 114 | ${ }^{36}$ | 191 185 18 | ${ }_{7}^{73}$ |
|  | ${ }^{68}$ | 119 | ${ }^{7}$ | 43 | ${ }^{5}$ | 89 146 168 | ${ }_{93}^{18}$ | 141 | ${ }_{10}^{10}$ | ${ }_{231}$ | 10 |
| - Ropra | 7 | 179 189 | ${ }_{18}^{18}$ | ${ }_{94} 9$ | ${ }_{8}^{10}$ | 111 | ${ }^{23}$ | 119 | ${ }^{23}$ | 170 | 18 |
|  | ${ }_{5} 5$ | ${ }^{138}$ | 7 | ${ }_{88}^{29}$ | 4 | 73 117 | 116 | 110 | ${ }_{18}^{10}$ | 238 201 | ${ }_{10}^{6}$ |
| Cooch Bohar ... ... ... | 1 | 169 | 11 | 41 |  |  |  |  |  |  |  |
| bast bengal ... ... ... | 91 | 188 | 18 | 36 | - | 128 | 27 | 185 | 28 | 204 | 18 |
| DLCOA DIvision ... ... | 80 | 154 | 21 | 37 | 10 | 120 | 30 | 181 | 30 | 184 | $21^{\prime}$ |
|  |  |  |  |  |  |  |  | 933 | 41 | gos |  |
|  |  | ${ }_{103}^{108}$ | 12 | 34 |  | ${ }_{80} 8$ |  | 114 | ${ }_{84}^{16}$ | 134 142 | 19 281 |
|  | ${ }_{11}^{181}$ | . 1336 | 79 98 | 4 | ${ }^{8} 8$ | 181 | [ 36 | ${ }_{268}^{203}$ | ${ }_{37}^{84}$ | ${ }_{20}$ | 87 |
| Ofittanoma divibion ... | 03 | 188 | 16 | 38 | * | 122 | 22 | 200 | 21 | 228 | 181 |
|  |  |  |  |  |  |  | ${ }^{28}$ | 211 | ${ }^{28}$ | 238 341 |  |
| Noakhali $\quad . .$. | 88 | 187 | 11 | 32 | ${ }^{\text {a }}$ | 1102 | 18 | 193 | ${ }_{18}^{18}$ | (241 | 11 |
| Chittagong | H | 180 113 | ${ }_{8}^{18}$ | ${ }_{36}$ | $\stackrel{8}{1}$ | ${ }_{18}^{116}$ | ${ }^{19}$ | ${ }_{1}^{1188}$ | ${ }^{18}$ | 145 | ? |
| Cripura Stata ... | 6 | ${ }_{168}^{118}$ | ${ }_{1}$ | 11 |  | ${ }^{6}$ | 16 | 274 | - | 182 | 12 |
| sixilim ... ... ... ... ... | 48 | 48 | 5 | 2 | 1 | 23 | 1 | 70 | $\checkmark$ | 127 | * |

subsidiary table iII.-Education by Religion, Sex and Locality.

subsidiary table iV.-Englisa education by age, Sex and Locality.

subsidiaky table v.- Mhogress of bivoation.

subsidiary table Vi.-Education by caste.


$t$ The onloulations for 1011 aro bayed on the figuras for tho whole Provinoe, but thow for 1981 only on thome for a part
subsidiary table Vi.-Educatioy by Caste.

sLbsidiary table yli- Nudbfr of instimtions and pupils accomdina to tile returns of tun Edecatron Department.



## CHAPTER IX.

## Language.

185. Introductory.-At the Census of 1901 instructions were issued that the language to be entered against the name of each individual was the language ordinarily spoken by him. A change was, however, made in 1911 and the rule was that the language to be entered was the language ordinarily spoken by each person in his qwn home, that is to say, his native tongue. In the vernacular the term matri bhasa is a perfectly well understood one, and it is unlikely that the instructions issued for the Census of 1911 and again for this census caused much difficulty or produced such anomalies as had been found to have been produced in 1901, when, for instance, Frenchmen working in India returned English as their language, because they spoke it more often than their native French.

The statistics of language are exhibited in Table $\mathbf{X}$ of the Census Tables Volume where the languages are arranged according to the province or country in which they are ordinarily spoken. First come the vernacular languages of Bengal and Sikkim followed by those of the adjoining provinces, Assam, Bihar and Orissa and Burma, those of other provinces of India, those of Asiatic countries beyond India and finally European languages. Although the majority of those speaking Hindi or Urdu are immigrants, the language has been included with the vernaculars of Bengal partly because it is the lingua franca in centres of organised industry and partly because it is not to be described as the vernacular of one of several provinces rather than the others.

The statistics are analysed in three subsidiary tables appended to this chapter showing-
(I) the distribution of the population according to language, the languages being arranged according to the scheme of the Linguistic Survey of India;
(II) the distribution by language of the population of each district showing only the more commonly used languages; and
(III) a comparison, for tribes with distinct tribal languages between the statistics of the Language and Caste Tables, Tables X and XIII of the Census Tables Volume.
It was not to be expected that the people themselves would be able to ${ }^{-}$return their languages with any philological extractitude. Their lingustic and dialectic distinctions made by the Linguistic Survey were largely its own work and its terminology is in some instances foreign to the people, and was certainly foreign to the census enumerators of Bengal in respect of the language of certain immigrants. Thus Bihari is a language with three main dialects, Magahi, Bhojpuri. and Maithili, but the Bengali enumerators could only recognise the language for Hindi, as the persons to be enumerated probably called it, and Hindi was recorded. At this census no attempt was made to distinguish Hindi and Urdu. At former censuses separate statistics were
prepared for the two, but what really happened was that a Hindu enumerator commonly used the term Hindi and a Muhammadan enumerator the term Urdu, and the statistical distinction between the two meant practically nothing at all.

On the occasion of this census no attempt was made to obtain statistics of dialects. The staff which supervised the enumeration were given a printed list of languages which were likely to be found and the locality in which they might be looked for, and when at the time of tabulating the results any dialect which is not a distinct language was found to have been returned it was classified under the correct language following the Linguistic Survey and the speaker entered as speaking that language. An exception was, however, made in the case of the Kherwari language. It was found that its dialects, Santali, Mundari, and so on, had invariably been returned, and separate fgures were prepared and are given in a footnote to Table $\mathbf{X}$ showing the number of speakers of each.

A tendency was noticed at this as at former censuses to return Persian and Arabic as languages ordinarily spoken, though the numbers of persons born in Persia or Arabia and of descendents of Persians and Arabians are very small in Bengal. Persian is often used as a sort of honorofic designation for the language spoken by Muhammadans, and Hafez, those who know the Koran by heart, commonly advertise their accomplishment by giving . their language as Arabic. Accordingly it was necessary to investigate instances in which Arabic and Persian were returned with the result that only 87 speakers of Persian and 44 speakers of Arabic are shown in Census Table X outside Calcutta.
186. Distribution of Bengali.-Though 80 different languages are found spoken in Bengal there is no other province in India which has the same homogeneity in the matter of language except the United Provinces in which 99 per cent. speak some form of Hindi. Bengali is the mother tongue of almost 92 per cent. of the total population of Bengal and considering the very large number of speakers $43,769,394$ it is a language with remarkably little variation from place to place. The Linguistic Survey separated six main dialects from the central or standard, calling them Western, SouthWestern, Northern, Rajbansi, Eastern and South-Eastern, but indeed it is very difficult to draw clearly marked lines between them. A Bengali from Midnapore would have consíderable difficulty in following a conversation between two old women in the island of Sandwip or in parts of Sylhet or Chittagong, but he would have no difficulty in conversing with the men. The Eastern Bengal man is at once recognised in Calcutta by his pronounciation of the letters $s, c h h$, and $z$. by the elisions which he makes in the conjugation of his verbs, and in some of the idioms he uses, but the difference between the Bengali spoken, for example, in Nadia, which is perhaps the purest form of the language, and even the distorted Chittagonian dialect is certainly no greater than that between Standard English and the language spoken by the working classes in Yorkshire. The Chakma dialect, that spoken by the tribe of the same name in the Chittagong Hill Tracts, and Mal Paharia, that spoken hv-some of the people from the Santal Parganas, differ more noticeably from Bengali, but have been designated dialects of Bengali by the Linguistic Survey, and separate statistics have not been prepared for those who speak them. The Kharia Thar and Pahira Thar dialects which are mentioned in the classification and statistics of the Linguistic Survey do not belong to Bengal, but to Manbhum district across the border, in the Province of Bihar and Orissa.

The proportion of the population whose language is Bengali falls below 85 per cent. only in 5 districts, Midnapore, Jalpaiguri, Darjeeling. Malda and Chittagong Hill Tracts, and in Calcutta and Tripura State, and rises above 98 per cent. in Nadia, Jessore, Khulna, Pabna, Dacca, Faridpur, Bakarganj, Tippera, Noakhali and Chittagong. The lauguage being so remarkably the prevailing language, the proportions speaking it are better illustrated as in the map in diagram No. 84 which shows the propartion of the population of
each district whose language is other than Bengali, than by a map showing the proportion of Bengali speakers.


The languages other than Bengali, spoken in the plains, are almost always the languages of immigrants. The most important of them is Hindi and Urdu, which is an indigenous language only in Malda and to a less extent across the river Ganges in Murshidabad; Kherwari, which is the language of some of the original inhabitants only in the western parts of Bankura, Midnapore, Burdwan and Birbhum; and Oriya, which is spoken by a certain number of the indigenous population only in a corner of Midnapore. Tipara or Mrung and certain other languages with smaller numbers of speakers belong to the Eastern Hills and there are numerous non-Aryan languages besideo the Aryan Khas Kura, which is the lingua franca in the Eastern Himalayas. Arakanese (Maghi) is the language of immigrants from Arakan to the southern parts of Chittagong and Chittagong Hill Tracts, but some of them are settlers for a very long time, and the Garos who have their own language in Mymensingh may be said to be indigenous to the district.

The proportion speaking Bengali in the Province and the several quar'ters of it at each of the last three censuses is as given below:-


The proportion speaking Bengali fell by as much as 1 per cent. between 1901 and 1911 mainly on account of increased migration from the west. The greatest fall was in Central Bengal due to the immigration of Hindusthani artizans, labourers, etc., to Calcutta and the industrial area about it, but the fall was almost as great in Northern Bengal, where it was due to the overflow of Kherwari speakers from the Santal Parganas, the indenture of more coolies for the Jalpaiguri tea gardens, and immigration from Nepal. The proportion also fell slightly in Western and in Eastern Bengal mainly due to greater fecundity among aboriginal tribes than among Bengalis but partly also to immigration from the west. During the last decade the proportion of Bengali speakers has slightly increased on the average. It has risen decidedly in Central Bengal where the proportion of immigrants to Calcutta from the west has fallen off considerably and that to the 24-Parganas and Murshidabad less noticeably; and risen slightly in Eastern Bengal for the same reason, but has fallen somewhat in Western Bengal and more in Northern Bengal, for the streams of migration into it have continued to flow, if less strongly than in the decade before.
187. Distribution of Hindi and Urdu.-The proportion speaking Hindi and Urdu in each district is illustrated by the map in diagram No. 85. In

the Province as a whole, Hindi or Urdu is the language of $1,806,820$ persons, 380 per 10,000 of the population. That most of them are immigrants is shown by the fact that $1,182,878$ of them are males and only 623,942 are females. There is no approach to an equal balance of the sexes among those who speak the language except in Malda where there are 118,859 females to 104,388 males and in Murshidabad where 38,667 female's to 36,405 males. Leaving aside these two districts in which as has already been mentiorred

Hindi is the language of an indigenous section of the population, there is distinctly less than one woman whose language is Hindi to two men. Hindi speakers are most common in Calcutta and in the industrial area up and down the Hooghly, where the language is spoken by most of the mill hands. There are towns like Bhadreswar and Titagarh, where Hindi is the language of the large majority of the population, but it is rarely spoken in rural areas either in the 24 -Parganas, Howrah or Hooghly. It and Kherwari are the languages most used in the coalfields in Burdwan district. Many of the tea garden coolies in Jalpaiguri district use it, and it is Hindi speaking merchants etc., rather than Bengalis, who have taken to trade in Darjeeling
district

The proportion returning Hindi or Urdu as their language at each of the last three censuses in Bengal and in each of the several quarters of the Province has been as given in the table below :-


Between 1901 and 1911 there was an increase in every Division corresponding to greatly increased immigration from the west. During the last decade there has been a reversal of this progress and a decrease in the proportion in every quarter of the Province though in no part has it been reduced to the level of 1901 .
188. Distribution of Kherwari.-Sir George Grierson, the Superintendent of the Linguistic Survey of India, recognised eleven tribal tongues, Santali, Mundari, Bhumij, Birhor, Koda, Ho, Turi, Asuri, Agaria, Brijia and Korwa as dialects of one language, Kherwari, common to as many aboriginal tribes whose home extends from the beginning of the uplands rising from the plains of Bengal in Bankura, Midnapore, Burdwan and Birbhum and extending into middle of the Central Plateau of India. He placed Kharia, Kurku, Juang, Savara and Godaba five distinct languages with Kherwari, to make up the Munda Branch of the Austro-Asiatic subfamily, a wing of the great Austric family of languages. Besides Kherwari only on of the other languages Kharia is found spoken in Bengal. Kharia properly belongs to Ranchi district and 13,032 out of the 13,979 returning it in Bengal where immigrants from Ranchi to the tea gardens in Jalpaiguri. Kherwari is much more widely spoken language. 816,476 persons in Bengal returned it as their mother tongue. The majority 708,490 talk the Santali dialect, 70,316 the Mundari dialect, 15,311 Bhumij. 14,131 Koda (Kora), 5,538 Turi, 2,807 Ho, 1,364 Asuri, 39 Brijia, 9 Kowra and 2 Agaria. Only two of these dialects are really indigenous to Bengal, Bhumij, which belongs to Bankura, Singhbhum and the Orissa Tributary States, and Kora which belongs to Asansol subdivision of Burdwan and the adjoining part of Birbhum and extends into Manbhum. The others are spoken by immigrants from the Santal Parganas, the Chota Nagpur districts and further west, but such immigrants are very numerous in Burdwan, Birbhum and Murshidabad; they have also flowed in large numbers across the Ganges at Rajmabal into Northern Bengal; and many have been imported to Jalpaiguri to suply the labour force for the tea gardens. Kherwari is the language of $1 .-\because n$. itc $n 0$ of the population of Bengal. The proportion speaking it in each dis!. . is given in column 5 of Subsidiary Table II and is illustrated
by the map in diagram No. 86. The number of its speakers increased greatly

between 1901 and 1911 when the stream of immigrants from Santhal Parganas was running fast; 559,045 returned the Kherwari dialects at the Census of 1901, but the number had increased by 1911 to 764,046 , i.e., by $36 \cdot 7$ per cent. The increase during the last decade, $6 ; 9$ per cent., has been more moderate. The figures for the Koda (Kora) and Bhumij dialects, which are indigenous to Bengal, are interesting. The number of speakers returned at the last three Censuses have been as follows-

|  |  | Eors. | Bhomij. |  |
| ---: | ---: | ---: | ---: | ---: |
| 1921 | $\ldots$ | 14,131 |  | 15,351 |
| 1911. | $\ldots$ | 19,958 | 21,263 |  |
| 1901 | $\ldots$ | 26,396 | 24,451 |  |

These two tribes are steadily multiplying and are not much affected by migration, and it is apparent that they are rapidly giving up the use of their tribal languages.
189. Distribution of Oriya.-Immigrants from Orissa are found in comparatively large numbers in Calcutta and its neighbourhood and there are small numbers to be found all over the Province, working as coolies or as cooks, water-carriers, etc. These use their own language, but there is no part of Bengal in which undiluted Oriya is the language of the permanent inhabitants. The aspiration of the Oriya speakers in India to be united under one administration has, however, aroused some interest in the question of language in the parts of Midnapore district adjoining Orissa. There a hybrid language, Bengali with something of Oriya in it, is commonly spoiken, and it is often a matter of opinion whether what any particular individual speaks should be. called Bengali or Oriya. The numbers returned
in Midnapore district as speaking Oriya at the last three censuses have been:-

|  |  | Perenas. | Mant. | Prinaisa |
| :---: | :---: | :---: | :---: | :---: |
| 1921 | - | 142,107 | 74,197 | 67,928 |
| 1911 | *** | 181,801 | 93,966 | 87,835 |
| 1901 | ... | 270,493 | 143,226 | 127,269 |

There is no great abnormality in the sex proportions among those shown speaking Oriya and there has been no migratory movement from Midnapore into Orissa, in fact the balance of migration has been in the opposite direction. It seems very probable, therefore, that in many instances the same language which was returned as Oriya in 1901 has since been returned as Bengali. The following figures show the proportion speaking Oriya returned under the police-stations adjoining the south-west border of the district in 1921 and 1911:-


Actually in 1911, 24,957 males and 26,005 females under Ramnagar police-station were returned as speaking Oriya and only 140 males and 28 females in 1921. The explanation of this remarkable change lies in the fact that the people of Ramnagar do not want the area to be transferred to Balasore the adjoining district of Orissa. They were afraid of the Oriya agitation and had petitioned Government on the subject before the Census. Apparently their leaders guessed that in deciding the matter the Government of India would give great weight to the language figures of the Census, and they saw to it that the language in common use, which indeed bears as close a likeness to Bengali as to Oriya, was returned as Bengali and not as Oriya on this occasion. The same activity does not seem to have extended to the areas adjoining Orissa under the Sadar subdivision of the district, for the proportions of Oriya speakers in Mohanpur, Dantan and Nayagram are much the same as 10 years ago and an increase has been shown in the number of Oriya speakers in Gopiballavpur thana, but what has happened is sufficient to show that the distinction between the two languages is not a matter to which much weight is to be given in considering the welfare of this locality. The total number of Oriya speakers returned in the province is $298,372,63$ per 10,000 of the total population and it is remarkable that excluding Oriya speakers found in Midnapore district there are in the rest of the province only 12,448 females to 143,817 males, that is to say only one female to eleven males. The Oriya very seldom indeed comes into Bengal to stay for any length of time and nearly always leaves his wife and family behind.
190. Distribution of Tipara, Arakanese and Eastern Paharia.-Only three other languages are spoken by as many as 1 per mille of the total population of Bengal, viz., Tipara or Mrung the tribal language of the Tiparas in Tripura State and Chittagong Hill Tracts, Arakanese the language of the Maghs who have overflowed from Arakan into Chittagong and the Hill Tracts behind and sent colonists also into the Sundarbans of Bakarganj, and Eastern Paharia or Khas Kura the Aryan language which has become the lingua franca of the Eastern Himalayas. Each of these is mainly confined to its own locality. Tipara is the language of $41 \frac{1}{2}$ per cent. of the people of Tripura State and $17 \frac{1}{4}$ per cent. of those of Chittagong Hill Tracts but is hardly found at all elsewhere. Its speakers are 33 per 10,000 of the population of the Province. The proportions which speak it in the several subdivisions of

Tripura State and in the thanas in which it is commonest in Chittagong Hill tracts are as follows :-

| Tripura State. |  | Per cent |  |  |  |  | Per cent |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sadar Subdivision | ** | $\cdots$ | 45 |  | Kamalpur | -.* | -." | 40 |
| Sonamura | .** | ... | 28 |  |  |  |  |  |
| Kailashahar | ... | *- | 9 |  | Dighidala |  | ... | 27 |
| Belonia | ... | ... | 33 |  | Ramgarh |  | ... | 47 |
| Ehowai | ... | -** | 47 |  | Easalong | ... | *** | 5 |
| Udaipor | ... | -* | 50 | ; | Mahalceri | -*- | -* | 43 |
| Subram | .- | ... | 71 |  | Bandarban | .-. | *** | 5 |
| Amarpur | -- | -. | 67 |  | Ruma | $\cdots$ | *** | 17 |
| K3lyanpar | .** | $\cdots$ | 65 |  | Lama | ... | *** | 18 |
| Bianlgar | -** | ** | 42 |  |  |  |  |  |

The number returned as speaking Tipara has risen from 101,571 in 1901 to 126,269 in 1911 and to 158,734 in 1921, for the Tipara tribe in the same period has grown from 101,508 in 1901 to 130,035 in 1911, and to 153,921 in Tippera, the Chittagong Hill Tracts and Tripura State in 1921, so that the probable total is now about 155,000 . At the Census of 1911, 16,419 claiming connection with the reigning house in Tripura State were returned as Kshattriyas who should be added to the number of Tiparas in comparing the figures of 1911 with those of 1901. The number returned in the same way in 1921 was not separately tabulated in 1921, but we may take it to have been about 20,000 and if we do so the number of speakers of the Tipara language compares with the number of the tribe as given below :-

|  |  | mber apealing Iipara. | $\begin{aligned} & \text { Xumber of the } \\ & \text { tribe. } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 1901 | $\cdots$ | 101,571 | 101,508 |
| 1911 | ... | 126.269 | 146,454 |
| 1921 | -** | 158,734 | 174,000 |

There is some evidence, therefore, that the Aryan Bengali has begun its attack on the fastnesses of the Tipara language in the last 20 years but the impressions it has made is not yet a great one.

Arakanese is the language of $22 \frac{3}{4}$ per cent. of people of the Chittagong Hill Tracts, $1 \frac{1}{4}$ per cent. of those of Tripura State and $\frac{3}{4}$ per cent. of those of Chittagong district. The proportions which speak it in the thanas of Chittagong district and Chittagong Hill Tracts where it is most common are as follows :-

Chittagong District.


There has at each census been some difficulty in separating Arakanese from Burmese correctly. In 1901 Arakanese was returned by 63,589 persons and Burmese by only 467. In 1917 the two were classed together with a total of 74,158 speakers and at the last census the figures given are 19,724 for Burmese and 56,858 for Arakanese. To gauge the progress made by the language it is best to treat the two languages together. The number of speakers thus increased from 64,056 in 1901 to 74,158 in 1911 and to 76,582 in the last ten years.

Eastern Paharia (Khas Kura) was returned as the mother-tongue of 22.6 per cent. of the population of Darjeeling district, $32: 9$ per cent. of that of Sikkim and 2.7 per cent. of that of Jalpaiguri. It is the language of 20 per 10,000 of the population of the Province. The progress of this language towards ousting the Austric languages in the Hills will be referred to below.
191. The philological distribution of the population by language.Bosides the seven languages which have been mentioned, there were 51 other Indian languages returned at the census but none having as many as $50,0 \% 0$ speakers. Garo spoken in the Mymensingh district, Kurukh, a Dravidian language spoken by the Oraons, and certain of the Himalayan languages are the most important. The languages of the Province arranged according to the scheme of the Linguistic Survey, with the number of speakers of each in round numbers, are given in Subsidiary Table I. 9,989 per 10,060 of the population speak languages of India, and the following among the great families of languages are represented:-

|  | The Austric family. | ... | 1,315 | thousa | res. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Auntro-Asiatic sul.family | ... | 830 | " |  |
|  | Tileto-Burman sub-family | ... | 487 |  |  |
| 2. | Dravidian family ... | ... | 218 | " |  |
| 3. | Indo-European fumily | ... | 46,0,4 | " |  |
|  | dryan sub-family ... | ... | 46,0¢14 |  |  |

192. Languages of the Austric family.-The Austric family: AustroAsiatic sub-family is represented in Bengal in two of its branches by three languages. A few Khasi speakers from the Khasia Hills are found to represent the Mon-Kmer Branch, and the speakers of Kherwari and Kharia to represent the Munda Branch to the extent of 830,000 .

The Tibeto-Burman sub-family is represented by only rather more than half as many speakers, but by as many as 31 languages, 16 in the TibetoHimalayan Branch and 15 in the Assam-Burmese Branch. In the former there is Bhotia of the Tibetan Group; there are four Bhotia languages spoken in Darjeeling and Sikkim but they were not-completely separated at the time of the census, their written language is the same for each and they have much in common. There are six languages of the Pronominalised Himalayan Group, Rai (Jimdar), Limbu, Yakha, Dhimal, Thami and Khambu arranged in that order according to the number of speakers; and nine languages of the Non-Pronominalised Himalayan Group, Murmi, Mangari, Rong (Lepcha), Newari, Sunwar, Gurung, Kami, Manjhi and Toto. These 18 languages (excluding Toto which is spoken by a tribe at the foot of the hills) are all found within the comparatively short length of the Himalayas in the Sadar, Kurseong and Kalimpong subdivisions of Darjeeling District, and the speakers of them are in large numbers conversant with the Khas Kura, the liastern Paharia language which is an Indo-Aryan language. In the AssamBurmese Branch there are 5 languages representing the Bara or Bodo Group, Tipara (Mrung), Garo, Bara (Bodo), Koch and Rabha. Garo, Bara and Rabhia are languages found much more commonly in Assam than in Bengal, and Koch is also found there, but Tipara belongs to Bengal and is not spoken in any other province. The Kuki-Chin Group is represented by Meithei (Manipuri); Kuki (unspecified), Hallam, Lushei, Khami (Kami), Hrangkol and Khyang. Meithei, Lushei, Hrangkol, Hallam and Kuki (unspecified; are more commonly spoken in the section of the hills along the Burma frontier which falls in Assam, and Khami and Khyang on the other hand belong to the Southern Chin Sub-Group and are spoken more commonly on the Burma side of the range. The Burmese Group is represented by Arakanese (Maghi), Burmese and Mru all languages of Burma though there have been some Maghs settled on the Bengal side of the frontier for a very long time, and many who came in after the Burmese overran Arakan at the end of the 18th century. Local officers in the Chittagong Hill Tracts have expressed a doubt as to the correctness of the returns of the Mru language. Colonel Lewin described the Mrus in 1870 as being the weakest tribe in these hills not numbering more than 1,500 souls, and Mr. H. R. Wilkinson, Deputy Commissioner of the Chittagong Hill Tracts, at the time of the census, believed that there had been a confusion between Mrung (Tipara) and Mru. The confusion, if there was one, must however have been made by the enumerators themselves, for the point was examined and it was faund that it had not been made during tabulation. The return of the Mru language with 8,000 speakers is less, not
greater than the 11,000 returned in 1911. In the eircumstances the census tigures may be accepted.
193. The Dravidian family.-The Dravidian family is represented by small numbers speaking three of the languages of the Dravida Group, Tamil, Malayalam and Kanarese all immigrants from the Madras Presidency, larger numbers 184,000 speaking Kurukh (Oraon) of Intermediate Group, 5,000 speaking Malto of the same group, and 25,000 speaking the Andhra language. None of these languages belong to Bengal though Kurukh belonging to the middle of the Chota Nagpur Plateau and Malto belonging to the Santal Parganas do not come from so far away as the others.
194. The Indo-European family.-The Iranian Branch of the Aryan sub-family is represented only by a few speakers of Persian and Pashto and the Dardic Branch only by a few Kashmiris. Bengali comes with Oriya, Assamese and Bihari, in the Eastern Group of the Outer Sub-Branch of the Indo-A rayan Branch, and taking 60 per cent. of what has been returned as Hindi or Urdu in the Census of Bengal to be Bihari the number of speakers belonging to this group in the Province amounts to $\mathbf{4 5}, \mathbf{1 5 6 , 0 0 0}, 949$ per mille of total population. The North-Western Group of the same sub-branch is represented by a small number of speakers of Sindhi and the Southern Group by Marathi speakers and the few Singalese. The Mediate Sub-Branch includes Eastern Hindi whose speakers may be taken to include 35 per cent. of those whose language was returned as Hindi or Crdu in Bengal and the Inner Sub-Branch includes, under the Central Group, Rajsthani, Gujrati, Panjabi and Western Hindi, taken at 5 per cent. of the Hindi spoken in Bengal, and under the Paharia Group, Eastern Paharia (Khas) the common language of the Darjeeling Hills.
195. Language in Sikkim.-In Sikkim the languages spoken by twothirds of the population belong to the Austric family, the Tibeto-Burman sub-family and the three groups called the Tibeto-Himalayan Group 11.8 per cent., the Pronominalised Himalaran Group 29.6 per cent., and the Non-Pronominalised Himalayan Group $25-2$ per cent. The languages of the remaining one-third belong to the Indo-European family, and all but : 4 per cent. to the Paharia Group of the Inner Sub-Branch of the Indo-A ryan Branch. The detailed figures are given in Part II to Subsidiary Table I.
196. Tendency for Indo-Aryan languages to displace others.-Though 96.60 per cent. of the population of Bengal now speaks an Aryan language nothing like this proportion has any claim to be classed ethnologically as of Argan extraction. Indeed it is but a minority who are really of Aryan stock. The tribes which inhabited this part of India must, before the Aryan race came to Bengal, all have had languages of their own. The forefathers of the Pods, the Namasudras, the Rajbansis, the Kaibarttas, the Bagdis and others must at one time have spoken non-Aryan languages, though what they were and which sections spoke them we have now no indication. Probably if they were still alive they would be classed either in the Austric or Dravidian families like the non-Aryan languages still found in this part of India, but from the nature of the country and the very definite distinctions between the different sections of the community which have now crystallized into the castes that form the substratum of Hindu society, it seems likely that the languages which are now dead must have been both nomerous and individually characteristic. The process by which the dominant Aryan languages are doing and have done to death the less pliant tribal languages of the non-Aryan races, is not so complete in other parts of Northern India as in Bengal, but eren in Bengal the slow strangulation of the tribal languages is still going on, and the process forms a very interesting study. Subsidiary Table III at the end of this chapter is designed to assist in such study, though, since statistics have at this census not been prepared for as many of the less nomerous cantonend tribes as formerly, the census figures for 1921 do not give the $u 11 \%$ for enquiry as those of former censuses. We have already seen ti $3: 1$ tre Bhumij and Kora tribes on the uplands of Western. Bengal are rapidly giving up their tribal languages. In the lower strata of society in the plains the strangulation of the original non-Aryan language is practically complete.

It may be said that there is only one of the original languages, Koch, belonging only to the plains of Bengal, of which there is any survival. The citardel of all the other non-Aryan languages spoken in the Province is somewhere outside the Province or in the hills. The Koch tribes numbers 131,273 and is found in considerable numbers over the area covered by the districts of Malda, Dinajpur, Rajshahi, Bogra, Rangpur, Pabna, Dacca and Mymensingh, but the Koch language survives only in Dacca and Mymensingh and is spoken by no more than 11,366 persops. The statistics of the Koch language at successive censuses are very irregular, the number of speakers having been returned at 4,493 in 1891, 12,621 in 1901, and 6,598 in 1911 so that it is not possible to estimate the rate at which the strangulation of the Koch language at the hands of Bengali is going on. Even in 1891 the language was confined to Dacca and Mymensingh and we must conclude that its last struggles have been very long drawn out. If the complete extinction of the other original languages proceeded so slowly the process must have been begun a very long time ago indeed.

The Garos in Mymensingh and the Meches in Jalpaiguri still keep their language alive. Out of 39,581 Garos, 38,137 speak the tribal language, while more speak Bara or Mech, 11,369, than the number of Meches, 10,777. These two languages, both with their last strongholds in Assam, have so far resisted the Aryan attack with success. The census statistics for Bengal only give us information as it were second-hand regarding the struggle for existence of the languages of tribes to which Santal, Munda, Oraon and other immigrants from Chota Nagpur belong, but it appears that the Santals, Mundas and Oraons by a large majority favour their tribal languages, although the languages of the Bhumij and Kora tribes are losing their hold on the tribesmen. It has been seen that the attack on the Tipara language has only just begun, for these people have been secured in the fastness of the Eastern Hills until quite recently. The progress of the struggle between the Aryan language of the Eastern Himalayas, Khas Kura or Eastern Paharia, and the Tibeto-Burman languages of the hills is particularly interesting. The latter start with an initial disadvantage in the division of their forces. Fifteen still current languages are ranged on one side against a single language. "The monosyllabic Tibet-Burman speech easily divides and subdivides into numerous distinct and mutually unintelligible languages. If as an example of similarly circumstanced Aryan forms of speech we take the Iranian languages spoken in or near India and the Dardic languages, we find that these two branches like the Tibeto-Burman languages are spoken in inhospitabie mountain tracts, but they persist. If they do subdivide, the division is not into mutually unintelligible languages, but into mutually intelligible dialects held together by a common grammatical basis. Their character preserves each as a constant whole and even in their rugged habitat they are only 21 in number spread over a tract from Kashmir to the Persian frontier and from the Pamirs to the Arabian Sea." " The Tibeto-Burman languages spoken at the top of the Assam Valley are even more broken up than those of the Eastern Himalayas for in parts of the Naga Hills almost every تillage has its own language, but even in Darjeeling district the TibetoBurman forces are so divided against themselves as to offer a great opening to the single Aryan tongue to establish itself, as it is doing or has done, as the

[^7]lingua franca of the hills, which is only the first step towards the extinction of other languages altogether.

Number speaking the Austric-Himalayan languages and their proportion to the numbers of the corresponding hill tribes.


For 1911. and 1921 there are no figures available for the Dhimal and Thami tribes, nor for the Manjhi and Toto tribes in 1921, and in 1901 and 1911 the Kami language was either not returned or not separately tabulated. According to the Linguistic Survey the classification of Kami and Manjhi as separate languages is considered doubtful.

The relative nombers speaking the Austric-Himalayan languages and Khas Kura have been as follows:-

|  |  | 1921. | 1911. | 1901. |
| :--- | :--- | :---: | :---: | ---: |
|  |  | 189,910 | 186,332 | 186,011 |
| Aostric-Himalagan leoguages | $\ldots$ | 10,947 | $118,92 z$ | 73,177 |

In the 20 years the speakers of Khas Kura have increased by 64 per cent. while the speakers of the Austric languages have increased only 2 per cent., but the progress of the Aryan tongue over the other was confined to the decade 1901 to 1911. During the last decade if anything the Austric languages have had a slight advantage. This has not been confined to a few languages only and it seems that during the last decade there has been some reawakening of enthusiasm for the tribal languages, though it is possible that there was greater care used in the return of language at this than at the Census of 1911. Certainly the census of the tea gardens, the labour on which is almost all Nepalese in the hills, was very carefully done and the circulation of a list of languages early to those who supervised the enumeration may have assisted in the record of these languages. Taking the statistics of the three censuses
together they show Rai (Jimdar.) the most progressive of the bill languages as it is the language with by far the largest number of speakers. The number being so great its speakers would not feel the necessity of falling back on a lingua franca as would the speakers of a less common tongue. Murmi the next language in order of the number of its speakers has also decidedly progressed though not as fast. Limbu has lost ground though the proportion of Limbus who talk it has increased somewhat since 1911. The Lepchas are a race apart from the Nepalese for they are Buddhists while the Nepalese are Hindus, and they are the original people of the Darjeeling Hills, not immigrants. The langaage it would seem has passed into use among others. probably Bhotias, to a certain extent. The Lepchas themselves have lost numbers somewhat of recent years. The Bhotias have varied somewhat in numbers for many are immigrants, and the proportion who talk one of the four Bhotia languages is about the same as 20 years ago. All the languages which have so far been mentioned are languages with comparatively large numbers of speakers, and languages which have lost very little of the use they had among their own tribes. The languages which hold a smaller proportion of the tribes to which they belong, have generally lost numbers in recent years, Gurung, Sunwar and Mangari. The languages with very few speakers have also lost though not as much as might have been expected, for Dhimal, Thami, Yakha and Toto retain much of their vitality in spite of the very small tribes to which they belong. It does not appear that the NonPronominalised languages have shown themselves weaker than the Pronominalised languages though they have rather less facility of expression, and the general conclusion to be drawn is that the process of strangulation of these Austric languages must be a very slow one indeed. Khas Kura has almost killed Gurung and Kami for both the tribes are large ones and a few speakers of the tribal languages are left, but all the rest are offering a stout resistan'e.

SUBSIDIARY TABLE I (PART I).-Langiages.


SUBSIDIARY 'TABLE I (PAIR'L' I).-LangUagin-concluderl.

| Lamouadm. | Numien or mpyarkian tr 1031 (100's OXITTED). |  |  | Numbere of Combert (1) 1811 . | Nntminer pore milan of fapn. lation of thatl'zorione, 1251. | Whisro cisingy ast sa |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total. | Majen. | Pemaler. |  |  |  |
| 1 | 2 | 1 | 4 | 1 | 6 | 7 |
| II. Deavidian Flmily ... ... ... ... | 210 | 112 | 108 | 138 | $4 \%$ |  |
| Tamil ... ... ... ... | $1 \cdot 8$ | 2 | $1 \cdot 3$ | 1 | 1 | What Erartone. |
|  | \% 8 | ${ }^{0} 0$ | 01 | 2 | -601 | 26Farganeatay Calcuter |
| Kazarasa ..- ... ... ... | 03 | -03 | * |  | -001 | Culcutte. |
| (b) Intermedizte Oroup- |  |  |  |  |  |  |
| Kurunb (Ornon)... ... ... | 14 | 94 | 00 | 117 | $8 \cdot 0$ | Nortu Beogal. |
| Male ... ... . ... ... | 5 | \% | 1 | 2 | $\cdot 1$ | Dites. |
| (c) Andira langaga- |  |  |  |  |  | - |
| Teligu ... ... ... .. | 83 | 13 | 12 | 11 | $\cdot 5$ | Wholw Provicos. |
| III. Inco-Iuropean Frmily ... ... ... | 40,004 | 23,818 | 22,188 | 44,804 | 9848 |  |
| ARYAN GURFAMILT ... ... ... | 40,004 | 23,010 | 22,186 | 44,004 | 285* |  |
| (1) Iramian blamelf ..- ... ... | 2.3 | 2 | $\cdot 3$ | 4 | '0s | . |
| (a) Pertion Group- |  |  |  |  |  |  |
| Persian men .-. | $\cdot 1$ | 4 | '3 | 1 | 001 | Calcutte. |
| Pato ... ... ... ... | 17 | 1.6 | $\cdot 1$ | 1 | '04 | Whole Prorlace. |
| (1) Dandic binavor ... ... ... | -08 | -08 | .02 | $\cdot 1$ | . 001 |  |
| Kamhirt ... ... ... ... | 0 | -04 | . 02 | $\cdot 1$ | -001 | Calcutte. |
| (3) timo-Abtan bmanci ... ... | ${ }^{\circ} \mathbf{4 0 , 0 0 2}$ | 23,415 | 22,118 | 46;900 | 200'0 |  |
| (1) Outer Sub-Braneh ... ... | 48,156 | 23,273 | 21,883 | 44,013 | 948.8 |  |
| (a) Sorth Western Group- |  |  | - |  |  |  |
| Sladht ... ... ... -- | 2 | $\cdot 1$ | $\cdot 1$ | $\cdot 3$ | .00s | Calcutta and Pabus. . |
| (b) Southern Group- |  |  |  |  |  |  |
| Marathl ... ... ... ... | 8 | 2 | 1 | 9 | -0 |  |
| alughalcsio ... ... ... | 0 | 0.01 | *. | ... | -001 | Calcu:ra. |
| (c) Eakern Oroup- |  |  |  |  |  |  |
| Orlyt ... ... ... ... | 281 | 218 | 80'4 | 204 | $0 \cdot 3$ | Midaapore asid 24-Pargat |
| Beugali ... ... ... ... | 48,74 | 23,343 | 11,436 | 42.568 | 9197 | Whole Prormow. |
| Assamese ... ... -. ... | 1 | ${ }^{8}$ | $\cdot 2$ | 1 | '02 | Dacem and Calcutta. |
| ©0 por cont. of Hiladt and Urdu | 1,004 | $700 \cdot 6$ | 374.4 | 1.150 | 928 | Whate Prortace. |
| Mediate Sub-Aranch- |  |  |  |  |  |  |
| Medisto Group |  | 414 | 918'3 | 871 | $13 \cdot 3$ |  |
| Ss per cent. of Riudi and Urdu | 882 | ${ }^{14}$ | 218.2 | 871 | $13 \cdot 3$ | Whow Protinco. |
| (ii) Inner Sub-Branch ... ... ... | 2139 | 128 | 88.3 | 216 | $4 \cdot 8$ |  |
| (a) Centrai aroup- |  |  |  |  |  | * |
| 5 por ornt. of Bludi and Urdu |  | 80 | 313 | :98 | $\cdots$ | Whole Prorlace. |
| Punjabi | 5 | 4 | 1 | 0 | 1 | Diteo. |
| Gujratl ... | 0 | 8 | 3 | 4 | $\cdot 1$ | Calcath. |
| Rajatiani ... ... ... ... | 17 | 12 | 5 | 19 | $\bullet$ | Whoie Prorlace. |
| (b) Pahart Grour- |  |  | - |  |  |  |
| Entetcru Palaarla (Khan) | 93 | 40 | 44 | 91 | I | Jutpalgurt aud Darju:tas |
| lameuncis fobiton to imdia ... | 53 | 38 | 21 | 62 | 17 | - |

SUBSIDIARY TABLE VII--Ntwrers 8upported by selected occupations, 1921, 1911 AND 1901-continated.

 1911 and 1901-confinted.


SUBSIDIARY TABLE I (PART II)-Showing distribution of tạe total popolation of Sikim by Languages.

| Luxguags. | HUMBER OT BPEAEERE IX 1921 (000\%A OXITTED). |  |  | Nimber of apenkere 10 1911. | Number fier mille of popalation of the Province, 1981. | Where cbielly spuken. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Trtal. | Matas. | Pemater |  |  |  |
| 1 | 1 | 2 | 4 | 5 | 6 | 7 |
| lumates of impla -mene ... | 81 | 41 | 40 | $8 *$ | 1,000 |  |
| Hatali family -- | 84 | 27 | 27 | 60 | $\boldsymbol{6 6 8}$ |  |
| THETO-BURXAX SUE-PAMILY - - | 58 | 27 | 27 | 60 | 888 | - |
| thato gixalayax groor $\quad-\quad-$ | 54 | 27 | 27 | 60 | 688 | - |
| (a) Tbecen Group- <br> Bhotia |  |  |  |  |  |  |
|  | 4 | 5 | 5 | 12 | 118 |  |
| (b) Pronomisalised Bloalapan Oromp- | - |  | . |  |  |  |
| Dhlmal -- .- - - - | - | $\cdots$ | $\cdots$ | -- | 7 |  |
| Thami - - - - -- | - | - | $\cdots$ | $\cdots$ | $\cdots$ |  |
| Limba - - | 7 | 3 | 4 | 8 | $n 9$ |  |
| Yakba - $-\cdots \quad .0$ | $\cdots$ | - | - | $\cdots$ | $\sim$ |  |
|  | 2 | $\cdot 1$ | 1 | $0 \cdot 8$ | , ${ }^{248}$ |  |
| Raf (Jlmdar) -- | 15 | 8 | 7 | 16 | 183 |  |
| (c) Som-Pronominalised Eimalyar Group- |  |  |  |  | - |  |
| Garagg --. --. $--\quad-\quad-$ | $\cdots$ | $\cdots$ | $\cdots$ | - | $\cdots$ | Siktim and Bengul. |
| Yarmi - - - -- | 8 | 8 | 3 | 7 | 74 | - |
|  | - 6 | 2 | 3 | $\cdot 9$ | 6 | - |
| Yaggar $\quad-\quad-\quad-\quad .-$ | 3 | 2 | 1 | 3 | 36 |  |
| Newari - - - - - | 14 | $\cdot 7$ | 7 | 1 | 18 | - |
| Roug (Lepchan) -- $\quad-\quad-\quad-$ | - | $4 \cdot 5$ | 45 | 9 | 114 |  |
| इami -- - - - - | - | $\cdots$ | - | - | - - |  |
| Manja! -- $-\cdots \quad-\quad$. | \% | 1 | 3 | - - | 3-5 | - |
| Towo $\quad-\quad-\quad-\quad-\quad-$ | - | - | -- | - | - |  |
|  |  |  |  |  |  |  |
| aryan sebpanmiy - - - | 274 | 14:3 | 137 | $28 \cdot 8$ | $335 \cdot 5$ | - |
| Ixdiganayas Bratce - $\quad-\quad-$ | 4 | 3 | 7 | - 8 | 4.6 | - |
| Hiodi and Urdu $\quad \cdots \quad-\quad-\quad .$. |  | . 2 | $\cdot 1$ | $\cdot$ | $3 \cdot 2$ |  |
| Regathad - - - - - | . $\boldsymbol{\square}$ | ${ }^{408}$ | 02 | 2 | $1 \cdot 3$ | , |
| Infir scm-branct - m- | 27 | 14 | 13 | 20- | 328 | - |
| $\because$ |  |  |  |  |  | - |
| Penert Group- | - |  |  |  |  |  |
| Eetera fubaria (Ehes) - - -- | 7 | 14 | 13 | 28. | 329 |  |

SUBSIDIARY TABLE II.-Distribution by Language of the population of each district.


SLBSIDIABY TABLE III.-Comparisox of Caste and Largcage Tables.


## CHAPTER X.

## Infirmities.

107. Introductory,-As at former censuses, four infirmities were recorded, viz., insanity, deaf-mutism, total blindness and leprosy. It has been seriously proposed to drop this enquiry altogether, on the ground that the diagnosis even of these four infirmities cannot be made with accuracy by laymen of the stamp of the ordinary census enumerator. On the other hand in India, there are few ordinary means of obtaining statistics of any kind on such a subject and as errors may be expected to be, and undoubtedly are, fairly constant from census to census and from place to place, the statistics of distribution and variation are of real use when employed for the purpose of comparison even though they may not be wholly reliable as absolute figures. The difficulty obtaining any statistics relative to the infirmities with the people of Bengal suffer, except on the occasion of a census, prompted the Department of Public Health to suggest the extension of the schedules of infirmities to include for example, goitre, but the suggestion was made at too late a stage, and it is doubtful whether the inclusion of more than these four would have been advisable. One change was made at this census. On former occasions, only those who had been deaf and dumb from birth had been recorded. Deaf-mutism is almost always a congenital defect, but it seemed likely that the enumerators sometimes did not write a man down a deaf-mute from birth for want of evidence that he had been deaf and dumb from infancy. For this and other reasons, the instructions on the occasion of this census were to record all who were deaf and dumb without further enquiry.

In criticism of the reliability of the statistics as absolute figures or for purposes of comparison with the corresponding figures for the more civilized countries of Europe, the following points may be made :-
(a) Insanity.-In some countries an attempt has been made at the time of the census to distinguish between the violent form of mental derangement, or insanity properly so called, and idiocy. Even in Europe it has been found almost impossible to separate the two classes of mental disease, and in India the difficulty would be far greater. The census figures for the insane include both classes, and from the fact that the number returned as insane between 5 and 10 years of age is about 1,000 , whereas it rises to 2,500 between 25 and 30 , it is to be concluded that very much less than half the numbers -returned insane were congenital idiots and very much more than half were suffering from mental derangement.
(b) Deaf-mutism.-True deaf-mutism is a congenital defect, and although persons suffering from it are, on the whole, kindly treated in Bengal and their deficiency looked upon with awe, such persons are generally short-lived. That as many as 800 deaf-mutes were returned aged 70 and over shows that in a few instances those who had become deaf and whose other faculties were failing in their senility were wrongly enumerated as deaf-mutes. Though the total number of deaf-mutes returned is 100 less than in 1911, there has been an increase of some 1,350 at this census over the age of 40 . This may be put down to the changed rule.
(c) Blindness.-The instructions issued were to the effect that none was to be returned as blind unless he was sightless in both his eyes. These have been issued at each successive census and it is probable that the enumerators did not record many blind who were blind only in one.eye, though they may have recorded persons whose sight has become very dim in old age.
(d) Leprosy.-It is often difficult to distinguish leprosy even in its ulcerous stage from syphilis, and in common talk in Bengal it is often confused with leucoderma. The medical man who is conversant with the manifestations of the disease can diagnose leprosy before the ulcerous stage by the form of the swellings which appear, but it would have been quite impossible to expect the census enumerators to make such a diagnosis even if they were actually to examine all the persons they were to enumerate, which of course they do not do: They were, therefore, required only to record as lepers those in whom the disease had reached the ulcerous stage.

The danger that wilful concealment may vitiate the return of infirmities ja greatest in the case of leprosy especially when the leper is a woman of a
respectable family. It is probable that amongst the better classes the existence of insanity and deal-mutism was not willingly admitted and that amongst all classes there were numerous omissions of children suffering from these afflictions, owing to the unwillingness of parents to recagnize their existence in one of their children so long as there is any hope that it may be merely a case of backward development. Intentional omissions are probably least common in the case of the blind. It is to be noticed that the number of females suffering from each infirmity in almost every locality in the Province is less than the number of males. This at once suggests omissions, but on the other hand statistics of European countries show more males than females among the blind and the deaf-mutes, and it is generally recognised that leprosy attacks males more frequently than females, though it is unlikely that the disproportion is as great as three male lepers to one female leper which the census statistics show.

The statistics under discussion are to be found in Tables XII and XII-A of the Census Tables Volume and are analysed in three subsidiary tables appended to this chapter giving-

I The proportion afflicted in each district at each census since 1881;
II The distribution of the infirm by age at each census.
III The proportion of the population afflicted in each age period, and proportion of females to males among the infirm in each period.
As in the case of certain tables appended to the previous chapters, it has been necessary in Subsidiary Table II to this chapter to give figures for Bengal with Bihar and Orissa for 1881, 1891 and 1901, but, in the second part of the table, separate figures are given for Bengal for 1911 and 1921.
198. Prevalence of insanity. -47 per 100,000 males and 36 per 100,000 females in Bengal were returned at the census as insane. The proportion varies considerably between district and district and the variations are illustrated for both sexes together in diagram No. 87. The changes in

proportion from place to place are somewhat irregular. Darjeeling ( 20 per 100,000 ) and Sikkim (14) are comparatively free, but, on the other hand, insanity is very prevalent in the Eastern Hills in Chittagong Hill Tracts (139) and Tripura State (60) and in the strip along the sea which forms Chittagong district (57). The districts on the west of the Jamuna are seriously afflicted, Jalpaiguri (72), Cooch Behar (82), Rangpur (65), Dinajpur (55), Bogra (47) and Pabna (50). Western Bengal except Howrah (42) comes off lightly, as do also Malda (20), Rajshahi (37), Nadia (32) and Murshidabad, the last, when the inmates of the Berbampore Asylum are excluded, having only 28 lunatics per 100,000 at large in the district. The proportion is fairly high in Khulna (49), Jessore (43), Faridpur (41) and Dacca (41 excluding the inmates of the Dacca Asylum), which form a strip separating the lightly afflicted western districts from Bakarganj (31) Noakhali (28). Tippera (31) and Mymensingh (35) which again come off lightly.

There are only two asylums in the province, one at Berhampore which at the time of the census housed 607 lunatics, 528 malesrand 79 females, and one at Dacca which housed 308 lunatics, 267 males and 41 females. The European Lunatic Asylum at Bhowanipore in Calcutta has now become no more than a receiving station and place of observation from which proved lunatics are drafted to Ranchi. At the time of the census there were only two females and one male in it. Practically all the lunatics who are put away in asylums in Bengal are criminal lunatics. The number confined at-the time of the census was 918 , which is less than the average number according to the returns of the Medical Department for the decade on account of the change made in the status of the Bhownipore Asylum. It will appear, therefore, that less than 5 per cent. of the insane are under restraint in public asylums and there are no private institutions in Bengal.

The prevalence of insanity has decidedly decreased during the last 40 years, for the number afflicted per 100,000, which was 64 in 1881, became 51 in 1891, 43 in 1901 and 1911 and 41 in 1921. According to the Census of 1881. women appeared to be rather more subject to this infirmity than men, but the figures of subsequent censuses have shown the contrary to be the case. The facts, that at each successive census the proportion of insane to sane persons has decreased, and that only the first census showed more female lunatics than male, though each successive census has probably been an improvement on its predecessor in point of accuracy, go a long way disprove the suggestion that there is much concealment.
199. Caste or race and insanity.-The community which has the greatest proportion of insane persons according to the census statistics is the Indian Christians-103 per 100,000-but this is accounted for by the fact that Christian Missions have adopted and care for a number of half-witted persons and idiots who have been returned as Christians. The prevalence of insanity is noticeably high among the Sunris 79 per 100,000, Kayasthas 70, Doms 69 , Baisnabs 67, Garos 58, Dhobas 56 and Kamars 52. The communities in which there is comparatively little of it are such tribes as the Khambus in the Himalayas 19, the Sontals 20 , the Lohars 25, and certain cultivating classes, the Chasi Kaibarttas 33 and the Pods 37, though it is more prevalent among the Namasudras 47 and the Rajbansis 51. Among the Muhammadans it is far more common among the better classes represented by the Saiyads, 86 per 100,000 , than among the cultivating class represented by the Shekhs 36 . It is comparatively uncommon among Anglo-Indians 27 and Europeans 22.
200. Distribution of the insane by age.-The proportionate iumber of the insane in each quinquennial period is given in Subsidiary Table II. The
proportions by decennial age periods are illustrated in diagram No. 88 for


Bengal according to the Censuses of 1921 and 1911. The distribution is much the same now in Bengal in 1911, and the distribution for Bengal, Bihar and Orissa has not charged much since 1881. What tendency there has been to change has been somewhat to reduce the average age of the insane and to concentrate their numbers into the ages of early maturity. That there has been a considerable reduction in the number of old people returned as insane, may however be due to greater accuracy in carrying out the census, which has included fewer of those suffering rather from senile dotage than actual derangement of the mental system. According to the Census of 1921, 4,817 per 10,000 male lunatics, and 4,298 female lunatics, were between the ages of 20 and 40. In 1911 the corresponding figures were 4,777 and 4,111. In both 1921 and 1911, the mean age of female lunatics was by about the same amount less than that of males, and there has been a reduction between the two censuses in the number of aged female lunatics though not of aged male lunatics. The sharp rise in the curves before the age of 30 indicates that insanity develops commonly before the age of 30 and rather earlier in females than in males, and the sharp fall later shows not only that insanity develops very much less frequently after 40 but that the insane do not survive long after they become so. The mortality among the insane in European countries is decidedly higher than among the sane and apparently this is even more noticeably the case in Bengal. Indeed, in this country, the lunatics' life is not a happy one. The congenital idiot is often kindly treated, but one who develops insanity later receives little sympathy. The medical treatment of the insane is designed with an eye to its cooling effects on the brain and nervous system and takes such forms as shaving the head and plastering it with mud, frequent bathing for preference in tanks overgrown with weeds, confinement in the dark and a low diet, but such treatment alternates with attempts to exercise the evil spirit with which the unfortunate being is supposed to be possessed. He is made to eat filth and drink nauseous draughts in the hope that it will drive the spirit to leave him. If violent, he is bound hand and foot or has a heavy log of wood fastened to his ankle, and there is little wonder that he does not survive long.
201. Prevalence of deaf-mutism.-According to the- census returns, there are 75 per cent. more deaf-mutes in Bengal than there are insane. The proportion over the Province is 69 per 100,000 when both sexes are taken together, 81 per mille in the case of males and 55 in the case of females. The prevalence of this infirmity in the several districts is as follows and the variations from district are illustrated in diagram No. 89 :-

| Burdwan | ...' | -** | 77. | Nadis |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Birbbun | *** | ... | 78 | Murshidabad | $\cdots$ | $\cdots$ | 50 |
| Bankura | -** | ... | 82 | Jessore | .-. | *** | 80 |
| Midnepore | $\cdots$ | ... | 80 | Khulna | ...0 | -.. | 88 |
| Hooghly | ... | ... | 31 | Raishahi | ... | $\cdots$ | 62 |
| Howreh | ... | ... | 55 | Dinajpur | .** | $\cdots$ | 75 |
| 24-Parganat | $\cdots$ | ... | 42 | Jalpaiguri | ... | ** | 75 |
| Calcutte | -ヵ | ** | 52 | Darjeeling | ... |  | 162 |


| Rangpur | ... | ... | 85 | Bakargabj | ..- | -.. | 61 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bogra | . | ... | 76 | Tippera | ... | ... | 77 |
| Pabna | ... | ... | 88 | Noakhali | ... | ... | 73 |
| Malda | ... | ... | 84 | Chittagong | ... | ... | 74 |
| Conch Behar | ... | ... | 87 | Chittagung H | Tracts | ... | 55 |
| Dacca | ..0 | $\cdots$ | 80 | Tripura State | ... | ... | 89 |
| Mymantingh | ... | ... | 21 | Sikkim | ... | ... | 172 |
| Faridpur | ... | ... | 85 |  |  |  |  |



Deaf-mutism is known to be associated with cretinism and goitre and the latter disease is very common in Bengal. Its prevalence is said to follow the course of certain rivers and it seems likely that the presence of abnormal quantities of certain salts dissolved in the water which is drunk facilitates the development of the disease.

It is found in other parts of the world that deaf-mutism is most prevalent in certain mountainous areas, for example, in parts of Switzerland, and in Bengal deaf-mutes are in a much larger proportion to the total population in Sikkim, Darjeeling, the Chittagong Hill Tracts and at the foot of the Himalayas in Jalpaiguri than in other parts. It is also high in the districts through which the drainage from the Himalayas passes through the Province on its way to the sea in Cooch Behar, Rangpur, Pabna, and high further down in Dacca, liaridpur and Jessore. The districts on the ser face of the Delta, the 24 F'arganas. Khulna and less noticeably Bakarg- ' Noakhali are omparatively free, as are also Hooghly, Nadia, Rajshe. ' Malda. In the parts of Bengal running up towards the Chota Nagpu. 1 thof.. deafmutism is again more frequently found.
202. Decrease in the number afflicted.-The proportion afflicted has changed in much the same manner during the last 40 years in each quarter of the Province as the following figures will show :-

DEATMOTES PEB 100,000 OF THE FOPULATION.


Ererywhere there was a steady decrease in the proportion of. deaf-mutes from 1881 to 1901 and the decrease was a large one, more than 40 per cent. over the whole Province in 20 years. Between 1901 and 1911, there was again an increase, but the change, though this time a slight one, has been in the opposite direction since 1911.
203. Deaf-mutism and caste or race.-That the Bhotias who have as many as 327 per 100,000 deaf-mutes among them, and the Khambus (201), the Lepchas (186), etc., have so high a proportion deaf and dumb is merely due to their living in the northern hills where deaf-mutism is so much more common than in the plains. A similar explanation accounts for the low proportion among the Pods (40) most of whom are found in the southern part of the Presidency Division, the Garos (10) in Mymensingh and so on. There does not seem to be any definite relationships between the prevalence of this infirmity and the position of any particular caste in the social scale.
204. Deaf-mutism and age.-The distribution of the deaf-mutes in the Province according to age, the number per mille in each decennial age periad in 1911 and in 1921, is illustrated in diagram No. 90 below, the figures being taken from Subsidiary Table II:-


The greatest number of deaf-mutes in Bengal, Bihar and Orissa at each successive census has been found either between-the ages of 5 and 10 or 10 and 15, and the same has been the case in Bengal alone for the last two censuses. Deaf-mutism is generally congenital, but many children afflicted with it under 5 are not returned as deaf-mutes, for their parents have not yet recognised that they are so, or at least are still in hope that the defect is merely due to $\mu^{2}$ s.awardness in development. The age distribution of deaf-mutes bra in ach the same for females as for males, but it has somewhat changentrs indth since. 1911. The change may be the result of the change :- tiplq istructions to enumerators who in 1911 were only to record those. des mutes who had been deaf and dumb from birth. The total number retu ed in 1921 was actually less than in 1911, 32,028 against 32,125
and according to the figures the number aflicted por 100,000 of the popula tion in each quinquennial age period at the two censuses was as follows:-


It is apparent from the increase in the figures in the later age periods that the result of the change has been to let in a considerable number of persons who can have been suffering only from senile debility in which their powers of hearing have been lost altogether and their other powers very much decayed. It would appear, therefore, that the statistics for deaf-mutism obtained in the later ages of life have not been improved by the change. Before comparing the total afflicted in 1921 with the statistics for 1911, we should, perhaps, exclude the excess in the ages from 45 onwards which the figures of 1921 show over the figures of 1911. If we do so, we reduce the number of deaf-mutes in all ages in Bengal to 30,872 or 648 per mille against 694 per mille in 1911. If the rule in 1911 caused a number, who should have beent returned as deaf-mutes, to be excluded because the enumerator was not satisfied that they had been so from birth, then the prevalence of deaf-mutism must have been decreased still further in the last 10 years.
205. Prevalence of blindness.-7.8 per 100,000 males and 66 per 100,000 females in Bengal are totally blind. The proportion for the two sexes together in each district is as follows and the variations from place to place are illustrated by the map in diagram No. 91 :-



The varying prevalence of blindness is what one would naturally expect, for generally speaking, it is least common where the climate is humid and the conntry green, and most common in districts pith an arid soil and a dry climate, where the eyes are affected by the fierce glare of the san and in the hot weather by clouds of dost driven before a scorching wind. It is most common in Bengal, in Bankura, Marshidabad, Birbhum, Burdwan and Nadia, though even in them there is not nearly so much of it as in districts further to the west, Shahabad, Gaya, Patna and Monghyr. There is little blindness in the districts along the Delta face, Noakhali, Bakarganj, Chittagong, Khulna and the 24-Parganas, and in Hooghly, Tippera and Mymensingh which are among the greatest districts. But the proportion afflicted is lowest of all in Sikkim and very low in Darjeeling. That the opposite is the case in the Chittagong Hill Tracts is a fact for which no explanation immediately suggests itself. This district has distinctly more than twice as many blind in proportion to its population than the Province as a whole. Jalpaiguri and Cooch Behar under the northern hill also have a high proportion, and it is well above the average in Rangpur, Dinajpur, Pabna and Faridpur.

That there was a large decrease in the prevalence of blindness, according to the census figures, between 1881 and 1891 -from 119 per 100,000 in the case of males to 84, and from 113 in the case of females to 75 -was no doubt partly due to greater accuracy in the enumeration, and greater care taken to ensure that none should be recorded as blind who had lost the sight of one eve only. But from 1981 to 1911 the statistics continued to show a slight decrease which, however, has not been maintained in the last decade for the proportion afflicted among males (78), is the same as in 1911 and the proportion afficted among females has slightly increased (from 63 to 66 ).
206. Blindness and caste or race.-The prevalence of blindness in the differeat castes depends very much on the part of the province in which the caste is found in greatest numbers, to some extent on the traditional occupation of the caste and somewhat on the extent to which its members are likely to have recourse to sound medical treatment when they are in trouble with their eyes. Thus the proportion afflicted is low among the Pods, who arg practically confined to the southern parts of Central Bengal, and the Sheiks, the greatest number of whom are cultivators in Eastern Bengal; high among the Suncis whose greatest numbers are found in Western Bergal, high among the Kamars and Lolars whose caste occupation, that of blacksmiths, is trying to the eyes; and low among the Europeans and Anglo-Indians, who would seek sound medical advice when the trouble began, and so on. There is a peculiarly high proportion ( 217 per 100,000 ) among the Garos in Mymensingh and a very high proportion among the Baisnabs (140), possibly due to the prevalence of syphilis among them. In the Himalayas, there is a contrast between the Buddhist tribes, Bhotias and Lepchas, and the Nepalese, comparatively few of whom seem to be blind. There does not, however, appear to be a definite tendency to greater prevalence at one end of the social scale than at the other, and in any case the number blind in each caste is not often large enough for the statistics to be made the basis of wide generalizations.
207. Blindness and age.-As was only to be expected, the statistics show that the prevalence of blindness increases very much with age, and this increase shows itself even from childhood. Proportionately there are twice as many afllicted between the ages of 10 and 15 as below the age of 5 . Its prevalence does not increase much between the ages of 20 and 40 though there is some increase, and it is more noticeable in the case of females than of males. After 40 is passed, the increase is very much faster. Proportionately nearly twice as many between 45 and 50 are blind as between 35 and 40 and more than twice as many between 55 and 60 as between 45 and 50 , while of those aged 60 and over more than 6 per mille males and more than 5 per mille females have lost their sight. The age distribution of blind persons by decennial periods is shown for 1921 and 1911 in diagram No. 92 below:-


In proportion to the total number afficted there are noticeable fewer old people than there were in 1911 and both censuses show the mean age of blind women to be decidely greater than the mean age for bind men, though the difference was greater in 1911 than in 1921.. The different age distribution in the blind of the two sexes is no doubt due to the fact that men more readily avail themselves of the services of medical men than women, and when their blindness is due to cataract, it can be, and often is, removed by having recourse to a surgeon. The number of persons operated on in successive years in Bengral for cataract since the last census and the number cured are given below:-

$\left.\begin{array}{ccccc}\text { Nun:ter of nersons } \\ \text { vpuratedun }\end{array}\right)$ Number curc 1.

These, of course, include operations upon persons blind in one eve only which is a very much larger number than the 34,215 returned as totally blind at the time of the census, but it shows what a great deal is being done by surgery to get rid of this particular sort of blindness. Unfortunately, nothing can be doue to get rid of most other forms of blindness. In Bengal, they are usually the result of neglected inflemmation of the eves combined with a poor constitution and the application of caustic remedies. Various forms of ulceration, especially of the cornea, are common. These, though easily amenable to treatment in their early stages, are often not submitted to treatment at the hospitals until the vision has been hopelessly destroyed and it is too late for any treatment to be of use. If the eye has not been destroyed by ulceration the scars often leave permanent opacities on the cornea which nothing can remove.
208. Prevalencee of leprosy.-Forty-nine males per 100,000 and 18 females in the Province were returned as lepers. The proportion for the two sexes together in the several districts is as follows and the variations from place to place are as illustrated by the map in diagram No. 93 :-



Leprosy is far more common in the Burdwan Division than in others. If the three districts viz.,.Bankura, Burdwan and'Birbhum are excluded, the proportion of the lepers to the whole population in the rest of the Province is only 22 per 100,000 which is some 40 per cent. lower than the average over the whole of India, and lower than in any of the great provinces except the Punjab and the North-West Frontier Province. Lepers are very few indeed in Noakhali and Bakarganj, few in all the districts along the iine from Dinajpur down to the estuary of the Meghna, and few also in Hooghly, Howrah, the 24 -Parganas, Jessore and Khulna, though there are more again in the districts along the eastern frontier of the Province from Jalpaiguri to Mymensingh and in the Eastern Hill Tracts. Bankura, however, has the unenviable reputation of having a greater number of lepers than any other d:strict in India and there are areas in Burdwan, Birbhum and Midnapore in which the prevalence of the disease is almost the same. The proportion of lepers per 100,000 of population under the several police-stations in Bankura, Burdwan and Birbhum and under those of the Sadar subdivisiou of Midna pore district is as follows, and is illustrated by the map in diagram No. 94 :-

bangora Distact.


Burdian District.

| Sadar Subdivision- |  |  |  | Salanpur <br> Raniganj | ... | *** | 319 149 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Burdwan | ... | ... | 31 | Jamuria | ... | -.* | 199 |
| Sahibganj | ... | ... | 78 | Ondal | -* | ** | 195 |
| Khandaghosb | -. | --* | 43 | Faridpar | $\cdots$ | ... | 309 |
| Raona | ... | - | 34 | Eoksha | ... | ** | 265 |
| Sntgachia | ..* | ... | 40 |  |  |  |  |
| Memari | ** | ... | 39 | Katwa Subdiv |  |  |  |
| Jamalpur (30yna) | ... | .-. | 27 | Katwa Subdiv |  |  |  |
| Gulsi | ... | ** | 71 | - Ketugram | - $*$ | -* | 130 |
| duagram | ** | ** | 154 | Katwa Manglakot | ... | $\ldots$ | $\begin{array}{r}154 \\ 96 \\ \hline\end{array}$ |
| Asansol Subdivision- |  |  |  | Ealne Sutdiv |  |  |  |
| Asansol | $\cdots$ | ... | 118 |  |  |  |  |
| Niamatpur | ... | ... | 166 | Kalna | $\cdots$ | ... | 46 |
| Disbergarb | ... | ** | $\begin{array}{r}93 \\ \hline 95\end{array}$ | Purbasthali | *** | - 0 | 104 |
| Barabani | - | ... | 265 | Manteswar | ** | -* | 104 |

- Bibbecy Distaict.


Midnapore District.


There are Leper Asylums in Bengal at Bankura, at Raniganj and at Gobra in Calcutta, but they are able to accommodate but a very small proportion of those afflicted. There has been an increase in the number of these unfortunates who were housed in asylums during the decade, the number of inmates each year being as shown below, but even the number which the asylums held in 1920 was only 6.6 per cent. of the lepers in the province, all the rest being still at large, living in the villages and all disseminators of further infection:-

| 1911 | $\ldots$ | $\ldots$ | $\ldots$ | 719 | 1916 | $\ldots$ | $\ldots$ | $\ldots$ | 798 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1912 | $\ldots$ | $\ldots$ | $\ldots$ | 916 | 1917 | $\ldots$ | $\ldots$ | $\ldots$ | 858 |
| 1913 | $\ldots$ | $\ldots$ | $\ldots$ | 871 | 1918 | $\ldots$ | $\ldots$ | $\ldots$ | 830 |
| 1914 | $\ldots$ | $\ldots$ | $\ldots$ | 752 | 1919 | $\ldots$ | $\ldots$ | $\ldots$ | 974 |
| 1915 | $\ldots$ | $\ldots$ | $\ldots$ | $721 \ldots$ | 1920 | $\ldots$ | $\ldots$ | $\ldots$ | 1,016 |

It is possible that at successive censuses, there has been some improvement in the direction of greater accuracy in the return of lepers and the exclusion of persons who are suffering from syphilis, leucoderma and other diseases which are sometimes mistaken for leprosy or mistakenly called leprosy, but the statistics of successive censuses indicate a great reduction in the prevalence of leprosy since 1881. How great has been the reduction is shown by the following figures for 1921 and 1881 showing the proportion of lepers per 100,000 of the total population in each quarter of the Province:-

|  |  |  | 1291. |  | 189. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Mriea. | Famalos. | Hales | Femases. |
| Western Beagal | ... | ** | 124 | 55 | 287 | 107 |
| Central Bengal | ... | ... | 30 | 11 | 111 | 38 |
| Northern Bengal | ... | -.. | 42 | 12 | 147 | 50 |
| Eastern Bengal | *** | ... | 29 | 9 | 74 | 27 |

In 1881, leprosy was more prevalent in Northern Bengal and almost as prevalent in Central Bengal as it is now in Western Bengal, and the proportion afflicted in Eastern Bengal was more than half that in the Western Bengal to-day. The improvement has been great in Eastern Bengal, greater in Northern Bengal and greatest of all in Central Bengal, where the proportion afflicted is but 27 per cent. of what it was 40 years ago. . The improvement which has taken place has been to reduce the proportion afflicted in Eastern Bengal to one-tenth of what it was in Western Bengal in 1881 and in Central Bengal almost to the same level, and to bring that in Northern Bengal down to one-seventh of what it was in Western Bengal.

Even in Western Bengal, there has been an improvement which has reduced the proportion by more than a half in the 40 years. The following figures show the actual number of lepers found in the districts which suffer most from the scourge at the last three censuses:-

| - | Total |  |  | Malrs. |  |  | Prxales. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1921. | 1911. | 1801. | 1031. | 1011. | 1801. | 1891. | 1911. | 1001. |
| Bankura | 2,752 | 2.645 | 2,969 | 1,817 | 1,764 | 2,015 | 935 | 881 | 954 |
| Burdwan | 1,613 | 2,152 | 2,517 | 1,166 | 1,537 | 1,832 | 447 | 615 | 675 |
| Birbhum | 1,255 | 1,528 | 1,928 | 914 | 1,114 | 1,427 | 341 | 414 | 501 |
| Midnapore | 1,288 | 1,541 | 1,684 | 937 | 1,132 | 1,255 | 551 | 409 | 429 |

There has, it appears, been steady improvement in Burdwan, Birbhum and Midnapore in each of the last two decades. In Bankura, there was improvement between 1901 and 1911, but the number of lepers, both male and female, has increased considerably in the last ten years. The Bankura Leper Asylum has grown since it was founded in 1902, but it contained only 145 lepers on the census night in 1921, and only three came from outside Bankura district, so that-this is no explanation to account for the phenomenon, which is at present showing itself, that while the prevalence of leprosy is decreasing everywhere else, the disease seems to be concentrating its forces on the district of Bankura.
209. Leprosy and caste or race.-Leprosy being now-a-days so much more common in Bankura, Birbhum and Burdwan than in other parts of the Province, the prevalence of leprosy in a particular caste depends very largely on.the proportion of the people of such a caste as are found in these districts. Thus, the explanation of the fact that there are more lepers among the Sunris, 265 per 100.000, than among any other caste for which statistics are available, lies in the fact that more than 35,000 of the 92,000 returned as Sunris were located in these three districts. Similarly, the high proportion among the Lohars (204) is due to nothing else than that 41,000 out of their 68,000 live in

Bankara. There is a different explanation for the equally high proportion among Indian Christians. The charity which cares for lepers is mostly the charity of Christian Missions. Not only will those who are stricken place themselves under Christian influence for the sake of the assurance that they will find pity and protection in the Mission asylum, but their treatment at the hands of the Missions goes hand in hand with the teaching of Christianity and converts are made among them. As in the case of other infirmities, castes and tribes, which are removed from localities in which leprosy iscommon, are the least troubled with the disease. The proportion afflicted is very low in the case of the Bhotias 18, Khambus 10, Lepchas 21, Namasudras, who are mostly to be found in the Dacca Division and Khulna, 20, and Pods 21. There is clear indication that a high position in the social scale and a high level of civilisation spell comparative immunity from disease, for it is rare among the Bengali badralok only 17 per 100,000 being afflicted among the Kayasthas, and as rare among Eurbpeans 18, and Anglo-Indians 18.
210. Leprosy and age.-Some of the cases of insanity, most of the cases of deaf-mutism, and some of those of blindness returned at the census, are congenital. The person afflicted was defective when he was born. Leprosy may attack people at all ages and there are a certain number of infants who develop its symptoms at a very early age, but it is a specific disease which is developed after birth and for this reason its prevalence is much less at early. ages than the other infirmities for which the census provides statistics. Its prevalence, as the figures in Subsidiary Table III will show, increases steadily with age up to about 50 but not later in life. The age distribution of lepers by decennial periods is illustrated for 1911 and 1921 in diagram No. 95 below:-


Both in 1921 and in 1911 male lepers were more noticeably concentrated in the ages between 30 and 50 than females. Generally speaking, the mean age of lepers was decidedly lower in 1921 than in 1911, and, no doubt, these unfortunates suffered the hardships dufe to the rise in prices and the unhealthiness of the latter half of the decade more severely than those who were not thus afflicted.

SUBSIDIARY TABLE I.-Number of pehsons afflicted per 100 , 0 א 0 of the population at each of the last five Oensuseb.


## SUBSIDIARY TABLE I.-Number of persons afflicted per 100,000 of the population at each of the last five Censuses.

|  Divilior. | BLItD. |  |  |  |  |  |  |  |  |  | Lepze. |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mam. |  |  |  |  | Famata. |  |  |  |  | Male. |  |  |  |  | Tramin. |  |  |  |  |
|  |  |  | 1801. | Itel. | 1881. | 1081. | 1914. | 1201. | 1831. | 1881. | 1881. | 1911. | 1901. | 1881. | 1881. | 1891. | 1911. | 1801. | 1891. | 1881. |
|  | 53 | 28 | 14 | 88 | 2 | 17 | 28 | 59 | 20 | 1 | 32. | 3 | 34 | 35 | Is | 35 | 38 | 20 | 40 | 41 |
|  | 7848 | 78 | $\begin{gathered} 10 \\ 106 \end{gathered}$ |  | $\begin{aligned} & 118 \\ & 150 \end{aligned}$ | $\begin{aligned} & 81 \\ & \boldsymbol{1} \end{aligned}$ | $\begin{aligned} & 18 \\ & a \varepsilon \end{aligned}$ | $\begin{gathered} 47 \\ 100 \end{gathered}$ | $\begin{aligned} & 76 \\ & 87 \end{aligned}$ | $\begin{aligned} & 113 \\ & 150 \end{aligned}$ | $\begin{gathered} 48 \\ 184 \end{gathered}$ | $\begin{gathered} 58 \\ 187 \end{gathered}$ | $188$ | $\left\{\begin{array}{l} 104 \\ 244 \end{array}\right.$ | $\begin{aligned} & 817 \\ & 287 \end{aligned}$ | $\begin{aligned} & 18 \\ & 58 \end{aligned}$ | 10 | 23 | 56 | $\begin{aligned} & E 7 \\ & \because \\ & 187 \end{aligned}$ |
|  |  | 36 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 57 | 64. | 80 |  |
| Burdeare - . | 108 | 108 | 182 | 104 | 146 | 107 | 107 | 131 | 110 | 188 | 139 | 200 | 539 | 388 | 44 | 83 | 80 | 88 | 18: | 189 |
|  | 35 | 110 | 108 | 185 | 125 | 98 | 101 | 118 | 147 | 181 | 218 | 411 | 331 | 359 | 1-5 | 80 | 88 | 109 | 180 | 188 |
| Heatrue | 104 | 107 | 121 | 124 | 148 | 187 | 183 | 13 | 135 | 179 | 357 | 314 | 367 | 815 | 540 | 188 | 163 | 188 | 12 | 314 |
| Midaspoce | 80 | * | 07 | 70 | 117 | ${ }^{8}$ | 86 | 87 | 5 | 129 | 70 | ${ }^{80}$ | 81 | 128 | 134 | 90 | 29 | 31 | 36 | 38 |
| Hinoghy - - | t | 80 | ${ }^{38}$ | 80 | 117 | 62 | 75 | 78 | 85 | 163 | 21 | 37 | 55 | 115 | 178 | 8 | 10 | 14 | 35 | 49 |
| .Howrlk $\quad$ - | 78 | 61 | 83 | 70 | 150 | 70 | 85 | 85 | 39 | 183 | 92 | 18 | 23 | 4 | 69 | 11 | 4 | 6 | 14 | - 31 |
| chitral bemoal -- | 73 | 78 | 76 | 48 | 175 | 47 | $e$ | 48 | 4 | 112 | 30 | 31 | 48 | 71 | 711 | 71 | 12 | 18 | 23 | 35 |
| , 2t-Pargasal $-\cdots$ | 4 | 87 | 6 | 84 | 116 | ss | 47 | 47 | 68 | 107 | 13 | 15 | 18 | 50 | 12 | e | 5 | 5 | 18 | . 30 |
| Onlouse* -- | 81 | 08 | 71 | 18 | 101 | 72 | 22 | 103 | 00 | 173 | 33 | 38 | 35 | 28 | 63 | 11 | 56 | 84 | 28 | 37 |
| Yudia - -- | 103 | 80 | 73 | 104 | 119 | 78 | 76 | 57 | 78 | 108 | 43 | 80 | 49 | 110 | 150 | 12 | 14 | 17 | 25 | 42 |
| Murabldebedt ... | 107 | 114 | 185 | 111 | 158 | 108 | 103 | 14 | 98 | 187 | 88 | 90 | 119 | 189 | 184 | 37 | 34 | 38 | 28 | 68 |
| Jemer - - | 10 | 72 | 78 | 79 | 101 | 58 | 40 | 54 | 56. | 78 | 31 | 38 | $\pm$ | 65 | 65 | 5 | 3 | 7 | 15 | 16 |
| Ehalma | 74 | 67 | ${ }^{88}$ | 4 | $8!$ | 49 | 41 | 37 | 31 | $\omega$ | 13 | 14 | 19 | 18 | 28. | 6 | 5 | 8 | 8 | 14 |
| mobte bemgal | 41 | 74 | 42 | 82 | 120 | 35 | 4 | 71 | 43 | 118 | 42 | 80 | 03 | $\int 1$ | 167 | 12 | 14 | 14 | 20 | . 60 |
| Ragamil - | 67 | 4 | 79 | 82 | 98 | 72 | 61 | 80 | 87 | 89 | 12 | . 7 | 15 | 20 | 5 | 7 | 6 | 10 | 17 | 37 |
| Dinsipur an m | 79 | 7 | 73 | 71 | 117 | 73 | 6 | 78 | 81 | 183 | 11 | 48 | 56 | 81 | 104 | 5 | 18 | 15 | 20 | 48 |
| Jelpetruri mor | 88 | 12 | 63 | 4 | 108 | 88 | 57 | 57 | 88 | 107 | 78 | 89 | 110 | 139 | 188 | 21 | 39 | 48 | 8 | 69 |
| Darjaulay - | 88 | 27 | 8 | 78 | 71 | 4 | 23 | 46 | 78 | 05 | 38 | 45 | 43 | 8 | 136 | 16 | 14 | 27 | 48 | 68 |
| venergpar - - | 84 | 68 | 88 | 66 | 138 | 67 | 55 | 65 | 4 | 149 | 77 | 78 | 9 | 107 | 531 | 19 | 17 | 24 | 27 | 64 |
| Byrs - - | 88 | 7 | 76 | 89 | 80 | 64 | 33 | 52 | 100 | 78 | ${ }^{3}$ |  | 38 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | 200 |  | 23 | 30 | 28 | 81 | 105 | 7 | 6 | 11 | 25 | \$9 |
| Fabat - - | 82 | 78 | $\infty$ | 85 | 138 | 76 | 63 | as | 73 | 107 | 30 | 50 | 48 | 68 | 100 | 8 | 8 | 11 | 21 | 30 |
| Talisa | 73 | 102 | 100 | 128 | 185 | 90 | 107 | $\infty$ | 136 | 150 | 4 | Es | 4 | 98 | 130 | 13 | 15 | 18 | ${ }^{3}$ |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 16 |  | 37 |
| Oooch Brabr | 9 | 0 | 24 | 113 | 139 | 84 | 71 | 89 | 138 | 186 | 87 | * 8 | 125 | 505 | 307 | 19 | 35 | 87 | 60 | -118 |
| east bengal - | 70 | 72 | 76 | 81 | 118 | 51 | 48 | 48 | 83 |  | 28 | 11 | 35 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 31 | 35 | 88 | 78 | - | 7 | 8 | 18 | 27 |
| Dreent - | 78 | 78 | 70 | 72 | 118 | 60 | 59 | 61 | 85 | 101 | 33 | 83 | 89 | 87 | 83 | 10 | $\cdot 9$ | 18 | 14 | 81 |
| Mruanalagh -- .-. | 6 | 79 | * | 07 | 104 | 4 | 54 | 83 |  |  |  |  |  |  | 8 |  |  | 12 | 14 | 31 |
|  |  |  |  | 0 | 104 | 4 | 6 | 63 | 89 | 90 | 19 | 67 | 84 | 124 | 129 | 11 | 13 | 15 | 40 | 39 |
| Preidpar - - | ${ }^{8} 8$ | 7 | 4 | 7 | 101 | 65 | 4 | 31 | 47 | 67 | 19 | 16 | 17 | 4 | 63 | 6 |  |  |  |  |
| Batirgaaj -.. - | 48 | 60 | 65 |  |  |  |  |  | 4 | 6 |  | 16 | 17 | 4 | 6 | 6 | 4 | 4 | 11 | 17 |
| 2ameaj -- | $\omega$ | 60 | 65 | 8 | 108 | 87 | 33 | 3 | 47 | 63 | 8 | 7 | 3 | 11 | 3 | 4 | 2 | 4 | 8 | 17 |
| Tippera $\rightarrow$ | 67 | 64 | 61 | 9 | 189 | 49 | 48 | 34 | 73 | 187 | 97 | 26 | 3 | 59 | 69 |  |  |  |  |  |
| Siceithat |  |  |  |  |  |  |  |  |  |  |  | 25 |  | 5 | 6 | 8 | 8 | 5 | 18 | 30 |
| -strat - - | 8 | 6 | 7 | 88 | 119 | 3 | 38 | 50 | 67 | 107 | 6 | $s$ | - | 90 | 4 | \$ | 1 | 2 | 8 | 18 |
| chataront $\quad \rightarrow-$ | 6 | 83 | 79 | 71 | 217 | 47 | 58 | 57 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 58 | 67 | 6 | 109 | 15 | 18 | 18 | 35 | 41 | 8 | 3 | 4 | 18 | 28 |
| Cuttarsat Fill Tractum | 174 | 117 | 120 | 187 | $\cdots$ | 142 | $\boldsymbol{*}$ | 5 | 184 | $\cdots$ | 120 | 78 | 74 | 7 | $\cdots$ | 50 | 23 |  |  |  |
| Tripurs Sate - - | 6 | ${ }^{0}$ | 40 | 158 | $\cdots$ | 78 | 40 | 50 | 76 | - | 47 | 83 | 87 | 67 | $\cdots$ | . 20 | 14 | 12 | 88 88 | - |
| atren - - - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 30 | 71 | $\cdots$ | - | 40 | 27 | 57 | - | $\cdots$ | 14 | 18 | 85 | $\sim$ | $\cdots$ | 12 | 60 | 25 |  |  |
|  <br>  169: and Oucratte coral 18, malean 18, ferition 16. <br>  <br>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

SUBSIDJARY TABLE II（PART I）．－Distribution of the Infirms by age per 10,000 of each sex．

| AGE． | Insamp． |  |  |  |  |  |  |  |  |  | Deat－muta． |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males． |  |  |  |  | Fematin |  |  |  |  | Maber． |  |  |  |  | Femaken． |  |  |  |  |
|  | 1981. | 1911. | 1901. | 1891. | 1891. | 1831. | 1011. | 1001. | 1891. | 1881. | 1931. | 1011. | 1801. | 1891. | 1531. | 1031. | 1911. | 1001. | 1591. | 1881. |
| 1 | 1 | 3 | 4 | 6 | c | 7 | 8 | $\bigcirc$ | 10 | 11 | 18 | 13 | 14 | 15 | 18 | 17 | 18 | ${ }^{19}$ | 20 | 11 |

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|  |  |  | tal | ．．． | 10，000 | 10，000 | 100000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，008 | 10，000 | 10，008 | 10，000 | 10，080 | 10，080 | 10，000 | 10，000 | 10，005 | 14，000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0-10$ |  |  |  |  | 112 | 65 | 116 |  | 183 | 133 |  |  |  |  |  | 139 |  | 359 | 130 | 438 | 817 | 838 | 64 | SA3 |
| － $6-10$ | ．． | $\cdots$ | $\cdots$ | ．．． | 650 | 830 | S78 | 1188 <br> 819 <br> 18 | ${ }_{677}^{187}$ | ${ }_{6} 134$ | 8 | ${ }_{6} 189$ | ${ }_{3} 38$ | 1808 | 1．400 | 1．809 | 1.68 1,618 | 389 1,342 | 1，190 | 1，318 | 1，560 | 1，883 | 1.310 | 1．158 |
| $10-18$ $13-20$ | $\ldots$ | $\cdots$ | $\cdots$ | ．．． | 787. | ${ }_{009}^{81,}$ | A73 | 748 | ${ }_{8}^{811}$ | 783 | ${ }_{\text {ckis }}$ | 973 | 733 | 800 | 1，1485 | 1， 1.470 | 1．779 | 1．133 | 1．181 | 1.34 | 3， $3 \mathrm{3H}$ | ${ }_{1}^{1.397}$ | 1．032 | ${ }_{768}$ |
| 20－35 | $\ldots$ | ．．． | ．．． | $\ldots$ | 900 | 1，100 | 89\％ | 927 | 2，116 | ${ }^{8} 970$ | ${ }_{1}^{1,090}$ | $\mathrm{Qax}_{0}$ | ${ }_{980}$ | ${ }^{810}$ | 1.084 | ${ }_{1,074}$ | 1，973 | cso | ） 81.80 | 1.003 | 1，1099 |  | NT1 | ＋ 1.48 |
| 26－3n $315-35$ | $\cdots$ | $\cdots$ | $\cdots$ | $\ldots$ | ${ }^{1} .2974$ | ${ }_{\text {l }}^{1,389}$ | ¢ | 1．919 | 2.116 | 1.273 | 1， 1000 | 074 | 1.014 | f 1.740 | 1．048 | 1．100 | 1，008 | 871 | $\} 1.688$ \} | ${ }^{4} 8$ | 1，093 |  | ${ }_{8}^{4} 4$ | 1） 1.473 |
| 85－40 | $\cdots$ | $\cdots$ | ．．． | $\cdots$ |  | $\xrightarrow{1,3 \times 1}$ | ， | 1.258 | 2，169 $\{$ | 1.123 | 1.102 | 1，000 | 1.024 | 1，881 | ${ }^{836}$ | 813 | 807 | ${ }^{83}$ | 1，507 | 789 | 774 | 7p8 | 814 | 1） 1.318 |
| 40－15 | … | $\cdots$ | $\cdots$ | $\cdots$ | ${ }^{1} 905$ | ${ }^{074}$ | －98 | 1，065 |  | $\mathrm{gns}^{2}$ | ${ }_{059}$ | 1．098 | 1.014 |  | ${ }_{876}$ | 814 | 818 | 808 |  | ${ }_{613}$ | 630 | cos | ${ }_{63}$ |  |
| 45－b0 | ．．． | $\cdots$ | ．．． | ．．． | 637 | 501 | 584 | S99 | 1，400 $\{$ | 615 | bss | 675 | 669 | 1．574 | 309 | 383 | 989 | 193 | 1.178 | 3，${ }^{\text {a }}$ | 296 | 921 | 198 | 1.178 |
| St－${ }^{\text {a }}$ | $\ldots$ | $\cdots$ | $\cdots$ | $\ldots$ | （858 | 630 341 | S4， | － $\begin{array}{r}612 \\ \hline 829\end{array}$ | 862 \} | ¢ 6 688 | 783 | 641 | ${ }_{7}^{768}$ |  | 383 | 369 | 317 | ${ }^{3} 9$ | ato 1 | 380 | 30.5 | 130 | 361 |  |
| 60 and over | $\ldots$ | ．．． | ．．． | $\cdots$ | 877 | 817 | 868 | ${ }_{685}^{882}$ | $8_{55}$ | ${ }_{774}$ | ${ }_{819}^{819}$ | \％ 880 | （1，088 | 1，311 | ${ }_{601}^{133}$ | 110 | 114 | ${ }_{097}^{278}$ | 1.164 | 178 788 | 118 | 188 | ${ }_{1}^{350}$ | ${ }^{1,517}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


| Ans． | Blind． |  |  |  |  |  |  |  |  |  | Luprss． |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males． |  |  |  |  | Pemalow |  |  |  |  | －Maser |  |  |  |  | Pramke |  |  |  |  |
|  | 1891. | 1911. | 1001. | 1801. | 1891. | 1921. | 1911. | 1801. | 1891. | 1881. | 1981. | 1911. | 1801. | 1891. | 1891. | 1031. | 1911. | 1001. | 1831. | 18：9， |
| － | 23 | 32 | 34 | 35 |  | 17 | 98 | 59 | 30 | 31 | 32 | ${ }^{33}$ | 4 | 4 | 4 | 17 | 33 | 37 | 40 | 4 |

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|  |  |  | 1 | ．．． | 10，000 | 10，000 | 10，000 | 10，000 | ${ }^{10,000}$ | 10，000 | 10.000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，000 | 10，050 | 10，800 | 10，000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0－ |  |  |  | $\ldots$ | 338 | 904 | 378 | 411 | ${ }^{408}$ | $9 \mathrm{n7}$ | 314 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\stackrel{8}{10-}$ | $\ldots$ | $\ldots$ | $\cdots$ | $\ldots$ | 209 | 777 735 | 7705 | $\xrightarrow{706}$ |  | 168 162 168 | ${ }^{188}$ | 433 | 105 | 3 2A |  | ${ }_{\text {in }}$ | ${ }_{3} 8$ | M | 13 16 | 818 | 165 | ${ }_{171}$ | iss | 只 |
| $15-80$ |  |  | $\ldots$ | $\ldots$ | 615 | ${ }_{66}$ | 898 | ${ }^{872}$ | 475 | ${ }^{23}$ | 146 <br> 415 <br> 15 | 419 | 388 | ${ }_{983}^{987}$ | 979 | 194 | ${ }_{\text {311 }}{ }^{\text {Ma }}$ | 986 | 417 | 303 | $\xrightarrow{133}$ |  | $3{ }_{3}$ | 319 |
| ${ }^{210} 5$ | ．．． | $\cdots$ | ．．． | $\ldots$ | 340 | 803 667 | ${ }_{\text {ctes }} 874$ | ${ }_{88} 88$ | ）1，029 | ＋130 | ${ }^{458}$ | 481 | 375 |  | 815 | 898 | B71 | Cis |  | ：64 | ins | 730 | 013 |  |
| 30－36 |  |  | $\cdots$ | $\ldots$ | ${ }_{610} 10$ | 663 | ${ }^{318}$ | 617 |  | Mas |  | cis | 489 | ） 76 | 1.044 | 878 | res | P0， | 1，11． | 1.672 | 003 | his | ＊ | 1，5＊4 |
|  | $\ldots$ | ．．． | $\ldots$ | $\ldots$ | 872 | sis | S43 | ${ }^{518}$ |  | ${ }_{728}^{850}$ | 800 | ${ }_{\substack{807 \\ 408}}$ | 4 | 014 | 1，944 | 1．919 | $1 \begin{aligned} & 1,178 \\ & 1,72\end{aligned}$ | 1 | 9.9501 | 1，135 | 1，117 | 1．03 | $1: 150$ | $1: 3$ |
|  | ．．． | $\ldots$ | $\ldots$ | ．．． | 648 <br> 810 <br> 10 | 6.7 618 818 | （888 | S03 | 1，14 $\{$ | （128 | 038 | TM | 738 |  | 1．497 | 1．1．1 | 1.413 | 1，454 |  | 7，：6t | 1，9is | 1.819 | i．31： |  |
| ！n－ss |  | $\cdots$ | $\cdots$ | $\cdots$ | 777 | 79 | $7 \times 3$ | 7ns | 1．184 | 479 | 67\％ | 年17 | cin |  | 1，004 | 1.1044 | 1.074 | 1.048 | $3.24$ | 807 | Ns | 102 | ， | 1，083 |
| －${ }_{\text {a }}$ | $\cdots$ | $\cdots$ |  |  | ${ }^{417}$ | 2．141 | 453 2.676 | （315 | 3.350 | 8， 813 | S80， | \％43 |  | 1．384 |  | 1．1598 | 1.104 | 1， 12 | 1，A33 | 渻 | 1.10 | ＂＊4．4 | lisi | ）1．184 |
|  |  |  |  |  |  |  |  |  |  |  | 3.8 | 3，710 | 3，＾AS | 0，619 | 1.002 | 1.078 | 1，076 | 1，230 | 1，146 | 1，043 | 3．13 | 1．3．10 | 1.304 | 1.02 |

SUbSidiary table il (Part II)-Distribution of the Infirms by age per 10,000 of each gex (1911 and i921).


SUBSIDIAIY TABLE III.-Number afflicted per lor,000 of each age peri od as. NUMBER OF FEMALES AFFLICTED PER 1,0 ÚO MALES.

| S0x. |  |  | numibr applicted per 100,000. |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Inianz. |  | deat.metm. |  | ВLind. |  | Lzpra. |  |  |  |  |  |
|  |  |  | Main. | Farmale. | Malo, | Fernalo. | unle. | Femant. | Melo. | Pomate. | Imana. | Iment-wate. | bited. | 2ant |
| 1 |  |  | g | 3 | 4 | 8 | 0 | 7 | 8 | 9 | 10 | 11 | 12 | 11 |
| all mose | $\cdots$ | $\cdots$ | 47 | 88 | 70 | 88 | 78 | 88 | 48 | 4 | 704 | 850 | 78 | 297 |
| $\begin{aligned} & 0-0 \\ & 6-10 \end{aligned}$ | ... | .. | 4 | : | 24 | 17 | 10 | 12 | 1 | 1 | 812 | 747 | 673 | 0.0 |
|  | ... | ... | 16 | 18 | 80 | 46 | 31 | $3{ }^{3}$ | 2 | 2 | 769 | 66 | 778 | 78 |
| 10-18 | ... | ... | 10 | 28 | 80 | 68 | 28 | 30 | 30 | B | 662 | 883 | 005 | CH |
| 16-20 | ** | *. | 42 | 38 | 94 | 68 | 42 | 80 | ${ }^{28}$ | 12 | 842 | 687 | 76 | 617 |
| $20-25$ | $\cdots$ | *. | 60 | 38 | 100 | 62 | 47 | 2) | 41 | 14 | 600 | \%os | 37 | 404 |
| 26-80 | $\cdots$ | ... | 64 | 48 | 90 | 87 | 47 | 4 | 67 | 21 | 683 | 109 | 64 | 2 H |
| 80-38 | ... | $\cdots$ | 70 | 64 | 78 | 65 | 52 | 42 | 70 | 38 | 884 | 807 | 687 | IT |
| 15-10 | ..* | $\cdots$ | 76 | 61 | 76 | 60. | 89 | bo | 8 | 35 | 491 | 867 | 727 | 329. |
| 10-48 | $\cdots$ | *. | 78 | 65 | 74 | 87 | 84 | 88 | 137 | 43 | 678 | 780 | 908 | 300 |
| 46-66 | ... | $\cdots$ | 34 | 72 | 78 | 80 | 114 | 187 | 180 | 49 | 711 | 860 | 821 | 2:\% |
| 20-65 | ... | - | 72 | 73 | ${ }^{80}$ | 83 | 183 | 151 | 128 | 6 | 917 | 700 | 918 | 270 |
| 85-60 | $\cdots$ | $\cdots$ | 78 | 6 | 01 | 4 | 258 | 268 | 184 | 88 | 715 | 847 | 870 | 7\% |
| 60add meer |  |  | 68 | 30 | 111 | 81 | 687 | 387 | 110 | 48 | 967 | 74 | 821 | m |

## CHAPTER XI.

## Caste, Tribe and Race.

211. Introductory.-This chapter deals with the statistics to be found in Table XIII of the Census Tables Volume. In 1901, statistics of all castes and tribes were compiled, but it was realised that the compilation of the figures for a great number of minor groups, each of which formed but an infinitesimal fraction of the population, involved an expenditure of time and labour and the resultant figures occupied a space in the tables volume incommensurable with their value for practical purposes. It is not however as easy as might be imagined to devise an economy in this matter, for it is not possible to select a number of important castes by name, throw aside all the other caste names returned, and tabulate only the figures for those chosen, for the reason that a variety of names besides the one in common use are returned for each caste. Some return the names of sub-castes, some names in local use only, some variants of the caste names colloquially used and a number of names of recent invention designed to associate the caste with one or other of the ancient varnas, a word perhaps most accurately translated by the English Estates. The frequency of such returns renders it essential to scrutinise every caste name returned before it is possible to obtain accurate statistics even for the largest castes. In 1911, statistics were tabulated only for castes in Bengal, as it was then constituted; which subscribed 50.000 to the population of the Province or 25,000 to the population of any district, and others of special local importance or ethnological interest. The complete statistics were, however, tabulated for the province of Eastern Bengal and Assam. On the present occasion separate statistics have been tabulated and published for the 56 non-Muhammadan Indian castes and races and 7 sections among the Muhammadans which contribute each something approaching one per mille to the total population of the Province or more. In an appendix to Table XIII further figures have been given in reference to 46 other non-Muhammadan castes and races which the census of 1911 showed to form a considerable part of the population of certain districts, and a footnote gives the number of an eighth Muhammadan sect numerous in Jessore and the 24 -Parganas. Figures for European and allied races are to be found on the title page to Table XVI. The statistics of caste, tribe and race presented in this manner account for all but some 4 per cent. of the nonMuhammadan population, which belongs to a large number of different castes and races, many of which are not indigenous to Bengal, and more than 99 per cent. of the Muhammadans.

At the time of the census of 1901 an attempt was made in dealing with the statistics of castes to set each down in order according to its place in Hinda society, but it was found by no means easy to do so, for there is no general concensus of opinion on some points, and .they are points on which there is much jealousy between one section and another. In order to avoid wounding the susceptibilities of either party in following one or other opinion on a contentious point, it was decided to present the statistics of caste in no other manner than in the alphabetical order of caste names at the census of 1911, and the same procedure has been followed on the present occasion. Only two subsidiary tables are, therefore, appended to this chapter giving-

> (i) a broad classification of castes, etc., according to well-recognised traditional occupations; and
! (ii) variations in the number of the numerically important castes since 1901;
and except incidentally in dealing with the claims put forward by certain castes to designations other than the name by which they are most eommonly known, questions of precedence in the social scale have been left severely alone. The expression the "depressed classes" has, however, attained a political significance enchanced recently by the provision for their special representation in the Legislative Council. What are the depresed classes does not seem to have been defined when the Reformed Legislature was constituted and this step was taken. The representatives being nominated, it was not necessary to devise a definition, as it would have been, had an electoral roll to be prepared, but this commentary upon the census statistics would be incomplete if it included' no estimate of the numbers intended to profit by such representation, and an attempt has been made at the end of this chapter to arrive at an estimate which may be considered reasonable.
212. The return of castes among Hindus.-No part of the censis in 1891. 1901 or 1911 aroused so much excitement as the return of caste, which caused a great deal of heart-burning and in some quarters threats of disturbance of the peace. These were repeated at the last census and at least in one case led to actual violence. The object of the return was merely to ascertain the numbers of each caste but individuals found it difficult to appreciate this. The ancient idea that the King, or the Government, is the last appellate authority on questions of caste distinction, still has its influence, and that was strengthened by the presentation and commentary upon the Census Staistics of 1891 and 1901, which laid stress on the relative social position of the several castes. This is a country in which the public sense is of very backward development, and the individual failed to realise the utility of mere enumeration and was unable to get away from the idea that the object of the census, as far as he was concerned, was to ascertain and fix his individual position in the social scale. This individualistic idea of the object of the census produced even ridiculous results in some cases as, for instance, when a notice was served on the Collector of a district that a suit. for damages would be filed against the Secretary of State because a Jugi woman's name had been written down Dasi instead of Debi as she claimed it ought to be written, but it also produced a great many very practical difficulties. It has been more than once suggested that the return of caste, tribe and race should altogether be omitted from the census schedules. The suggestion first came from a former Census Commissioner in 1901, and was made on the ground that the numbers of each caste could never be obtained with meticulous accuracy, and as the proportion of the population belonging to each caste did not change fast, it was waste of time, trouble and money to repeat the return of caste at each census. Advocates are very much more numerous for dropping the return on the ground that it causes an amount of heart-burning and disturbance which is incommensurate with the value of the results obtained. Public meetings were held in many parts of Bengal about the time of the census in which this was the real intention of the speakers, although following the spirit of the times they put their resolutions so as to read as if they considered that Government had no right to require a return of caste and urged the public.to resist an oppressive measure. But the leaders of all hirt the highest castes franklv looked upon the cencus as an onportunitv for pressing and perhaps obtaining some recognition of social claims which were denied by persons of castes higher than their own. This was however no sign of general revolt against the caste system. None made any suggestion of social equality for all. Each individual community was clamant to obtain a step upwards on the ladder of society, but it was equally insistent that those who stand below it should not be permitted to do the same thing. This was particularly noticeable in the attitude of the Chasi Kaibarttas. At the last census their claim to the use of the term Mahisya as a caste name was acceded to, and their energies on this occasion were devoted to ensuring that such castes as the Jalia Kaibarttas, Patnis, and others, who claimed to use the same term or a variant of it, should not be permitted to do so. There has been great development of late years in the organisation of the caste shabhas, societies of castemen whose purpose is to advance the position of their caste.

Some of these do excellent work in furthering education among the members of their communities and the like, but, especially at the time of the decennial census, their energies are turned to pressing the claims to social distinction to which their community aspires. Such claims are now very numerous and in support of each one petitions were filed and arguments greatly elaborated. In answer to them it was pointed out that the notion that the census was intended to adjust social distinctions in any way was erroneous; that no attempt would be made to do otherwise than publish statistics in which the cast $\epsilon$ names would appear in alphabetical order; it was pointed out in what manner the pressing of individual claims had vitiated the returns of former censuses and would vitiate the results of this census, and so on. But it was impossible to dispel the idea that those who were carrying out the census could, if they wished to do so, make a real adjudication of a dispute as to some point of social distinction. One argument only seemed to be appreciated and that whs an argumention lines something like this: " You the leaders of your community are anxious to return yourself in a manner different from that in which the bulk of your community will be returned. You are the educated people of your community. With your numbers included in some other caste or among the minority in the population for which caste statistics cannot be given in detail, the census statistics will show a much lower proportion of literates in your caste than is really the case, and what you are doing will, therefore, operate to the discredit of your caste rather than the reverse.

The following are the claims which were most strongly pressed:-

| Caste. |  |  | - | Caste name claimed. |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | A. |  |
| Rajbatai | -* | - | $\cdots$ | Kshattriya, Bratya Kehattriya, Barna Kshattriys. |
| Kayastha | ..* | $\cdots$ | ... | Kshattriya. |
| Hadi | ** | ... | .- | Kshattriya. |
| Kamar | ** | ... | $\bullet$ | Karmar Kshattriya, Kshattri Karmakur. |
| Kahar (Ratvadi) |  | *- | *** | Chandravanshat Kshaturiya. |
| Pod | ** | ... | - | Poundra Eshattriya, Bratya Ksbattriya. |
| Pondsri | -- | ... | $\cdots$ | Poundra Kshattriya. |
| Malo | .. |  | ... | Bratya Eshattriya, iJalla Kyhattriya, Malla Kehattriya. |
| Kuch | ** | ... | ** | Koch Kehattriya. |

B.

| Sbahe ... | -.. | $\cdots$ | Vaisya, Vaisya Shaha, Faisya Banikya, Vaisya Barendra Shaha. |
| :---: | :---: | :---: | :---: |
| Bais Bania ... | ... | ** | Vaisya Banikya. |
| Gandhabanik | *** | $\cdots$ | Vaisya, Vaisya Gandbabrnikya. |
| Teli and Tili | .. | *-* | Vaisya. |
| Tanti ... | ..* | .-. | Vaisya Basak. |
| Goala | *. | *-* | Vaisya Gop. |
| Sotradhar ... | *- | $\cdots$ | Vaisya, Vaisya Sutradluar. |
| Barui ... | *- | $\cdots$ | Vaisja, Vaisya Barujibi. |



| Onses. |  |  |  | Cucte name clatmen. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| D. |  |  |  |  |  |
| Barui | . ${ }^{\prime}$ | ... | -•• | Late Baidya, |  |
| Buchi | ." | ... | ... | Baidya Riahi. |  |
| Napit | ... | ..' | ... | Chandra Baidya. |  |
| E. |  |  |  |  |  |
| Chani Kaibartta Jalis Kaibartta |  | *** | -** | Mahisya. |  |
|  |  | ... | ... | Mahisys. |  |
| Tiyar | ** | -. | -.. | Mahisya. |  |
| Patoi | -.* | -.' | ... | Matirya, Lupta Mahisya. |  |
| $F$. |  |  |  |  |  |
| Goala | ... | ... | -. | Sadgnp. |  |
| Chasadioba |  | ... | $\cdots$ | Saulgop. |  |
| Ganral | -." | ** | -. | Mayra. |  |
| Sunri | ** | ... | . $\cdot 1$ | Shaha. |  |
| Kalu | ... | ... | -•* | Teli. |  |
| Jalia Kaiuarta |  | - | -•• | Kajbanai. |  |
| TiyarGancah | $\cdots$ | ... | ... | Rajbanai. |  |
|  | - | - | ** | Tantubai (a name claimed by | Tantis). |

The above cannot be called a classification of claims, but they have been placed here in an order which will show at once what confasion would have arisen if the individuals making them had had their own way. Many of the terms put forward are, it will be noticed, very elaborate ones. If they had been freely used, it would have been very difficult to ensure that the staff engaged in copying the census slips and sorting them, copied them out in full and, instead, did not copy the first. or last word used instead of the whole term. Often it will be noticed individuals of the same caste, or the caste sahhas in different localities, put forward different claims. In the first and second groups A and B above, appear 9 castes, who claimed the term Ksybattriyas and 8 who, claimed term Vaisya, or variants of these terms. The Kshattriyas, the second of the social Estates of ancient India, were the military element and the Vaisyas the mercantile element. The backbone of the argument by which the claims to be called Vaisya were supported contained an obvious fallacy, for, stripped of ornament, it was this; "These men are traders; the Vaisyas were traders; therefore they are Vaisyas." The arguments supporting claims to the term Kshattriya contain also a doubtful assumption: "These men probably were soldiers at one time; the Kshattriyas were soldiers; therefore they are Kshattriyas." The claims in group C and Dare ones which would associate lower castes with the Baidyas or Kayasthas and could only operate to vitiate the statistics. Similarly, those in Group E are claims by 4 castes to use the term Mahisya, which has been previously associated in the census statistics only with the first of them. The claims in the last group are claims to the use of a caste name which definitely belongs to another caste altogether.

Many claims as to title, correspondng to the surname in European countries, were put forward, and as the entries in the columns for name were not to be used at all in tabulating the statistics, instructions were issued to enumerators not to raise objections in this matter. Theoretically, many of the caste claims might have been admitted without disastrous results. It is true, for instance, that if all the Sunris were returned by the term Shaha, and all the Shahas by the term "Vaisyas Shaha," the statistics of these two castes would have been complete. But the enumerating staff, which was voluntary, contained a number of Shahas none of whom would have written a Suri down "Shaha," and a number of higher caste Hindus who had no sympathy for the claim of the Shahas to be called Vaisyas Shahas, and who would
certainly have avoided using the term Vaisyas in connection with them, no matter what instructions they had received. Even to permit such an entry as Jogi for Jugi caused considerable trouble. A conservative Brahman enumerator put his feelings very plainly into words when he said he would rather cut off his hand than write down a Jugi as Jogi and his wife with the title of Debya like a Brahman woman. Enough has however been written to show how impossible it is to satisfy all, and to show that to obtain statistics upon which reliance may be placed, it is necessary for the purposes of enumeration to stick to the old name by which each caste is commonly known. It will be found that a few new caste names have been admitted into the statistics of this census and added in brackets after the old name, Poundra after Pod, Adi Kaibartta after Jalia Kaibartta, Solanki after Sukli and Kshattriya after Rajbansi (feeling ran so high that the census would have broken down completely in Rangpur if this had not been promised), and it was found that tension was relieved by the instruction to enumerators to write down names and titles exactly as those who were being enumerated gave them; but there is indication that the return of caste is exercising men's minds in a more and more disturbing manner from census to census and the disaffection which recurs at each census over the return is spreading each time further into the uneducated masses. The better educated classes are beginning to take a more sensible view of the intention and objects of the census, for the agitation of the Kayasthas to be returned as Kshattriyas is much less than that it used to be.
213. The return of the several Muhammadan sections.-There is no caste recognised by the Muhammadan religion as by tie Hindu, and although there certainly are certain divisions among the Muhammadan community, they are by no means the clear divisions of the Hindu caste system. The several sections are not to be called castes in the same sense as the word is used for Hindus, and yet some certainly are not to be distinguished by race There are functional sections, such as the Jolahas and Kulus, and there are what purport to be separate races, the Pathans and the Moghuls, though the fashion nowadays is to deny the existence of rigid partitions. on the lines of the functional sections, and the distinctions of race have been almost obliterated. Yet the fact remains that a Sheikh will not márry a Kulu and in some parts one class of Muhammadan will not even feed with another. In Tippera there are Muhammadan Beharas who carry palkis, with whom the ordinary Muhammadan cultivator will not sit down to a meal. The distinctions between section and section being gradually much looser than among Hindus, the statistics obtained from the census returns are not of the same importance. Feeling ran very high among the Muhammadans in certain parts regarding the entries in the column of the census schedules for caste, tribe and race. One Bengali word jati covers all the three English words, and some took the use of it to mean that it was not recognized that the two, religions, Hindu and Muhammadan, adopt a very different attitude to distinctions of the kind. The main difficulty was, however, a more practical one. The Jolahas, Kulus, etc., have to a great extent given up their traditional functions and joined the great mass of the cultivating classes. In 1911 under the Government of Eastern Bengal and Assam; Muhammadans were returned every one according to his wish, and if in 1921 an attempt had been made to adhere rigidly to the old distinctions, the resultant statistics would have been of little value for purposes of comparison with those of 1911. Accordingly, the precedent of 1911 was followed, and Muhammadans returned their jat as they wished, throughout Bengal. The resultant statistics are of very little value except psychologically.
214. Population according to the traditional occupation of each caste. The statistics given in Subsidiary Table I to this chapter show the manner in which the population may be divided according to the traditional occupation of each caste, tribe or race. The verv great majority of the Muhammadan Sheikhs are cultivators, and, if we include them among the cultivating classes, thongh they are not a functional group, as for instance are the

Muhammádan Jolahas, then a broad distribution of the population of Bengal according to the traditional occupation of each section is as follows:-

|  |  |  |  | Number ( 000 B omithed). | Per miftio of the rotal poyglatlos. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Plains cultivators | 0.0 | ... |  | 32,467 | 682 |
| Plsins labourere | *-0 | ... |  | 1,605 | 84. |
| Hill Tribes inoluding tibes (labourern and |  |  |  | 1,642 | 34 |
| Grazicre | $\cdots$ | ... |  | 611 | 18 |
| Bnatmon and fiaherimen |  | -0 |  | 980 | 20 |
| Domentic sesvante | ..' | ... |  | 1,170 | 25 |
| Industrial workera | .." | - 0 |  | 3,416 | 71 |
| Teadora ... | ..- | .. |  | 765 | 15 |
| Prients and devoteen | ... | ** |  | 1,688 | 35 |
| Art, Science and Letter |  | - $*$ |  | 1,451 | 30 |
| 8oldiers .... | ... | *- |  | 201 | 4 |

By this classification more than two-thirds of the population belong to the classes who are cultivators by tradition. Traditionally the Bengali cultivates his own land, for labourers by tradition are only one to every 20 cultivators and are less than the priests and devotees. The classes industrial by tradition are only 1 to every 10 of the cultivating classes and traders only $1 \frac{1}{2}$ per cent. of the total, while in this Province the fighting castes make up less than half per cent. and a third of their numbers are of Nepalese origin.
215. The Statistics of each caste,-With this introduction I propose to discuss the number and variation of each caste, tribe and race numerically of greatest importance, taking the non-Muhammadans first and the individual castes, etc., in alphabetical order, and only leaving the Chota Nagpur tribes, the hill tribes on the eastern side of the Province and the Himalayan hillmen to be dealt with together at the end.

Aguri.-The Aguris appear to have been the dominant race round Burdwan right up to Moghul times. They were returned at 79,675 in 1901, 70,272 in 1911 and 68,816 in 1921, in Burdwan, Bankura, Hooghly and Calcutta, but the great majority are now to be found in close proximity to Burdwan town. The decrease of $13 \cdot 2$ per cent. is to be put down largely to the fact that the Aguris live in the unhealthiest parts of Western Bengal, but it has been exaggerated by the fact that nearly all those of the caste in Calcutta and Hooghly on this occasion seem to have returned themselves as Khatri. Their claim to be called Ugra Kshattriya is an old one.

Bagdi.-Three-quarters of the Bagdis, who now number 895,397, are to be found in Western Bengal and nearly all the rest in adjoining districts of Central Bengal. They appear to have been the aboriginal race whose habitat was the area just below the fringe of the uplands in Western Bengal. Their number was stationary between 1901 and 1911, but they have lost nearly 12 per cent. in the last decade mainly through the accident that their numbers happen to be greatest in the unhealthiest strip of country in the Province.

Baidya.-The Baidyas, the traditional medical men of Bengal, are a much smaller caste than either the Brahmans or the Kayasthas, who together with them make up what are commonly called the bhadralok of Bengal, but they have advanced further in education and in civilization generally than the other two and have prospered accordingly. They increased by 9.3 per cent. between 1901 and 1911 and by no less than $15: 9$ per cent. in the last decade. They now number ratuier over 100,000 and are in greatest numbers in Bakarganj, Dacca and Chittagong.

Baisnab.-The number of the Baisnabs is more liable to variation than that of other castes, for it is refuge for many in revolt against society and Brahmanical domination, and is not a unit closed to invasion as are the rest of the castes in the Hindu social system. Many have leanings towrds Vaishnavism who would still return their caste as the caste of their birth, and that more such have returned their original caste rather than Baisnab ho doubt
accounts in a large measure for the decrease of 10.8 per cent. in the number of Baisnabs since 1911. The number returned at this census is 378,107 .

Barui.-The Baruis are by tradition growers of betel-leaf and in this occupation they have almost a monopoly. Their greatest numbers are found in Dacca district, nearly 41,000, but Khulna has nearly 19,000, Bakarganj over 17,000 , Tippera over 16,000 and Noakhali over 10,000 . They are a prosperous community and now number 185,870, having increased 4.3 per cent. during the last decade and 13.5 per cent. since 1901.

Bauri.-The Bauris are akin to the Bagdis, but their original home was above rather than below the beginning of the uplands of Western Bengal and therefore west and rather south-west of that of the Bagdis. They have taken whole-heartedly to the occupation of coal-mining, so much so that they are beginning to look upon it as their traditional occupation. Their greatest numbers, in each case almost a third of the total in Bengal (just over 300,000), are to be found in the Asansol subdivision of Burdwan and the Sadar subdivision of Bankura. Their strength is to the west of the unhealthy strip of country along the edge of the delta plains in Western Bengal, and though they have decreased by 3.4 per cent. since 1911 they have not been as hard hit as the Bagdis.

Bhuimali.-The Bhuimalis are one of the scavenger classes and engage also in mat-making by tradition. They belong rather to the eastern than to the western parts of Bengal, and the numbers returned have decreased 10.9 per cent. since 1911. The reliability of the figures is however doubtful, for the caste is often spoken of as "Mali"' in Eastern Bengal, and from the large increase in the numbers returned for the true Mali caste, otherwise known as Malakar, it seems probably that the statistics for it have this time included a number whose real caste is Bhuimali.

Brahman.-In the statistics of caste published after the census of 1911 for the districts which had been part of the province of Eastern Bengal and Assam but not for the districts of Bengal as it was before 1912, separate figures were shown for Agradani, Barna, Daibajna and Nepali Brahmans, but at this census for the whole Province all who returned themselves as Brahmans bave been counted together... Thus, the preserit figures include the priests of the Jugis and other castes who are not recognised as true Brahmans by the bhadralok classes. The number of these is, however, comparatively small. Brahmans now number 1,309,539, having increased by $4: 4$ per cent. since 1911 and by 12.2 per cent. in the last 20 years. They are still in greater numbers than the Kayasthas, though the latter community has added more to its numbers of recent years. The three castes-Brahman, Baidya and Kayas-tha-make up the bulk of what are known as the Hindu bhadralok classes of Bengal, and the distribution of the three together over the Province is worthy of closer examination. The proportion of these to the total population in the several districts and States is as follows, and the figures are illustrated by the map in diagram No. 96:-

| Burdwan | ... | ... | 97 | Darjealing |  | *** | *-. | 34 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Birbhum | ** | $\cdots$ | 59 | Rangpur | - 0 | -. | -* | 12 |
| Bankura | -•• | ... | 115 | Bogra | ... | ... | ... | 20 |
| Midnapore ... | ..* | -** | 57 | Pabna | ... | ... | $\cdots$ | 39 |
| Hooghly | $\cdots$ | -** | 92 | Malda | $\cdots$ | .a* | ** | 13 |
| Eowral | ... | -* | 100 | Cooch Beh |  | ... | ... | 17 |
| 24-Pargeos | $\cdots$ | ... | 62 | Dacca | ... | 8. | ... | 68 |
| Cadcatta | ** | ... | 263 | Mymensio |  | *-* | - | 66 |
| Nadia | -.. | ** | -48 | Faridpar | ... | - | -.. | 62 |
| Maralidabad | .... | *** | 40 | Bakarganj | ... | ... | *** | 74 |
| Jensore | -* | :. | 59 | Tippers | ... | ... | ... | 55 |
| Khulna | -** | -. | 58 | Noakbali | ... | *-* | $\cdots$ | 54 |
| Rajohabi ... | ** | - | 18 | Cbittagong |  | $\cdots$ | \%os | 95 |
| Didajpor | $\cdots$ | -** | 11 | Chittagong | Hill | ... | ... | 67 |
| Jajpaiguri .e. | -* | $\cdots$ | 14 | Tripura 8t |  | - |  | 31 |



It will at once be noticed that there is a very close correlation between the extent of literacy, and especially of literacy in English from place to place, and the proportions just given. Some years ago this must have been very much more noticeable even than now, for up till recent times these three castes had the moonpoly of education among Hindus in Bengal, and the Muhammadans were always backward in this respect. The proportions given above will be found to be a useful measure of the supply of clerical labour from place to place, though such labour has become much more fluid than it was a few years ago. Still for such work as, for example, that of copying the census slips, it is very much easier to find workers in such districts as Burdwan, Bankura and the Eastern Bengal districts than in Murshidabad, Nadia and the Northern Bengal districts. Near Calcutta the market for clerical labour is affected by the much greater demand. There is some trace in the high proportion in such districts as Bakarganj and Chittagong of the fact that numbers of the better class Hindus were forced to take refuge in remoter parts during the times of Muhammadan supremacy, as in the high proportions in Burdwan and Bankura there is trace of the fact that the Moghuls never subdued those parts as they did Eastern and Central Bengal. The Moghuls cannot be held responsible for the low proportion of bhadralok Hindus in Northern Bengal. The establishment of the Muhammadan power with its headquarters at Gour much earlier than Moghul times may have driven the ruling Hindu races from the neighbourhood of Malda, but the Muhammadans never established themselves in the north-eastern parts of the Rajshahi Division, and we may conclude that those parts were not occupied by the Aryan invaders of India before Muhammadan times as effectively as the central and southern parts of the Province.

Chamar and Muchi.-It is not an easy matter to separate these two castes, which both follow traditionally the occupation of leather workers. The Muchis generally belong to Bengal, while the Chamars are more often immigrants from Bihar and further west; but in considering the variations which have taken place in numbers from census to census it is better to take the two castes together than separately. They were 548,913 in Bengal in 1901, 591,789 in 1911 and 569,966 in 1921 so that there has been a decrease of $5 \cdot 7$ per cent. in the last decade against an increase of $7 \cdot 8$ per cent in the decade before. No doubt the contrast is partly due to the disabilities of the last decade, but it is also true that there has been a considerable falling-off in the immigration of such people as these from the west in the last ten years.

Chain.-The Chains in Bengal are found in closely circumscribed areas in Murshidabad, Malda and a corner of Rajshahi, but they are also found in Bihar. They are a cultivating and fishing community and are generally poor people. Their number in these three districts is now 80,681 and they have shown a decrease of $10: 9$ per cent. since 1911.

Chasati.-The silkworm-rearing caste, Chasati, which also cultivates, is numerous only in Malda-its number was returned at 27,088 in 1911, but at only 17,867 in 1921. They have had to give up the occupation of silk wormrearing to some extent of recent years and may have lost numbers, but the reduction is in the main due to their having been returned either as Chasadhobas or Satchasis, to whom they are closely allied, or as Sadgop, to which name they have aspirations.

Dhoba.-For a functional caste, whose traditional employment is so universal a necessity, it is somewhat surprising that the Dhobas of Bengal are so unevenly distributed. The caste is different from the Dhobi caste of Bihar though immigrants of that caste have been numbered with the Dhobas of Bengal. Very few were counted in Northern Bengal and the uneven balance of the sexes shows that those who were found were immigrants. The Dhobas in Eastern Bengal have a different arrangement of. sub-castes and rather different customs from those of Orissa and Midnapore, and, as the census figures show, there is a gap between Bakarganj, Tippera and Noakhali, where the Dhobas are the most numerous to the east, and Midnapore, where thev are again very numerous, partly filled by Calcutta and the 24-Parganas, in which, however, as the sex proportions show, the Dhobas are largely immigrants. It is a fair conclusion to draw from this, that the Dhobas are originally two separate coastwise races, one belonging to the Meghna estuary and one belonging to the Orissa and Midnapore. The Dhobas in Bengal now number 227,469 and their numbers have altered little in the last 20 years.

Dom.-The Doms, scavengers and basket-makers, belong to Western Bengal. Few are to be found on the east of the Hooghly, except a colony in Chittagong, where there are some 12,000. In Eastern Bengal the Bhuimalis occupy the place of the Doms of Western Bengal. The Doms in Bengal are some 150,000 in number 24,000 less than the number returned in 1911 and 24.8 per cent. less than in 1901, and though this caste is often the very reverse of prosperous there seems little doubt that some of them must have taken deliberately to denying their true caste at the time of enumeration, especially in Chittagong.

Gandhabanik.-The Gandhabaniks, traditionally sellers of spices and the like, are a prosperous trading community returned at nearly 150,000 . They are generally more numerous in Western Bengal than in the other quarters of the Province in which trade is more often in the hands of the Shahas. The number returned increased but little between 1901 and 1911 but the figures for 1921 show an increase of $18 \cdot 8$ per cent. The number in Calcutta now stands at some 18,500 in place of a few more than 7,000 in 1911, but, as has been mentioned in the Report' on the Census of Calcutta, this cannot be accepted as correct. It seems likely that what happened was that a number of merchants in Calcutta on the present occasion gaye their caste bv the vague term bania, and either the enumerators in looking over their schedules corrected this to Gandhabanik or the entries were classified as entries of Gandhabanik at the time of tabulation. There was in Calcutta at this cerisus
a decrease, though not of the same magnitude, in th return of some of the upcountry merchant castes.

Gangai (Ganesh).-The caste is returned at 17,827 in Malda and Dinajpur, where it is found, and according to the figures has lost $12 \cdot 9$ per cent, since 1011, mainly due to the fact that individualsare now dissatisfied with being called by the old name. They claim the name Tantubai, and those of them who returned it were counted with the Tantis, who make the same claim.

Goalu.-The milkman caste of Goalas numbered 638,550 in 1901, 646,438 in 1911 and 583,970 in 1921, so that it appears to have lost 9.7 per cent. since 1911 and 8.5 er cent. in the last 20 years. It is far more numerous in the western than in the eastern healthier parts, and this in part accounts for the decrease in numbers, but it has certainly been assisted by reduced immigration of the Bihari Goalas (Ahirs) during the last 10 years and to some slight extent by Goalas having disguised their true caste at this census and called themselves Sadgops. They are most numerous in the Western Bengal districts, except Birbhum, and in the districts of the Presidency Division, except Khulna. There are a number in Dacca and Mymensingh, but very few in the North Bengal districts, except Malda and Dinajpur, and very few in Bakarganj, Noakhali and Chittagong, where, indeed, they are not numerous enough to hold their monopoly in the preparation and sale of curds and ghee, and where it is not uncommon to see a Muhammadan selling curds in the open market, a thing unheard of in other parts.

Hari.-The Haris like the Doms, who occupy much the same position, are most numerous in Western Bengar and especially in Bankura, Birbhum and Midnapore than in other parts, though there are more of them than of the Doms in Northern Bengal, especially in Dinajpur and Malda. There is also an isolated colony of Haris as there is of Doms, although a smaller one, in Chittagong. Like the Doms the Haris have shown a remarkable decrease in the number returned since 1911 and probably for the same reason. The caste is now returned just under 150,000 .

Jugi and Jogi.-The Jugis are the Hindu weaver caste of Eastern Bengal. Some prefer to call themselves Jogi, claim to be of a different origin and call themselves Deb Nath instead of Nath and their women Debi, like a Brabman woman, but they are all of the same stock. They now number 365,910 and have increased by $1 \cdot 3$ per cen't. since 1911 and 6.8 per cent. since 1901 . Their greatest numbers are found in Tippera and Noakhali and they are numerous also in Chittagong. Mymensingh, Dacca and Bakarganj. Further west their place is taken by the Tantis, but they are in considerable numbers in the southern districts of the Presidency Division and in parts of Northern Bengal. Many have now given up their traditional occupation, but they do not take to agriculture, for those of them who call themselves Jogis hold themselves above using the plough, and have therefore been thrown upon the cultivating classes as middlemen and money-lenders.

Kahar.-The Kahars, palki-bearers by tradition, are immigrants from Bihar and find employment in Bengal in their traditional occupation, which Bengalis will-not now follow except in a few instances. as casual labourers for example in the jute centres, and in the jute mills in the neighbourhood of Calcutta. Their number in Bengal has increased by $35 ; 9$ per cent. since 1911 and by 78.8 per cent. since 1901 , and is now more than 120,000 , among whom there is a large preponderance of males. Their increase since 1911 is the more remarkable in the face of the falling-off of immigration from Bihar generally. The reason is that as casual labourers they are eminently hard-working and they take up work which is generally too strenuous for the Bengali.

Chasi Kaibartta (Mahisya).-The split between the Chasi Kaibarttas and Jalia Kaiharttas is now complete and the jeallousy between the two is very great. The former now claim to be of totally different origin, though this is a comparatively new departure, and they certainly have established themselves in a somewhat better social position than the latter. In numbers, 2.210.684, the Chasi Kaibarttas or Mahisyas are the largest Hindu caste in Bengal, beating the Namasudras by nearly 200,000 and the Rajbansis by, nearly 500,000 . They are in greatest strength in Midnapore, where there are

856,000 of them, and in Howrah, the 24 -Parganas and Hooghly. There are many of them also in Murshidabad and Nadia, extending to adjoining parts of Jessore and across the Ganges into the southern districts of Rajshahi Division, and they are in strength again in Mymensingh, Dacca, Tippera, Noakhali and Sylhet in Assam. Originally they must have been the people of the delta who filled the space between the ancestors of the Bagdis just below the fringes of the rising ground to the west, and ancestors of the Pods and Namasudras nearer the delta face. They have increased by 3.4 per cent. since 1911 and $13: 2$ per cent. since 1901.

Jalia Kaibartta (Adi Kaibartta). -The Jalia Kaibarttas are traditionally an aquatic community engaged in fishing and as boatmen. They showed themselves very anxious to claim the same caste name, Mahisya, as the Chasi Kaibarttas have taken to using, or some variant of it. In numbers they are much the less important, but they were returned in 1921 at 384,049 and have increased by $17 \cdot 6$ per cent. since 1911 and by $44 \cdot 8$ per cent. since 1901. To the student of the question whether they were originally of the same stock as the Chasi Kaibarttas or not, the close parallel between the distribution of the two communities over the several districts of the Province will appear significant. Both communities seem to belong to the same localities, but, naturally the Jalia Kaibarttas are rather less numerous in the drier districts,' where there is not the same scope for the exercise of their traditional occupation than in the districts intersected by streams.

Kandra, Karan and Khandait.-The Karans, the writes caste of Orissa, northern and western parts of Central Bengal. Very few are found either in Northern or Eastern Bengal. Their number, 95,906 , shows a decrease of 14.0 per cent. since 1911 and $16 \cdot 2$ per cent. since 1901, but the decrease is due very largely to the fact that many now claim to be Telis, oil merchants of a rather superior social position, and returned themselves so at the time of the census.

Kamar (Karmakar) and Lohar.-The traditional blacksmiths' of the plains of Bengal are really three castes, the Bengali Kamars or Karmakars, Kamars of Bihar who have immigrated, and the Lohars of the Chota Nagpur Plateau, aboriginees originally of several tribes who have taken to iron work and whose habitat extends into the border districts in Western Bengal. As some of the last named also call themselves Kamar, it is difficult to separate the returns for them, and in the statistics of the census of 1901 Kamars and Lohars are placed together. The majority of the Kamars found elsewhere in the Province than the Burdwan Division are associated with their traditional occupation, for they are not too many to find employment in preparing. the instruments of agriculture and other iron implements required for use in every-day life. But in Western Bengal, Kamars and Lohars together are far more numerous. In Bankura, for example, Kamars were returned at 19,507 and Lohars 41,486, making between them $6 \frac{1}{4}$ per cent. of the population of the district, and the majority are engaged in agriculture. Between them Kamars and Lohars were 295,720 in 1901, 311,851 in 1911 and 325,005 in 1921.

Kandra, Karan and Khandait.-The Karans, the writer caste of Orissa, and the Kandras, a Orissa cultivator caste, extend into Midnapore, while the Khandaits have immigrated temporarily to work as coolies into Calcutta, the 24 -Parganas and Howrah. The Karans in Midnapore now number $50,495,3 \cdot 7$ per cent. more than in 1911, the Kandras $26,389,26 \cdot 1$ per cent. less than in 1911 and the Khandaits in the 24-Parganas, Calcutta, Midnapore and Howrah 39,375, $10 \cdot 1$ per cent. more than in 1911.
kapali.-The Kapalis are weavers who also cultivate. They number 158,864 and belong to the strip of country from the 24 -Parganas across to Tippera. They have increased by 2.9 per cent. since 1911 and by 10.6 per cent. in the last 20 years and, considering their social position, they are well adranced in education.

Kastha.-The Kasthas-are a small cultivating and landholding caste peculiar to Midnapore and Balasore districts. The number returned in Midnapore in 1901, 27,625, decreased to 20,719 in 1911 and at the last census was 11,977 , only $43 \cdot 4$ per cent. of théfigures of 20 years ago. The
reason for the reduction would appear to be that individuals of the caste have returned themselves as Kayasthas.

Kayastha.-The Kayasthas now number 1,207,736 and, according to the census returns, have increased by 16.5 per cent. since 1911, and by 31.8 per cent. since 1901, but this increase has been exaggerated for there is no doubt that individuals of other castes, especially Sudras and Baruis, returned themselves as Kayasthas who certainly were nothing of the sort. Kayasthas are very numerous in the Dacca Division, Tippera, Noakhali and Chittagong, but are comparatively few in Northern Bengal, except in Pabna. Their distribution along with the other two Bengali bhadralok castes, Brahmans and Baidyas, has already been examined.

Koch.-At the census of 1911 the Koches were treated as belonging to the great Rajbansi caste. The total was given for each district and also the separate figures returned for Desi, Kantai, Koch and Paliya, which however made up less than a quarter of the total. The Koches of Northern Bengal were not returned under the head Koch at that time and the 64,319 who appeared as Koches in the statistics belonged almost exclusively to Mymensingh and Dacca. In the statistics for 1911 and 1921 the Koch tribe has been treated as quite separate from the Rajbansis, and the number returned at 125,046 in 1911 and 131,273 in 1921, showing an increase of 50 per cent. for the decade. There is a Koch language as well as a Koch tribe, but it is being gradually ousted by the Aryan Bengali tongue and survives only among the Koches in Mymensingh and Dacca.

Koiri.-The Koiris are a very numerous cultivating caste in Bihar extending into Chota Nagpur. Those found in Bengal are temporary immigrants and they come to Calcutta and its suburbs in some numbers, though there are few to be found in other parts of Bengal. The number found in Calcutta and the 24 -Parganas rose from 6,467 in 1901 to 10.339 in 1911, but has now fallen again to 7,115 . This is due to reduced immigration.

Konai.-The Konais are a small caste practically confined to Birbhum district, though there are few in the Santal Parganas also. The number in Birbhum is now 15,300 , about the same as 20 years ago.

Kora.-The Koras are a Dravidian tribe of cultivators and earthworkers closely allied to the Munda tribe, although numerically very much smaller. Their home is on both sides of the western border of Bengal, but somewhat more live on the Bengal side of the line in the undulating parts of Birhbum, Burdwan. Bankura and Midnapore than across the border in Manbhum and the Santal Parganas. The tribe is apparently losing in numbers, for 37,830 were enumerated in the four Western Bengal districts in 1901, 36,217 in 1911 and only 29,881 in 1921.

Kotal.-The small Dravidian tribe of Kotals in Burdwan was returned at 8,445 in 1901 and 9,609 in 1911, but at only 4,930 in 1921 .

Kumhar.-The Kumhars, the potter caste, are evenly distributed over the whole Province and are generally employed at their traditional occupation. They now number 284,653 and have decreased by $2 \cdot 1$ per cent. during the last ten years, though they grew by $4: 2$ per cent. in the previous decade.

Kırmi.-The Kurmis belong to two separate castes whose names should be spelt one with a hard $r$ and one with a soft $r$. The latter is a Bihari oultivating caste and the former an aboriginal tribe of the southern part of the Chota Nagpur plateau and the Orissa States. It would, however, have been impossible to separate the figures for the two as returned and this has not been attempted either at this or at the former censuses. Midnapore contains 80,000 and Bankura nearly 20,000 Kurmis with an even balance of the sexes. These must almost all be the aboriginal tribe, which is indigenous to the western parts of Midnapore and the south-western parts of Bankura district. Those found in the neighbourhood of Calcutta and in Northern

Bengal are more likely to have been Behari Kurmis. There were few returned either in Eastern Bengal or elsewhere in Central or Western Bengal. The total number of Kurmis in Bengal is 181,447, 2:6 per cent. more than in 1911 and 17.9 per cent. more than in 1901. The number found in the North Bengal districts in 1911 was almost double that found in them in 1901, but since 1911 there has been little further immigration from Bihar.

Mal and Malo.-There is always some difficulty in dealing with the tabulation of figures for Mal and Malo, as the names are so much alike and are frequeutly confused at the time of enumeration as well as at latter stages. The Mals are of Dravidian extraction and are found in two localities, Birbbum and Murshidabad to the west and Mymensingh to the east. The Malos are also probably Dravidian, but are quite a different people who are engaged in fishing and employed as boatmen: They are twice as numerous as the Mals and are to be found in greatest numbers in Dacca, Mymensingh, Faridpur, Pabna, Nadia and Jessore. Taking the figures for Mal and Malo together they have remained little changed since 1901, and the apparent increase of the Malos and decrease of the Mals shown by the census of 1911 and reversed by the last census may be taken to have been caused by the confusion of the caste names. Mals are now shown as 117,557 and Malos as 211,148.

Mali (Malakar).-The confusion which affects the figures for Malis is between Mali and Bhumali, and it is probable that the increase of the Malis by $45 \cdot 9$ per cent. which the census figures for 1921 show over those of 1911 is fictitious, and due to Bhuimalis having been returned as Mali, a contraction in common use where the real Mali caste is not commonly found. The fact that the apparent increase has been greatest in Mymensingh and Tippera renders this the more probable. A correct estimate of the true numher of the Mali (Malakar) caste would not put them at more than 30,000 in Bengal at the most.

Mayra.-The sweetmeat-maker caste of the Mayras is most numerous in Western Bengal and adjoining districts of Central Bengal, but there is also a large colony, nearly 30,000 , in Rangpur, though no other Northern Bengal district has as many as 700. The Mayras are now returned at 121,534, 3.8 per cent. less than in 1911 and $5 \cdot 1$ per cent. less than 20 years ago. The decrease may be put down to the fact that the Mayras are most numerous in the Western Bengal districts which have lost population during the last decade, but it is also possible that some of the caste returned themselves among the Kayasthas, for they claim the name of Kayastha Kuri.

Nagar.-The Nagars are a small North Bihar cultivating caste found in Bengal only in Malda district in any numbers, and even there the number, 17,439, returned in 1901, which had increased to 18,505 in 1911, has now fallen to 14,714 .

Naik.-Naik is a title used by a variety of people, and there have been such changes in the numbers returned as belonging to the caste of Naiks, a true caste only in Bankura and Midnapore, that the figures are of little value. The same may be said of the returns for Samantas in these two districts.

Namasudra.-The Namasudras are the second Hindu caste in Bengal in point of numbers, the Chasi Kaibarttas (Mahisya) alone being more numerous. The Namasudras are now returned at 2,006,252. They are in greatest strength in the low-lying tract in the south-west of Faridpur and.extending into Bakarganj, Khulna and Jessore. In these four districts their numbers amounts to no less than $1,148,268$, considerably more than half the total number of the caste. They are numerous also in Dacca and in the lowlying parts of Mymensingh, Tippera and Pabna, but there are very few in Birbhum, Bankura, Calcutta, Malda, Dinajpur, Jālpaiguri, Darjeeling, Chittagong and the Chittagong Hill Tracts. Everywhere they are the people of the swamps, and though to some extent they may have been driven or have withdrawn into such localities to avoid oppression by successive races which have invaded Bengal, such localities must to a great extent fave been
their original habitat. They have undoubtedly improved their economic and to some extent their social position of recent years, and have increased ty 5.1 per cent. since 1911, and by 8.5 per cent. in the last 20 years.

Napit.-The Napits, the barber caste of Bengal, generally follow their traditional occupation in which they serve all tine better class Hindus and even Muhammadans, though they often refuse to shave a Namasudra. They have made themselves necessary parties at family ceremonies on such occasions, for example, as marriages and the ceremonies following the birth of a child, and are proverbially loquacious and well-informed. They have taken to education, are well in advance of the cultivating classes and their fellowworkmen in domestic service, the Dhobas, in the matter of literacy, and now number 444,188 persons scattered fairly evenly over the face of the province. The number has slightly decreased by 0.7 per cent. since 1911 , but is 2.8 per cent. more than in 1901.

Rajbansi (Kshattriya).-The Rajbansis are the indigenous people of Northern Bengal and the third largest Hindu caste in the Province. Their total number is $1,727,111$, of whom $1,530,712$ or $88 \cdot 6$ per cent. are to be found in Dinajpur, Rangpur, Jalpaiguri and Cooch Behar. The total number has decreased by 4.5 per cent. since 1911 and $9 \cdot 0$ per cent. since 1901, and a decrease has undoubtedly taken place, but it has been exaggerated by the fact that a number of fishermen caste, especially in Mymensingh, Nadia and Murshidabad, returned themselves as Rajbansis at former censuses who were not permitted to do so at this. In 1901, moreover, many Koches in Nortiern Bengal were returned as Rajbansis. Many of the Rajbansis have now taken the sacred thread and at the time of the census were prepared to use force in support of their claim to be returned as Kshattriyas.

Patni.-The Patnis, traditionally employed as ferrymen and boatmen, have been returned 30.7 per cent. less than in 1911 The decrease has been most marked in Mymensingh, and there is no doubt that a number of them in that locality disguised their true caste and were returned as Chasi Kaibarttas (Mahisya), for they claim the title of Mahisya along with the Jalia Kaibarttas as well as the Chasi Kaibarttas. Of the 43,955 returned, the greatest numbers are found in Mymensingh, Tippera, Dacca, Bakarganj, Faridpur, Pabna, Rangpur, Jessore and Nadia.

Pod (Poundra).-The Pods are the indigenous people of the 24 -Parganas and Jessore. Out of the total of $588,394,368,490$ were returned in the $24-\mathrm{Parganas}$ and 151,953 in Jessore, leaving only 16 per cent. to be returned elsewhere, mostly in Midnapore and Howrah. Very few indeed are to be found in Burdwan, Birbhum, Bankura, Nadia and Murshidabad and practically none in Northern or Eastern Bengal. The Pods have taken to education and are improving their position. They are 97 per cent. more numerous than in 1911 and 26.6 per cent. more than in 1901.

Sadgop.-The Sadgops are cultivators who have separated themselves from the Goalas, graziers and milkmen by tradition. They were returned at 533,236 persons, two-thirds of them in Western Bengal, and half the rest in adjoining districts of Central Bengal. There is a tendency for prosperous Goalas to take to calling themselves Sadgops, but the latter caste belongs to the unhealthiest part of the Province and its number has decreased by $3 \cdot 1$ per cent. since 1911 and $4 \cdot 6$ per cent. since 1901.
Shahas and Sunris, for the former are firmly established in a superior social
Shaha and Sunri-There is now-a-days a definite distinction between. status, but separate statistics were not prepared for the two in 1901, when they totalled 428,215 . In 1911, between them the two castes numbered $4,44,252$, and in 1921, 452,223 , so that there has been an increase of 1.8 per cent. since 1911 and of 5.6 per cent. since 1901. The separate statistics for Shahas and Sunris have been vitiated by the action of individual Sunris in returning themselves as Shahas. In 1911, in Eastern Bengal and Assam, the Shahas were permitted to return themselves as Vaisya Shahas, and, as a result, many enumerators took the instructions to mean that the distinction
between Shahas and Sunris should be by the use of the word Vaisya. They wrote the Shahas, Vaisra Shaha, and raised no objection when a Sunri called himself Shaha. The result was that the statistics of 1911 show not a single Sunri in the Chittagong Division and only 508 in the Dacca Division. By 1911, the agitation of the Suris to be returned as Shaha had not much affected Western and Central Bengal, and in Western Bengal the entry Vaisya Shaha was disallowed. It was disallowed also at the census of $19 \dot{2} 1$ and, though the Shahas in outlying districts continued to press for it, the leaders of the community in Calcutta saw, when it was explained to them, what had been the result of permitting the use of the term in Eastern Bengal and Assam in 1911; realised that it would be impossible to discard the term Sunri altogether, and issue instructions that the two castes should be entered as Vaisya Shaha and Shaha; and seeing that a great number of enumerators were Brahmans and Kayasthas of conservative ideas whom nothing would persuade to use the terms Vaisya for a Shaha, admitted the advisability of sticking to the terms Shaha and Sunri. The result of this census is to show a certain number of Sunris in Eastern Bengal, 1,595 in the Chittagong Division, 1,936 in the Dacca Division and rather more in the Rajshahi Division than in 1911. It is true that there are few who deal in spirituous liquors in Eastern Bengal, but there is little doubt that the true number of Sunris is understated. The Sunris of Central Bengal have shown themselves s? much stirred by the ambition to make themselves Shahas, that the 37,859 returned ten years ago in the Presidency Division has been reduced to 18,002 , and the Sunris of Burdwan Division have also been affected, for their number now stands at 64,574 in place of 74,840 , and 3,286 Shahas have been returned in place of only 323 ten years ago. The Shahas are strongest in Dacca and Tippera, which districts are followed by Mymensingh, Faridpur, Pabna, Bakarganj and Jessore. The Sunris are strongest in Bankura, Burdwan and Birbhum.
subarnabanik.-The Subarnabaniks, whose name pronounces their occupation to be that of dealers in gold, are in education and perhaps in business ability the most advanced of the mercantile castes of Bengal. Traditionally they were settled in Dacca until the days of Ballal Sen, but they are now far more numerous in Calcutta than elsewhere, and the Western Bengal districts hold more of them than those of the Dacca Division. They were 105,349 in 1901, 109,429, in 1911 and 117,123 in 1921, so that they have increased by 7:0 per cent. since 1911 and by $11: 2$ per cent. since 1901.

Sutradhar.-The carpenter caste numbers 168,577 and; like the barber caste is almost entireiy occupied in its traditional occupation and scattered very evenly over the face of the province. It is now returned 5.6 per cent. less than in 1911 and about the same as in 1901.

Sudra.-Separate figures were not tabulated for Sudras, sometimes called Golam Kayasthas, for Western and Central Bengal in 1911, and very few either in Western, Central or Northern Bengal have returned themselves as Sudra at any time. In 1911, however, 63,831 in Dacca Division and 82,548 in the Chittagong Division were so returned. The corresponding figures for 1921 are 25,294 in the Dacca Division and 68,012 in the Chittagong, and large numbers who should have been included in this caste appear to have returned themselves as Kayasthas.

Sukli (Solanki).-The Suklis are a cultivating caste of the lower parts of Midnapore, who originally must have occupied the western shores of the Hooghly estuary as the Pods occupied the eastern shores. Their number returned in Midnapore and Howrah was 34,613 in 1901, but fell to 28,405 in 1911 and to 17,591 in 1921, and there is no doubt that the last return was incomplete, partly because the Suklis have set up the claim, like so many castes on the same social level, to be Kshattriyas, though it is possible that somé may have been entered in the census schedules as Dhobas, Pods or
Tantis.

Tanti and Tatua.-The Tantis are the Western Bengal weaver class while the Tatwas belong to Bihar. The former filed petitions to be separated from ${ }^{\circ}$
the latter, whom they hold to be much inferior, but in many localities in th: Province the two terms are treated as synonymous, and separation is therefore impracticable. Tantis and Tatwas were 312,927 in 1901, 322,4583 in 1911 and 319,613 in 1921 , so that, though they have lost 1.0 per cent. since 1911, they are $2: 1$ per cent. more than they were 20 years ago. This distinction between Tantis and Jugis have never caused any dificulty, and the fact that recently the Jugis have increased in numbers while the Tantis have decreased, is to be put down to the fact that the Jugis belong to the progressive Eastern Bengal, while the Tantis belong rather to the decadent (from the point of view of the census figures) Western Bengal. Tantis and Tatwas are in greatest numbers in Midnapore, the 24-Parganas, Hooghly, Bankura, Howrah and Calcutta, and have also a colony of some size in Dacca.

Teli and Tili.-The Telis are traditionally dealers in oil, but an influential and very wealthy section calling itself the Tilis is now definitely separate from the rest, though very many Telis aspire to belong to it. The Telis and Tilis were 403,959 in 1901, 419,122 in 1911 and have now been returned at 395,926 . There is no doubt that this number includes a contingent which should correctly have been returned as Kalus, and this and the fact that the returns show a decrease on this occasion points to a number of Telis having denied their true caste. They seems to have put themselves down as Gandrabaniks. More than half the Telis and Tilis are to be found in the Burdwan Division, especially in Bankura, Midnapore and Hooghly. There are large numbers in Calcutta and its immediate neighbourbood, but they are fewer in Northern and Eastern Bengal, though there is a considerable colony in Dacca.

Tiyar.-The Tiyars are the fishing caste of the Hooghly estuary, and the 24-Parganas. Midnapore and Howrah account for more than half their numbers in Bengal. There are Tiyars also in Dacca and Mymensingh and in Bihar extending into Malda, but other districts, except the parts of Jessore and Hooghly adjoining the 24-Parganas and Howrah, contain very few. The number of the caste in Bengal was returned at 213,511 in 1901 and 215.270. in 1911, but at no more than 175,721 in 1921, for a movement of dissatisfaction with their position has been started among them of recent years and individuals seem to have returned themselves as Mahisya (Chasi Kaibartta) and Rajbansi, instead of using their correct caste name.
216. The aboriginal tribes from the west.-The original labitat of the aborigines who belong to the Chota Nagpur plateau extends into Western Bengal. The Bhumij, Khaira, Kora tribes and the Chota Nagpur Lohars extend into Bankura district and the Bauris are closely related to them, but people of the larger tribes, the Santals, Mundas and Oraons are mainly immigrants, who have either overflowed from the Santal Parganas or been imported to the tea gardens of Jalpaiguri. - Taking these three large tribes together they now form a sensible proportion of the population of all the districts along on the western side of the province. :-



The progress of the overflow of these aboriginal tribes into Bengal has already been examined on the basis of the statistics of birth place in Chapter III of this Report, but the racial statistics are equally interesting. The number of these three tribes found in Bengal at the last three censuses has been as follows:-

|  | - | $!$ | 1981. | 1011. | 1801. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sautals |  | $\cdots$ | 712,040 | 669,420 | 528,415 |
| Orams |  | $\cdots$ | $\underline{202,442}$ | 165,337 | 118,225 |
| Mundas |  | -.* | 99,343 | 67,252 | 51,465 |
|  | Total | -•• | 1,013,825 | 902,009 | 698,105 |

A fact that is worthy of note is that the numbers belonging to the Santal and Munda tribes; who are Hindus by religion, has been roughly the same at each of the three censuses and has decreased in the case of the Oraons. It is the number of Animists that has increased. Apparently those who had accepted Hinduism were at first the more inclined to leave their own hills and come into Bengal, but later the less sophisticated have done so to an increasing extent.
217. Hill tribes on the eastern side of the Province.-Tipara.-The Tiparas in Tripura State, Chittagong Hill Tracts, Chittagong and Tippera districts were 90,296 in 1891, 101,329 in 1901, 129,846 in 1911 and 153,521 in 1921. The increases in successive decades have been 12.2 per cent., $28 \cdot 1$ per cent., and 18.5 per cent. and, according to these figures the tribe has increased by 70.5 per cent. in 30 years. This very great increase is something less than the truth for the reason that a number claiming relationship, with the ruling race of Tripura State has been returned in 1911 and 1921 as Kshattriyas. The number so returned in 1911 was 15,970 , and 26,116 at this census, so that apparently the Tipara tribe has doubled its numbers since 1891 . Such an increase is greater even than that of the Muhammadan cultivators has been in the richest parts of the plains, but its appearance may be due in part to an improvement from census to census in the accuracy of the enumeration of a race living in forest seclusion. That this is a possible explanation is rendered the more probable by the fact that there has been little increase in the number of Tipperas in Chittagong Hill Tracts while the increase in the Tripura State has been 100 per cent.

Chakma.-This tribe in Chittagong Hill Tracts and Tripura State numbered 40,022 in 1891, 48,839 in 1901, 57,910 in 1911 and 77,590 in 1921 . The increase have been 22.0 per cent., 18.6 per cent. and 34.0 per cent. in successive decades and the tribe has apparently grown by 93.9 per cent. in 30 years. It is practically confined to the Chittagong Hill Tracts.

Garo:-The Garos in Mymensingh numbered 28,085 in 1891, 33,191 in $1901,38,481$ in 1911 and 39,581 in 1921. This number is considerably less than a quarter of the total number of the tribe, for it peoples the hills north of Mymensingh, and though there is not much movement in and out of the hills some movement does take place. It is probable from the figures that this tribe has by no means the same great natural fecundity'as the Tiparas or the Chakmas.

Hadi and Hajang.-These two tribes found in Mymensingh are akin to the Garos, but are not properly hill tribes, as they belong to Mymensingh district, and it would perhaps have been more correct to have mentioned them along with the Koches. ${ }^{-\quad \text { The Hadis now number } 19,016 \text { and the }}$ Hajangs 23,021 , and both tribes, especially the former, have decreased in numbers of recent years.
218. The Himalayan castes and tribes.-Lepcha.-The Lepchas, the original inhabitants of the Darjeeling hills and Sikkim, are a retiring race with the habits and instincts of forest dwellers, and are no match for the more virile Nepalese. They are Buddhists by religion and were at one time considered to be a rapidly dying race. The census statistics have, however, disproved this, for the numbers of the tribe at successive censuses have been returned as follows:-

|  | 1091. | 1011. | 1901. | 1501. |
| :---: | :---: | :---: | :---: | :---: |
| Uarjeeling | 9,669 | 9,706 | 9.972 | 9,717 |
| Sikkim | 9,021 | 9,031 | 7,982 | 6,762 |

The total number has increased by 20.7 per cent. in 30 years, but the increase has taken place mainly in Sikkim, for there has been a certain amount of movement of this tribe towards the more secluded forest tracts, as the hills have been opened up by Europeans and the Nepalese.

Bhotia.-The Bhotias have come into Sikkim and the Darjeeling hills from Tibet and Bhutan, and a certain number are also found in the foot hills in Jalpaiguri district. They are bigger and more powerful men than the
rest found in the hills, but are not the proficient agriculturists that the Nepalese are. They live rather as graziers and coolies, but the trade in and out of Tibet is in their hands, and they are not hampered by caste distinctionsin choosing their means of livelihood. Their number returned at successive censuses have been as follows :-

|  |  | 1981. | 1911. | 1901. | 1891. |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\ldots$ | $\ldots$ | 10,710 | 10,768 | 7,620 | 8,899 |
| Darjeeliug | $\ldots$ | 11,580 | 12,414 | 8,184 | 4,776 |  |
| Sikkim | $\ldots$ | 4,997 | 5,673 | 6,798 | 4001 |  |
| Jalpaiguri |  |  |  |  |  |  |

The total has increased by $54-4$ per cent. in the 30 years, but has decreased by $5: 4$ per cent. since 1911.

Murmi.-The Murmis appear to form a link between the Bhotias and the Nepalese tribes. They seem to be descended from Tibetan stock modified more or less by intermixture with the Nepalese races. The majority are Buddhists, but their Buddhism is more tinged with Hinduism than the Buddhism which is the State religion of Sikkim. Their numbers in Darjeeling, Sikkim and Jalpaiguri have increased from 32,778 in 1901 to 38,317 in 1911 and 39,716 in 1921.

The Nepalese Tribes.-The numbers of the nine most important Nepalese castes and tribes in Darjeeling, Sikkim and Jalpaiguri are as follows :-

| Damai | ** | ... | (Darjeeling and Sikkim) | ... |  | -** | 7,052 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Garung | ** | -* | Ditto | *** |  | -** | 14,793 |
| Kami | *** | -** | (Darjeeling, Jalpaiguri and | Sikkim) | $1:$ | \% | 18,113 |
| Khamba | -.. | ** | Ditto |  |  | ... | -58,572 |
| Khas | ** | - | (Darjeeling and Sixkim) | *** |  | -** | 7,236 |
| Limbu | .* | ... | (Darjeeling, Jalpaiguri and | Siftim) |  | - | 24,721 |
| Mengar | -** | -* | Ditto |  |  | ... | 26,643 |
| Newar | ... | ... | Ditto |  |  | ... | 13.493 |
| Sunwar | $\cdots$ | -** | (Darjeeling and Sikkim) | $\cdots$ |  | -* | 4,386 |

All increased in numbers in these parts between 1901 and 1911, except the Sunwars, and some, especially the Kamis, traditionally. workers in iron, and the Mangars, increased very fast. During the last 10 years, however, only the Mangars, Newars and Damais have increased in numbers. The statistics for the Khas tribe or caste for 1921 have been altogether vitiated by the fact that most of those in Darjeeling district belonging to it seem to have returned themselves as Rajput (Chhatri), so that the number, 12,599, returned in the district in 1911 has been reduced to 620 , while the figure for Rajputs (Chhatris) has risen from 431 in 1911 to 15,646.

Mech.-The Mech tribe does not belong properly to the Himalayas but to the foot hills in Jalpaiguri district and the districts at the lower end of the Assam Valley. Its number in Jalpaiguri has fallen from 22,350 in 1901 to 19,893 in 1911 aud 10,777 in 1921, and this shy race, which is withdrawing into the Goalpara foot hills as cultivation is extending into those in Jalpaiguri, is probably also losing in actual numbers.
219. The Muhammadan Sections.-Behara.-Those returned as Beharas numbered 47,265 in 1901, 45,916 in 1911 and 39,026 in 1921. They are numerous in Jessore, Nadia, Khulna and Faridpur and there are some also in Bakarganj and Chittagong, but very few elsewhere.

Jolaha.-The weaving section among the Muhammadans, the Jolahas, was returned 446,973 in 1901, 282,425 in 1911 and 255,164 in 1921 . The great reduction is due to the dislike these people have for the term Jolaha and all it implies, which has led them to give up returning themselves by it. That the number has not gone lower is due to the fact that some enumerators
of the higher classes were jealous that those, who were really Jolahas, should not be returned as anything else, and it is known that a number was so returned in spite of their protest, especially in Faridpur and Jesenre, where they were returned in greatest numbers. In Pabna, on the other hand, where there were nearly 84,000 Jolahas returned in 1001, the number returned in 1921 was no more than 11,426. Similarly, in Mymensingh, where over 30, , (f) were returned in 1901, the present figure is but 4,802 . The large excess of males among Jolahas in Hooghly, Howrah, the 24 -Parganas and Calcutta is due to the fact that many found in these parts are Bihar Jolahas who have .mmigrated to the industrial area of which Calcutta is the centre.

Kulu.-The Muhammadan section whose traditional function is that of oil-pressers numbered 118,768 in 1901, but only 74,296 in 1911. The number lias on the occasion of the recent census risen again to 85,733 . The increase has taken place in the districts which were in the province of Eastern Bengai and Assam in 1911, but not in those which were under Western Bengal. Kulus are few or none in the Burdwan Division, but in the Presidency Divison the 28,725 returned in 1911 has been reduced to 19,994 , since Muhammadans in this part of Bengal have been allowed by the instructions issued to enumerators to be returned as they wished. But in such districts as Pabna, Bogra, Faridpur and Chittagong, there has been since 1911, apparently, a reaction of public opinion among the better classes of the population against the pretensions of these people, and the number returned as Kulu has been greatly increased. Kulus are most numerous in Mymensingh, Dacca, Faridpur, Pabna, Jessore, Nadia and Rajshahi.

Nikari.-27,000 out of the 44,000 Nikaris returned in Bengal in 1901 belonged to the Presidency Division, in which in 1911 Muhammadans were not permitted to return themselves just as they pleased. Between 1901 and 1011 the number went down in the districts under Eastern Bengal and Assam. Since 1911, the number in the districts which were parts of Western Bengal has been reduced by more than a third, but the number returned in what was Eastern Bengal and Assam has increased in a reaction similar to that noticed in respect of the Kulus.

Pathan.-The numbers who returned themselves as Pathans increased from 215,082 in 1801 to 280,898 in 1911, the increase being greatest in the Dacca Division, where 87,220 were returned in 1911 against only 54,371 in 1901. This number has now risen to 122,146 in 1921 and the designation seems to be very popular, especially in Mymensingh and Bakarganj. In other parts of the Province it seems to be much less popular, for, since at this census Muhammadans in the Burdwan and the Presidency Divisions have for the first time been permitted to return themselves just as they wish, the number of Pathans in both of them has decidedly decreased.

Saiyad.-The number of Saiyads, those claiming to be of the same stock as the Prophet himself, are now returned as many as 140,499 in Bengal. The number has not increased inordinately of late years, by 16.4 per cent. only in twenty years, and the increase has been mainly in the Dacca and Rajshahi Divisions. Dacca Division claimed only 24,362 in 1901 and Rajshahi Division only 16,112 , but these numbers have now been raised to 34,377 and 26,706 . Since 1911, the number of Saiyads in the Chittagong Division appears from the statistics to have decidedly decreased, probably due to a similar reaction to that to which reference has already been made against extravagant claims amongst those who have risen in the world. The number returned as Saiyads has also decreased in the Burdwan and Presidency Divisions.

Sheik.-The Sheiks are by far the most numerous section among the Muhammadans. They are now returned at $24,414.666$, no less than $95 \cdot 8$ per cent. of the total Muhammadan population, and the acquisitions they have received to their numbers since 1901, through persons formerly accounted as of other sections having been returned as Sheiks, probably no more than some 200,000 , have not very seriously affected their numbers. They form as large a proportion as $\mathbf{9 9}: 0$ per cent. of Muhammadans of Chittagong Division.
220. The depressed classes.-In the first paragraph of this chapter an estimate was promised of the number of tire depressed classes. The term has never been defined and it is not easy to define it. It has not quite the same meaning as the "backward clasess," the classes backward in education and in civilization generally, and yet is not quite conterminous with the lowest class in the Hindu social scale. There are classes among the Muhammadans which are very backward in education as there are Buddhist, Animist and Hindu tribes in the Darjeeling hills and in the hill tracts to the east of the Province, but when the question of proportional representation of the depressed classes in the Democratic Government of the country was considered, it was obviously not intended that any Muhammadan section should be included among them, for separate representation has been given to Muhammadans. The homes of the hill tribes, moreover, are without the scope of the recent Reforms. I propose, therefore, not to include any Muhammadan sections or tribes of the Darjeeling hills or Eastern hill tracts in my estimate of the numbers of the depressed classes. Education does not by any means go hand in hand with social position in the country, and it would not be correct to count as the depressed classes all the castes below a certain point in the list of castes given according to the proportion literate among them in paragraph 177 of ChapterVIII supra, and exclude all the castes above that point. There are castes like, for instance, the Sunris and the Telis, who in education are far advanced compared with castes which rank below or level with them in the social scale and I would certainly not count such castes among the depressed classes. The following castes together number about $11,250,000$ and with a few smaller castes which should be held to come under the samé category we may place the depressed classes in Bengal at about $11 \frac{1}{2}$ millions:-

Bagdi.-West Bengal cultivators and labourers.
Bauri.-Labourers, West Bengal.
Bhuimali.-Scavengers.
Bhuiya.-A tribe of the Chota Nagpưr plateau.
Bhumij.-A tribe of the Chota Nagpur plateau.
Chamar and Muchi.-The cobblers and leather workers.
$?$ Chasi Kaibarttas.-Cultivators.
Dom.-Sweepers and basket makers.
? Garo.-An aboriginal tribe of Mymensingh and the Garo hills to the north.
₹ Hadi.-Aboriginals of Mymensingh.
? Hajang-Aboriginals of Mymensingh.
Hari.-Sweepers and scavengers.
Jalia Kaibartta.-Fishermen and boatmen.
Kulu.-Oil-pressers.
Kaora.-Labourers.
Kaira.-Midnapore cultivators.
Kasta.-Midnapore cultivators.
Khandait.-Immigrant labourers from Orissa.
Khen.-An aboriginal race of Rangpur, Jalpaiguri and Dinajpur.
Koch.-An aboriginal race of Northern Bengal.
Koiri.-Immigrant labourers.

- Kora.-A tribe of the Chota Nagpur plateau.

Kurmi.-Labouress.
Lohar.-Their number is mostly made up of iron work rs of the Chota Nagpur plateau and adjoining parts.
Mal.-Boatmen.
Malo.-Boatmen.
Mech.-An aboriginal tribe in Jalpaiguri
? Munda.-A tribe of the Chota Nagpur plateau.
Namasudra. - The aboriginal race of the Lower Delta.
Nuniya.-Earthworkers; immigrants.
? Oraon.-A tribe of the Chota Nagpur plateau.
Patni.-Ferrymen and boatmen.

Pod.-The aboriginal race of the lower Hooghly delta; cultivators. Pundari.-Murshidabad and Malda.
Rajbansi.--The aboriginal cultivating class of Northen Bengal.
Raju.-Midnapore labourers and cultivators.
? Santal.-A tribe of tise Chota Nagpur plateau.
Sukli.-Cultivators of th west bank of the Hooghly estuary.
Tiyar.-Fishermen and boatmen.
It may be asked why such a caste as the Muchis (leather workers and cobblers) has been included while the Kumhars (potters) have been left out, and why such castes as Napit (barbers), Goala (milkmen) and Dhoba (washermen) have been omitted. It is certainly very difficult to draw the line. The Kumhars certainly have a much better social standing than the Muchis and better education; the Napit is certainly not inarticulate; in fact he is typically the village busybody knowing every one's business and ready to talk to any one on any subject. The milkman and the washerman, too, have contact with the educated classes, and are not to be described as "depressed.." I was in some doubt whether to include the Chasi Kaibarttas, but they belong to the rural areas and occupy much the same position in the body politic in the parts where they are numerous, as do, for instance, the Namasudras, though they are higher placed in the Hindu social scale.

The figures in the following table and the map in diagram No. 98 show 'the proportion which the people of all these castes togetiuer bear to the total population in each district. The Darjeeling district and the Chittagong Hill Tracts are left out as there is no representation from them of the Legislative Councils and their tribes have not been counted among the Depressed Classes in Bengal. Tripura State and Sikkim bave been left out also, but not Cooch Behar, as it is peopled by the same class as the British district on either side of it:-

|  |  |  |  | Proportion of the pmopnlation per mille beloukIng to the depressed claver. | Cubee more ec -mody found. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Burdwan | ... | *- | ... | 406 | Bagdi and Banri. |
| Birlhum | ... | ..* | $\cdots$ | 407 | Bagdi, Santal, Yuchi, Bauri, Mal and Dom. |
| Bankura | ... | $\cdots$ | $\cdots$ | 426 | Santal, Bauri, Bagdi and Lohar. |
| Midnapore | ... | ** | ... | 598 | Chasi Kaibartta. Santal, Bagdi and Eurmi. |
| Hooghly | ... | ... | $\cdots$ | 448 | Chasi Knibarttu, Bagdi and Santal. |
| Howrah | ..* | ... | .'. | 469 | Chasi Kaibartta, Bagdi, Tijar and Pod. |
| 24-Parganas | ... | ..* | $\cdots$ | 419 | Pod, Chasi Kaibartta, Bagdi and Tiyar. |
| Calcutta | -** | ".0 | $\ldots$ | 113 | Chamar aud Muchi and Clani Kaibartta. |
| Nndia | -•• | ... | ... | 186 | Chasi Kaibartta, Chamar and Muchi, Namasudra. |
| Murelidabad | -•• | ..- | ... | 214 | Chasi Kaibartta, Chamar and Muchi. |
| Jebsore | ** | ... | ... | 208 | Namasudra, Chamar and Muchi. |
| Khulna | $\cdots$ | . $\cdot \cdots$ | ... | 333 | Namasudra and Pod. |
| Rajehahi | -•• | *- | $\cdots$ | 137 | Chasi Kaibarta. |
| Lidajpur | $\cdots$ | -•• | $\cdots$ | 419 | Rajbansi, Santal and Koch. |
| Jalpaiguri | ... | $\cdots$ | ** | 559 | Rajbansi, Oraon ald Santal. |
| Radgpur | $\cdots$ | $\cdots$ | ... | 241 | Rajbansi. |
| Byrgre | ... | *. | *.' | 96 | Rajbansi and Koch. |




The fact that the numbers of those who have been counted among the depressed classes are only taken from among the Hindus, and that Hindus are in a minority in many Eastern and Northern Bengal districts, largely accounts for the much greater proportions shown in the above table against Western

Bengal districts than amongst Eastern Bengal districts. Cenerally upeakiner the great masses of the depressed classes are these-
(a) Bauris, Suntals, etc., on the fringes of the Chota Nagpur plateau and on the western side of the Burdwan Division;
(b) Bagdis and Chasi Kailharttas on the alluvial plains of Weatern Bengal, the latter extending into Central Bengal also;
(c) Pods in the 24-Yarganas and Khulna;
(d) Namasudras in adjoining parts of Faridpur, Bakarganj and Jessore, and also in the south of Dacca:
(e) Santal immigrants in Dinajpur and Malda;
(f) Indigenous Rajbansis and Koches in Dinajpur, Rangpur. Cooch Behar and Jalpaiguri; and.
(g) Immigrants from Chota Nagpur in Jalpaiguri.
221. Europeans and Anglo-Indians.-Bengal has a European population of 22,730 , of whom 14, 15:3 are males and 8,577 females, as well as 22,250 AngloIndians, of whom 11,164 are males and 11,086 females. The accuracy of these figures is open to some doubt owing to the difficulty which is experienced at every census of restraining Anglo-Indians from returning themselves as Europeans and certain educated Indian Christians. especially from Southern India and Portuguese territories, from claiming to be Anglo-Indians. The practice of using schedules to be filled up by householders themselves for the census of Europeans and Anglo-In lians, instead of having them entered in the schedules filled up by the enumerators, has in the past added to this difficulty. At the recent census an attempt was made to restrict the use of household scheitules, and to empluy European enumerators to fill up selundules wherever a considerable number of Europeans were found living together in a particular locality and it was possible to arrange for their appointment. This plan undoubtedly produced greater accuracy in discriminating between Europeans, Anglo-Indians and Indian Christians in C'alcutta, though the Boy scouts who were appointed as enumerators for European blocks did not complete their work as satisfactorily as it was hoped they would. The plan was adopted in European Railway Settlements with excellent results. The Railway authorities selected enumerators from among their stafi who carrisd cut the enumeration of the Europeans and Anglo-Indians with great care. There were some omssions of Europeans in the census of Cilcutta. but on the whole considerably greater reliance may he placed on the figures of this census separating Europeans and Anglo-Indians and excluding Indian Christians from the latter than on the figures obtained at former enumerations. The figures show Europeans and Armenians together slightly less numerous than in 1911, but the Anglo-Indians, 22,250 in place of 19.533 . i.e.: increased by $12 \cdot 2$ ner cent. The number of Anglo-Indians in Bengal acenrding to the cenisus of 1901 was 18.050 , so that the increase between 1901 and 1911 was but 9.9 per cent., and as the community has heen very hard hit by the pressure of competition to obtain employnient and hy the rise of prices. and is nowalays much less often recruited by the progeny of alliances between Europeans and Indians than formerly, and since a number of Indian Chyistians have now been excluded who are included in the figures for 1911, it is safe to say that the arrangements adopted for this census have resulted in the transfer of something like 2.000 from the number of the Europeans to the number of the AngloIndians. If this is so and if the omissions of Europeans in the census of Calcutta amounted to 800, the estimate given in the Census Retrort for Calcutta. it means that in the last 10 vears there has been an actual increase in the number of Europeans in Bengal hy some 10 per cent.

In the early days of British rule in Bengal, Eurepeans were frequently to be found in all parts of the country. European officials were not so numerons as at present, though they liad the East India Company's trade to employ them as well as administration, hut they kept a certain number of European servants and numbers of other Europeans of the lower classes were also to be found, ship's carpenters settled in places like Chittagong and Sylhet building hoats, and Europeans of all sorts mixing themselves in the trade of the country. Lord Cornwallis, when he came out, found it necessary to take steps to restrict Europeons from aequiring rights in land and pspecially in hits
(market-places). Later, in the days in indigo again, Europeans were to be found all orer the country. But things are now changed- The majority both of the European and Anglo-Indian community are congregated in Calcutta, a larger proportion of the latter than of the fermer. In most districts of the Province there are no Europeans but the distriet officials and missionaries, and fewer Anglo-Indians. unless the district tonches the industrial area round Calcutta or the coal-field, or one of the tea growing districts or happens to include a centre of the jute collecting' trade or a railway settlement. The following table shows the number of Europeans and Anglo-Indians and of both communities together in each district and the places of concentration of theee who are not officials or missionaries :-



The following table shows the proportion of the European and Armenian population of Bengal which was found in Calcutta and outside it at each of the Tast three censuses.

|  |  |  | Caleuts. | Outus. |
| :---: | :---: | :---: | :---: | :---: |
| 1901 | ... | ... | 611 | 339 |
| 1911 | ... | ... | 571 | 42 |
| 1921 | $\cdots$ |  | 568 | 43: |

Thete was a definite tendency for the number of Europeans outside the city to increase between 1901 and i911. The greatest increase took place in Midnapore district, where the railway settlement at Kharagpur was established, in Jalpiaguri and Darjeeling, where the tea industry was expanding. and in Chittagong, where the Assam-Bengal Railway headquarters was emploving an increased number. During the last decade the proportion of European community living in mufassal districts has remained much as it was 10 years ago. There are increased numbers up and down the Hooghly in Horvralh, the 24-Parganas and Hooghly and many more in Chittagong, but rather fewer in the tea districts, many fewer in Dacca, which is no longer a provincial capital, and, generally, decidedly fewer in the districts in which Europeans are few. The change which has reduced the number so much in Midnapore, Rangpur, Pabna and Faridpur is due to the more careful discrimination betreen Anglo-Indians and Europeans at Kharagpur, Shidpur, Sirajganj, Madaripur and Rajbari.

In 1901, a very much larger proportion of the Anglo-Indian community lived in Calcutta than of the European communitr. The following table shows the proportion of all the Anglo-Indians in Bengal found in Calcutta
and outside at the last three censuses and shows that the Anglo-Indian commonity has in the last 20 years shown a strong tendency to seek employment outside the city.

|  |  |  | CNatum | Sutule |
| :---: | :---: | :---: | :---: | :---: |
| 1901 | $\cdots$ | ... | 802 | 98 |
| 1911 | $\cdots$ | ... | 715 | 285 |
| 1921 | ... | ... | 612. | 388 |

The greatest increase in the number of Anglo-Indians in mufassal districts has taken place in Midnapore due to the establishment of Kharagpur, in Rangpur due to the expansion of Saidpur, in Chittagong due to the expansion of the port and the headquarters of the Assam-Bengal Railway, in the municipalities along the Hooghly, especially on the 24-Parganas side, and in Darjeeling due partly to the growth of the Kalimpong Homes for needy Anglo-Indian children. The increases in some of these places are due in part to the correct entry of persons in railway settlements especially as Anglo-Indians instead of Europeans. Even now a greater proportion or the Anglo-Indian community than of the European community sticks to Calcutta, and the census statistics bring out very clearly the paucity of both communities seattered over the Province.

## SUBSIDIARY TABLA I.-Casteb CLassified according to theib 'Thaditional occupations.



| V.-Flshermen and Boatmen. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jalia Kaibarta (Adi Kaibartta) ... |  |  |  | 384 | Nikari (Mo | adan) |  | 37 |
|  |  |  |  | 118 | Patni | ... | .. | 44 |
| Malo | ... | ... | ... | 221 | Tiyar | ... | ... | 176 |
| VI.-Personal and Domestlo sorvioe, eto. |  |  |  |  |  |  |  |  |
| Dhoba (washermen)... <br> Kahar (palki bearer) |  |  |  | 227 | Napit (bar |  | ... | 44. |
|  |  |  |  | 122 | Sudra (Do | servants) | ... | 9x |
| Behara (palk |  | bearer; Muham- |  |  | Bhaimali |  | $\cdots$ | 82 14 |
|  |  |  | ... | 39 | Hari (swe |  | ... | 149 |


|  | VIl.-Industrial castes. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Jugi or Jogi (weover) | ... | 366 | Sonar (guldsmith) ... |  | 46 |
| Kımar (potter) .. | ... | 285 | Teli or Tili (oil preyser) |  | 396 |
| Kapali (weaver) ... | ... | 159 | Kalu (oil presser) ... |  | 9 |
| Tanti or Tatwa (weaver) | $\cdots$ | 320 | Kula (oil presser ; Muham |  | 86 |
| Jolaha (weaver ; Muhammadan) |  | 255 | Mayra (confectioner) | $\cdots$ | 152 |
| Sutradhar (carpenter) | ... | 169 | Chamar (leather vorker) | $\cdots$ | 415 |
| Kamar (blacksmith) | ... | $2: 5$ | Muchi ( litto | ... | ${ }_{15}$ |
| Lohar ( do. ) ... | ... | 68 | Dom (basket maker) |  | 1.0 |


|  |  |  |  | Tambali ... |  | ... | 418$9: 3$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gandhabanik | ... | ... | 142 |  |  |  |  |
| Shaha ... | ... | ... | 117 | Suari (toddy seller) |  |  |  |
| Subarnabanik | ... |  |  |  |  |  |  |
|  | IX.-Prieste and Devotees. |  |  |  |  |  |  |
| Brahman | ... | ... | 1,310 | Baishnal | ** | ... | 378 |
|  |  |  | Arts | Letters. |  |  |  |
| Kayastha (writer) | ... | $\cdots$ | 1,298 | Bailya (loctor) | $\cdots$ | ... | 103 |
|  |  | Xl.-Soldiers. |  |  |  |  |  |
| Rajpat (also land owners) |  | 126 |  |  |  |  |  |



SUBSIDIARY TABLE I $(a)$.-CASTES INCLUDED UNDER ": OTHERS" IN Table I for whice figures are avallable for the localities Whfre they are found in large numbers.

subsidiary table iI-Variation in Caste, Tbibe. etc., mince igfi.


 WHERE THEY ARE NLMEROR
!! $\qquad$


## OHAPTER XII.

## Occupations.

22'. " introductory.-This chapter is a commentary upon the statistics cor': ed in Tables XVII to XXII of the Census Tables Volume. Tables $y$ if to XXI are statistics of occupation obtained from the schedules of the $r$ nnsus itself, following a scheme of classification, altered only slightly from that used in 1911 in a manner described in the title page to Table XVII. Table XXII contains statistics obtained from a special return required to be filled up by the managers of all factories with as many as ten employees each.

This chapter deals first with the general distribution of the population according to occupation and then with each of the sub-classes of the ocrupational scheme:-
I.-Exploitation of the Earth's surface.
IV.-Transport.
V.-Trade.
VI.-Public Force.
VII.-Public Administration.
VIII.- Professions and Liberal Arts.
IX.-Persons living principally on their income.
X.-Domestic Service ${ }_{n}$

XI-Insufficiently described occupations.
XII.-Unproductive occupations.

Sub-class II, "Exploitation of minerals" and sub-class III, Industry are left till last, and in connection with them the statistics of Table XXIf are examined along with those obtained from the schedules of the census itself.

Some further introduction of the statistics to the student of them is however necessary. Individuals were required to describe their main occupation as precisely as possible, and if they had another occupation subsidiary to it to give that also in a separate column provided for the purpose. No attempt was made to guide the enumerators as to the terms by which occupations should be described except in the case of agriculture, for to have done so would have meant that a certain amount of classification would have been done by the enumerators themselves which could have been done much more satisfactorily in the course of tabulation. If any classification had been done by the enumerators it would have been impossible moreover to obtain uniformity, or even to ascertain what system bad been used, whereas a full record can be kept of classification done in the compilation offices, and for the benefit of the student of the figures an alphabetical list (in English) of significant occupational entries found in the schedules, which gives against each the group number in the occupational classification scheme, is published as an appendix to this chapter. An exception was made in the case of agriculture for the reason that experience has shown that agriculturists, if left to themselves, use terms indicative of their status in the land tenure system rather of their occupation. In these days the man whose status according to the land laws is that of a raiyat may not always be a cultivator, for the money-lender, who buys up a holding with no intention of cultivating it himself but of sub-letting it, acquires the status of his predecessor in interest. Moreover there are terms. ordinarily applicable to niddlemen in the land system which do not by any means clearly indicate that the man who describes himself by them is not a cultivator. A Patnidar in most parts of Bengal, for instance, is the holder of a considerable estate from which he collects the rent, but in Noakhali district landlords bave for a long time been accustomed to allow the ordinary cultivator to purchase patni rights by payment of a premium, so that in that part the term matnidar does not by any means point conclusively to the user of it being a middleman. and in fact over many square miles in Feni subdivision nearly all the actual culfivators have patni rights, and if asked their occupation would say
patnidar. There are other terms which in this locality are equally indeterminate of the question whether the man described by them is a cultivator or a middleman, shikmidar, haoladar, jotdar, etc. The term haoladar in Bakarganj and Khulna is indeterminate of occupation for another reason, viz., that haolas are of very various sizes, from holdings small enough to be cultivated by a single person to wide-spread middle rights. The significance of the term jotdar also varies very much from place to place. In Eastern Bengal jot is the term ordinarily used to describe the holding of a cultivator with a right of occupancy, but in parts of Northern Bengal the jot is much larger and the jotdar has commonly sub-let to others, chaukanidars, adhiars, etc. In the western part of the Province a jot often covers a much larger area than a jot in Eastern Bengal. Enough has however been said, without multiplying instances further, to indicate that the terms ordinarily used to describe status in the land system, which have been used at former occasions in filling up the columns for occupation in the census schedules, by no means satisfactorily distinguished the rent receiver from the actual cultivators. Accordingly, instructions were given to the enumerators to distinguish carefully between those who cultivated all or most of their land themselves and those who had sublet all or most of it, by returning the former as praja, "tenant," and the latter as bishay bhogi, "rent receiver." In these days, moreover, when there is so much quibbling as to whether one who cultivates another's land and in return pays him a share of the produce has any right in the land or is merely acting as a servant, it was necessary to remind the enumerators that a legal point should be left aside and the man entered as praja unless he was actually paid the wages of a servant or labourer.

Whatever scheme of classification is used there must be some occupations even among those described with precision whose classification is not at once obvious, but the greatest difficulty in Bengal is to obtain precision. The Rengali bhadralok are very apt to give their occupations by the term chakuri, literally "service", the business classes by the term byabasha; "trade,". and the labouring classes by the term dainik majur, "daily labour". It was necessary to issue strict injunctions to enumerators to avoid these terms and any other vague terms of the sort, and always to be as precise as possible, but the result was not altogether satisfactory, for the description of its occupation given in the case of 2 per cent. of the population was not precise enough to enable any more detailed classification to be made than to divide it into(a) manufacturers, businessmen and contractors, (b) clerks, accountants, bookkeepers, etc., and (c) labourers asd workmen. This proportion is, however, 45 per cent. less than in 1911 and less than a third what it was in 1901, so that there has been considerable improvement in the precision of returns of occupations during the last 20 years.

The entry of subsidiary occupations proved so obviously incomplete that the resultant statistics are of little or no value. Seventeen Subsidiary Tables are appended to this chapter, the first eight giving proportionate figures based on the statistics of occupation obtained from the census schedules themselves and published in Tables XVII to XXI of the Tables Volume, the ninth figures obtained direct from the Railways, Post and Telegraph and Irrigation Departments, and the last eight being analyses of the statistics of organized industry obtained from the Industrial Returns made by managers of factories. They are as follows:-
I.-A general distribution of the population according to occupation. II.-A similar distribution for each division of the Province.
III.-A distribution of the population of each district between Agriculture, Industry, Commerce and the Professions.
IV.-An analysis of the extent to which agricultural occupations are followed as subsidiary occupations to others.
V.-An analysis of the extent to which other occupations are followed as subsidiary occupations to agriculture.
VI.-The proportion of female to male workers in each occupation.
VII.-A comparison of the returns of occupation for 1901, 1911 and 1921.
VIII.-An analysis of the occupations of selected casteg, tribes and races.
IX.-The number of persons employed on Railways, in Post and Tele graph Service and by the Irrigation Department.
$\mathbf{X}$.-A distribution of industries and persons employed.
XI.-Particulars of establishments employing 20 or more persons in - 1911 and 1921.
XII.—An analysis of the organization of establishments.
XIII.-Particulars of place of origin of skilled employees.
XIV.-Particulars of the place of origin of unskilled employees.
XV.-The distribution of certain races in cęrtain Industrial Establishments.
XVI.-The proportional distribution of adult women and of children of each sex in different industries.
XVII.-The distribution of power.
223. General distribution of occupations.-The following statement shows the distribution per 10,000 of the population of Bengal according to the four main classes of occupations by which it is supported :-


The figures show to how great an extent Bengal depends upon the production of raw materials, i.e., in this instance mainly upon the agriculture and cognate pursuits, for nearly all of it is an alluvial plain in which there are no minerals to be exploited. The distribution arcording to the 12 sub-classes of the classification scheme adopted is as follows, and is illustrated by diagram No. 100:--

Number supported and employed per 10,000 of the uhole population.



In the several quarters of the Province the proportion of the total population dependent upon various classes of occupation is as follows, and is illustrated in diagran No. 100:-

|  | Proportiok fer maliz supfortid by- |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bropoltation of anlmak and regetation | $\begin{gathered} \text { Todustry } \\ \begin{array}{c} \text { inclodion } \\ \text { mow.) } \end{array} \end{gathered}$ | Trade. | Protestiona freladiog the Prblle Force and Astrainighrathuta. | Other ceeap tions |
| Bengal ... | 787 | 78 | 51 | 23 | 61 |
| Weatera Bengal-Bardyan Divisivo. | 738 | 119 | 42 | 22. | 79 |
| Central Bengal-Presidency Division. | 679 | - 119 | 74 | 35 | 93. |
| Northern Bengal-Rajshahi"Division and Cuoch Belus. | 870 | 42 | 32 | 13 | 43 |
| Eastern Bengal-Dacea Division. | 815 | 57 | 59 | 23 | 46 |
| Eastern Bedgal-Chittagong Division and Tripara State. | 808 | 70 | 47 | 24 | 51 |



It is in NorthernBengal that agriculture monopolizes the energies of the population the most completely. There only 13 per cent. of the population is engaged in non-agricultural occupations. This proportion rises to $18 \frac{1}{2}$ per cent. in Dacca division and just over 19 per cent. in the Chittagong division with Tripura State, but inWestern Bengal it is as much as 26 per cent. and in Central Bengal 32. The proportion in which this surplus over the total agricultural population is divided between Industry, Trade, the Professions and "other"' oecupations is very much the same on all sides. The largest ilems in "other" occupations are Transport, Domestic Service, and "insuffciently described occupations," and the total is, as might be expected, roughly proportionate to the number of non-agriculturists, for since there is no difficulty in identifying agricultural occupations as such the total for insufficiently described occupations is proportionate to the number of nonagriculturists, while the necessity for transport depends very much on the extent of trade and industry, and domestic servants are not commonly found in the houses of cultivators.
224. Agriculture.-The produce of the soil is the direct means of support of no less than 77.3 per cent. of the total population of Bengal. The proportion supported by other means in each-of the several districts is as follows and is illustrated in diagram No. 102 :-

| Burdwan . | ..' | Per cent. |  | Rangpur ... | -•• | Per cent |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $32 \cdot 1$ |  |  | ... | $10 \cdot 4$ |
| Birbhum ... | ... | ** | 23.1 | Bogra ... | ... | * | 130 |
| Benkura | .... | ... | $23 \cdot 0$ | Pabna | - | ... | $25 \cdot 0$ |
| Midnapore ... | ..* | ... | 16.0 | Malda | ... | ... | 23.5 |
| Hooghly ... | ... | ... | 38.4 | Cooch Belar | ..* | ..* | $11 \cdot 3$ |
| Howrals | ... | ..* | $52 \cdot 3$ | Ducca .. | $\cdots$ | ... | 31.5 |
| 24-Parganas | ... | ... | 35.9 | Mymenaigh | .-* | ... | 13\%2 |
| Calcutta | ... | ... | 94.6 | Faridpur ... | ** | . | 22.0 |
| Nadia | ... | ... | 32.6 | Bakarganj .. | ... | -.. | $15 \cdot 2$ |
| Murshidabad | ... |  | $2 \mathrm{~J} \cdot 1$ | Tippera ... | ** | - | $15 \cdot 8$ |
| Jessore | ..' |  | $23 \cdot 7$ | Nouishali . | ... | . | $18 \cdot 8$ |
| Khulua | ... |  | $16 \cdot 1$ | Chittagong ... | $\cdots$ | ... | 28.8 |
| Rajnhahi | ... |  | $15 \cdot 5$ | Chittagong Hil |  | ... | $22 \cdot 1$ |
| Dinajpur | ... | ... | $8 \cdot 8$ | Tripura State | ... | ... | $19 \cdot 3$ |
| Jalpaiguri ... | ..' |  | 8.9 | Sikkim | . | ... | $5 \cdot 3$ |
| Darjueling ... | ..* |  | 24.4 |  |  |  |  |


225. Ordinary cultivators and .field labourers.-Ordinary cultivators. in Bengal number $9,274,927$ workers and $21,268,653$ dependents, so that the total number supported by this means is $40,543,580$ out of a total population of $47,592,462$. All these cultivators are people who hold their land themselves and generally carry out the work of cultivation themselves. Farm servauts, servants in regular employment to work on the land, were returned at no more than 9,345 worbers in the whole Province, and although field labourers, persons casually empldyed to work on the land, are more numerous, $1,796,157$ workers in all, the total $1,805,502$ is small compared with the number of ordinary cultivators. There is in fact only one hired labourer on the land to every five who cultivate land of their own. According to the Census of 1911 in England and Wales there were; by contrast, well over three hired labourers to every farmer, i.e., cultivator of his own land; and in 1851, before agricultural implements and machinery had been improved as they have been since and more of the work had to be done by hand, there were nearly six hired workers to every farmer, and conditions are much the same in other European countries. The customs of this country, now crystallized in the Tenancy' Laws, have produced a system of small holdings such as is not found in other countries of the world except in parts of China, and the problems connected with the economics of agriculture here are, therefore, very different from those which have to be faced elsewhere. There is one hired worker to every five workers of their own land in the Province as a whole but in the Eastern Bengal districts (Dacca and Chittagong divisions) there are only 364,621 hired workers to $2,880,971$ workers of their. own land, i.e., only one hired
labourer to eight ordinary cultivators. The landlords and middlemen have often kept a little land néar their homes on which they grow rice for their household needs and on which they employ hired labour, and there are always cultivators suffering from disabilities which do not permit them to work their land themselves, widows left with children not yet old enough to put their hand to the plough, and so on. The number of labourers employed by ordinary cultivators is, therefore, very small indeed, and it may be said generally that the holdings in Bengal and especially in Eastern Bengal are so small that the cultivation of them is hardly ever too much for their owners themselves to accomplish unaided.
226. Acreage per worker in agriculture.-According to the Agricultural Statistics publishéd for 1919-20, there are 24, 496, 800 acres of land under cultivation in British Territory in Bengal, and the number of actual workers in cultivation, ordinary cultivators, farm servants, field labourers and growers of special products in British Bengal is $11,060,629$. This means ouly 2.215 acres per worker. It is in such figures as these that the explanation of the poverty of the cultivator lies. The cultivation of less than $2 \frac{1}{4}$ acres of land cannot employ a man for more than a comparatively small number of days in the year. The cultivator works fairly hard for a few days when he ploughs his land and puts down his crops and again when he harvests them, but for most of the year he has little or nothing to do. The cultivated area in England and Wales is just over 26 million acres and according to the Census of 1911 the number of male workers in agriculture was $1,253,859$ while female workers on the land were very few indeed. These figures give some 21 acres per worker, 10 times as much as in Bengal. ' In 1851, in England and Wales, there were $1,544,089$ male workérs in agricultural occupations and the cultivated area was not less than nowadays.. This gives one worker for about 17 acres in the days before mechanical appliances had been bruught in to any considerable extent to assist the farmer. In the great whent-producing countries of the world, for instance in the Western States of America and in the Argentine, where labour is very scarce and mechanical appliances and power are more used than in England, the acreage per worker is very much greater. The total area of farms under the Union of South Africa, where . indigenous labour is available, is $229,270,000$ acres, of which $13,856,152$ ;acres are under the plough and the rest is pasture. According to the recent census the number of workers in agriculture is as follows:-

|  |  | Malc. |  |  | Fetmile. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| White | $\cdots$ | ** | ... | 41.756 | 12,865 |
| Native | -* | - | $\cdots$ | 254,623 | 104,351) |
| Asintic | -... | ... | ... | 19,697 | 4.044 |
| Other coloured | $\cdots$ | - |  | $\begin{array}{r} 38,673 \\ 1 \\ \hline \end{array}$ | 12,124 |
|  |  | Total | $\cdots$ | $\begin{gathered} 354,67^{9} \\ \hline \end{gathered}$ | 133,383 |

Here Europeans are only 10.96 per cent. and including pasture land as well as that which is under the plough there are 460.2 acres per agricultural worker. Cultivated land is only $6 \cdot 1$ per cent. of the total area of the farms, but even if the workers spend one-third of their time on this small area there are 83 acres cultivated per whole-time worker. This is 38 times as much as the average worker in the agriculture has to deal with in Bengal. Agriculture may not be so intensive in South Africa as in Bengal, but on the other hand the ulluvial plains of the Delta here yield their return with comparatively little
expenditure of labour, and such figures as these make it very clear that the Bencali cultivator has not nearly as much work to do as will fill his time. This is the root cause of his poverty.

It is largely the land system of the country that is responsible for the present conditions. In other countries where the holdings are comparatively large and the farmer can only manage with his own hands a fraction of what work there is to be done, he employs hired workers and engages as many as are required to do the work, and no more. In Bengal the holdings have been so minutely subdivided that there is not enough work for the cultivators, but on the other hand there is no other work to which they can turn their hand. The very rights which the cultivator has in his land and which it has been the object of the tenancy legislation to preserve to him, stand in the way of an adjustment between the supply and demand for labour in this Province. He cannot be expected to sacrifice these rights and go in search of work in industrial centres except in the last extremity, and the only amelioration of present conditions in Bengal that seems possible, is by bringing work within reach of the cultivator near his own village. This no doubt is the reasoning of the more thoughtful of those who preach the use of the charka and it is sound as far as it goes. But it does not solve the problem. The Bengali cultivator is used to obtaining a sufficient return for very little labour from his land to support him at his present standard of living. He certainly will not take kindly to any subsidiary occupation which gives but a very poor return for a great expenditure of labour and time. The economics of the charka are beyond hope, though those of the hand loom are not by any means in the same position. Not only do laziness and the easy return for little labour on his land disincline the Bengali for more work in order that he may be able to raise his standard of living but there are many prejudices and much false pride, which will be difficult to overcome. At present the cultivator holds himself above many forms of labour to which he might turn. In Eastern Bengal an ordinary cultivator would not think of taking up the employment of an earth worker and fill in part of his spare time by:working as a labourer repairing the roads or cutting tanks. Such prejudices must break down in time with the increase of the pressure of the agricultural population on the soil, but the breaking will be a slow progress. The best hope for the country would seem to lie in an extension of organised industry, which is at present confined to the banks of the Hooghly, to other parts, It looks a reasonable proposition to establish a jute mill, for instance, somewhere near Narayanganj or Chandpur, to use oil engines for power, bringing the fuel direct from Assam or Burma, and to employ local labour, but he would be a bold man who would finance such an enterprise. The doubtful factor would be the willingness of local labour. There is plenty of it available, but it is doubtful whether it would give up its present lazy habits and its prejudices, and come forward. The pioneer mill, if it proved a success, would achieve the greatest possible good to Eastern Bengal, for others would follow and the cultivator would be given the opportunity, which otherwise he has no chance to get, of having a good day's work and earning a full day's wage.
227. Comparative wealth of the cultivating classes in different parts of the Province.-The statistics of agrieulture have been analysed in Chapter I for eleven districts stretching across the Province from Bankura to Noakhali, for which reliable statistics have been prepared by the Settlement Department, and the density of population per square mile correlated with area under cultivation, outturn of food-crops and gross value of agricultural produce per square mile. That density was the density of the population engaged in all kinds of occupations. The relative economic position of the cultivating classes in these districts can be gauged by correlating the gross produce of the soil with the number of ordinary cultivators, farm servants and
field labourers per square mile in each of these districts, and that is dose in the following table:-


The figures in the second column are taken from the table in Section 14 of Chapter I of this report, and in those in third are the number of ordinary cultivators, field labourers and farm servants supported per square mile of the area of each district. The figures obtained and entered in the fourth column are for each district an index of the proportionate value of the produce of agriculture which goes to the share of the average cultivator in each district. If all the cultivating classes-male or female, adult or child-shared the gross produce of the soil equally and each individual in Midnapore got Rs. 100 worth in a year then the average individual in the other districts would get-

| In Bankura (Sadar Subdivision) |  | ... | ... | ... | $\underset{\substack{\text { Rupers morth } \\ 135-4}}{ }$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| On Noakhali maidand | $\therefore$. | ... | ... | ... | $139 \%$ |
| In Tippora | ... | ... | $\cdots$ | ... | $140 \cdot 2$ |
| In Mymensing ${ }^{\text {a }}$ | ... | ... | $\cdots$ | ... | 142-3 |
| In Faridpur | ... | ... | . | ... | 1426 |
| In Rajehali | ... | ... | ... | ... | $148 \cdot 1$ |
| In Dacca | $\cdots$ | $\ldots$ | ... | ... | 148.8 |
| In Bakarganj | ... | ... | ... | ... | $153 \cdot 3$ |
| In Nadia | ... | ... | ... | ... | 171\% |
| In Jessore | ... | ... | $\cdots$ | ... | 174.6 |

It is to be noticed that the Midnapore cultivator has apparently far less to spend than those of other districts, and that the amount varies little in the districts of Eastern Bengal, while the incompletely developed Bakarganj gives its cultivators a decidedly better return than the neighbouring districts which are fully developed. The cultivator of Jessore and Nadia is in the best economic position, where the population has been reduced by disease to a decidedly lower level than the highest 'the country can support. The average Noakhali cultivator is better off than the figures indicate, because many cultivators who live on the mainland have land also on the islands from which the assets of the cultivating classes of the district are supplemented. The domestic economy of the cultivating classes of the Faridpur district has been very carefully analysed in a book written by the late Major J. C. Jack, i.c.s.. called The Economic Life of a Bengal District, and published by the Oxford University Press. As Settlement Officer of the district, with a newly recruited
staff of young university men as Kanungoes, he was able to carry out what he called an "Economic Cadastre " in-which the annual assets and expenditure of every cultivator's family in the district was estimated. The results are analysed and discussed in his book, and the reader interested in the subjects will find in it more reliable information of this character regarding a Bengal district than can be obtained anywhere else. It is hoped that the figures which have just been given in this report will give a clear insight into the economic position of the cultivating classes in the other districts by a comparison of the assets of the average cultivator in those districts with those of the Faridpur cultivators.
228. Rent receivers.-The total dependent upon rent received from agricultural land in Bengal is $1,319,302$ which is 2.77 per cent. of the total population. The number at each of the last three censuses and the number of the ordinary cultivating class per 100 of the landlord class have been as given in the following table :-


The landlord class which includes a very much greater number of small middlemen than of zamindars paying revenue direct to Government, increased by 23 per cent. between 1901 and 1911, but by much less, 9 per cent. during the last decade. In both cases the increase has been something like three times as great as among the population as a whole. An accurate estimate of the average rent paid by ordinary cultivators in Bengal will not be obtainable until the Settlement Department has completed a record-of-rights for the whole Province, but it seems likely, from the statistics already available and a general impression of the conditions in parts of the Province for which a Settlement Record has not yet been prepared, that the average rent paid by raiyats for all classes of land is-rather over Rs. 3 per acre. This means that the total realized as rent by the landlord class including middlemen in Bengal is Rs. $13,50,00,000$ per annum. Allowing six persons to the average rent receiver's family, nearly one more than the average for the whole population, this gives the average rent-receiver's family a gross income of only Rs. 620 a year, just over Rs. 50 per month and about $£ 41$ per year. When it is remembered that not less than 10 per cent. has to come off for land revenue and the cost of collecting rents, though the small middlemen usually collect their rents themselves, and that a small number of great landlords take a large proportion of the assets of the land to themselves, it will be realized that most of the landlord and middleman class in Bengal are by no means well-to-do.

The following figures illustrated by the map in diagram No. 103 give an idea of the size of landed properties in the several districts and States of Bengal. The districts are placed in order of the number of ordinary cultivating cultivators per 100 rent-receivers in each, workers and dependents being included in both cases :-

| Chittagong Eill Tracts |  | Number of caltiontort por 100 fedt rocelrets. |  |  |  | $\cdots$ | Namber of caltivatore per 100 zent receivers. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ... | 17,111 | Pabna |  |  | ... | $2,390$ |
| Dinajpor | ... | ... | 10,750 | Dacea |  |  | ... | 2,068 |
| Rangpar | -•• | ... | 7,730 | Rajshahi |  | ... | ... | 2,048 |
| Derjecling | ... | ... | 6.077 | Murshidabad |  | ... | - | 1,915 |
| Tippera | ... | -** | 5,289 | 24-Parganas |  | ... |  | 1,915 |
| Bogre | ... | -.. | 5.074 | Baokura |  |  |  | 1,710 |
| Malde | ... | ... | 4,870 | Khulna |  | ... | $\cdots$ | 1,710 |
| Cooch Behar | ... | ... | 4,193 | Burdwsn |  | *..* | ... | 1,63 |
| Mymeasingh | -.- | --* | 4,045 | Hooghly |  | ... | $\ldots$ | 1,626 |
| Birbhom | .-. | ... | 3,725 | Faridpur |  | $\ldots$ | *-. | 1,590 |
| Midaspore | $\ldots$ | .... | 3,618 | Jessore |  | - | ** | 1,408 |
| Tripura State | ... | ... | 3,519 | Nadia |  |  | *** | 1,268 |
| Jalpaigori | - | .- | 2,949 | Clittagong |  | ... | ... | 1,029 |
| Noakhali | - | ... | 2,544 | Howrah |  | *** | ... | 778 |
| Bakargaj | *** | ... | 2,420 |  |  | "* | *-. | 752 |



The reduction of the size of the property of the average rent receiver comes about either by the disintegration estates or by subinfeudation. A word of warning should perhaps be given lest those who read the figures may be tempted to use them as indicating the size of the average estate or tenure. That they do not do, for in some parts the tendency is for the number of cosharers in estates and tenures to multiply, while in others, tenures are multiplied by the process of subinfeudation. Subinfeudation has run mad, for instance, in Bakarganj, where there are often more than a dozen grades of middle rights between the zamindar who pays revenue to Government and the actual cultivator, but in Bakarganj the same middleman appears over and over again in different grades, and though tenures are more numerous in Bakarganj than perhaps anywhere else in Bengal, the number of the landlord and middleman class compared with that of the cultivating class is no more than normal.
229. 'Landlords' agents, clerks, rent collectors, etc.-There are 46.181 landlords' agents, actual workers, in Bengal, one to every 661 of the cultivators, workers and dependents. These persons include all grades of estate servants, managers, where there are managers, naibs, tashildars, clerks, barkandazes, peons, etc. Commonly the rent collecting staff is paid quite a small wage, certainly not a living wage, and left to supplement it by what exactions it can make from the tenants. The number of landlords' agents, etc., employed in a particular locality is, therefore, some criterion of the amount of such exactions which the cultivators are willing to pay and the agents can screw out of them. The fact that the number of landlords'
agents in the Province has fallen from 76,341 in 1911 to 46,181 in 1921 is partly due to the fact that in districts for which a record-of-rights has been prepared so large a collecting staff as before is no longer required, but it is also indication of a change in the attitude of the cultivating classes towards the illegal exactions which have been made from them from time immemorial. In the following table the number of cultivators to each landlord's agent (actual workers) is given for each plains districts and State in Bengal, these being placed in the order of the number in each case:-

|  |  | Namber of the calttvalling chars per iand. loras agent (actiad workers. |  | Pabna |  | Numbior of the colirlVatilig clacs per handlords' ngept (actasbworkers). |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jalpaiguri | -** | ... | 2,659 |  | ..- | - ... | 524 |
| Noakhalj | .-* | -.* | 2,436 | Khulns | ... | ... | 517 |
| Tippers | $\because \bullet$ | .-a | 1,768 | Bakarganj | -** | ... | 508 |
| Jessore | ... | ... | 1,493 | Dacca | -* | ** | 504 |
| Cooch Behar | .- | .- | 1,351 | 24-1'arganas | ... | ... | 489 |
| Midnapore | ... | ** | 1,218 | Burdwan | ... | - | 443 |
| Chittegong | ... | ** | 1,112 | Birbhum | ** | .- | 427. |
| Faridpar | *** | ... | 1,034 | Rajohahi | .-. | . | 403 |
| Myıuensingh | -* | $\cdots$ | 1,009 | Howrah | $\cdots$ | .-* | 341 |
| Rajgpur | $\because$ | ... | 957 | Malda | $\cdots$ | .... ${ }^{\text {a }}$ | 310 |
| Bankura | ... | $\cdots$ | 902 | Murshidabad | -... | $\cdots$ | 307 |
| Dinajpur | ... | -0 | 843 | Hooghly | .*** | ... | 307 |
| Bogra | ... | ... | 767 | Nadia | ** | $\cdots$ | 254 |

There are, of course, other considerations which determine the number of landlords' agents to be employed besides the extent to which the cultivators will permit such people to batten upon them. A complicated tenure system such as that in Bakarganj or Dacca, or the existence of the utbandi ssystem in other parts, necessarily requires the employment of a larger staff than in a district like for instance Rangpur or Bogra, where estates are large and there is little subinfeudation. The fact that many small rent-receivers in Howrah and Hooghly work in Calcutta who, if they lived further away, would stay at. home and collect their own rents, means that more agents are employed than normally in these districts. The fact that there are very many small landlords in Jessore who collect their own rents, means that agents are the fewer in that district. Still the contrast, for instance, between Noakhai and Tippera on the one hand, and Nadia, Murshidabad, Malda and Rajshahi on the other hand is mainly due to the fact that the cultivators in the last mentioned districts are very unsophisticated and down-trodden, whereas those in Tippera and Noakhali are the very reverse. The landlords' naib has little difficulty in enriching himself at the expense of the raiyats on either bank of the Ganges in the upper part of its course through Bengal, but the Noakhali cultivator knows what rent he ought-to pay, pays it only when he can avoid doing so no longer, and gives little or nothing to the landlord's agent. when he goes to the kachari to do so.

During the last decade the Settlement Department prepared a record-ofrights in a number of districts. Latterly the landlords seem to have paid their share of the cost of its preparation very much more willingly than when the operations of the Settlement Department in the Province first began, and some clue to the reason for their willingness to pay is to be obtained from the following figures which show, for the districts dealt with in the decade, the number of agents, etc., employed by the landlords in 1911 and in 1921 :-

| Diatict. |  |  |  | Landiords' agenta, etc. (ectual workers). |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1911. |  | $1921$ |
| Faridpar | $\therefore$ |  | -.. | 2,777 |  | 1,496 |
| Mymensiagb | ... |  | ... | 7,040 |  | 3,832 |
| Dacea | '.. |  | -.. | 5,132 |  | 3,767 |
| Midnapore | ... |  | ... | 3,761 |  | 1,478 |
| Rajahahi | ** | 1 | -." | 3,317 $\cdot$ r |  | 2,634 |



In other districts the number of landlords' agents has been reduced from 44,157 to 30,603 , i.e., by $30 \cdot 7$ per cent. in the 10 years, but in the districts in which the Settlement Department has worked the reduction has been by $44 \cdot 7$ per cent. The difference, 14 per cent., represents a substantial saving in collection expenses which the landlords have been able to make since they have had the record-of-rights.
230. Tea.-According to the figures of the general census, 292,610 persons are supported by work on tea, coffee, cinchona, rubber and indigo plantations. Indigo nowadays is in Bengal a thing of the past, and supports very few indeed, while the country is not suitable either for rubber or coffee. Government has established two cinchona plantations in the Darjeeling hills, but according to the industrial census they employ only 2,088 persons and nearly the whole of the above number are therefore supported by the tea industry. In it actual workers greatly outnumber dependents, for women and children find employment as easily as men, and there are 114,458 male and 108,658 female workers, total 223,114 , to only 69,469 dependents. The industrial census return for the tea gardens shows 340 gardens in all divided between the districts in which tea is grown as follows:-

| Distrios. | Namber of gardana. |  | Satuber of amployes. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1981. | 1911. | 191. |  | 1911. |  |
|  |  |  | Male. | Fourale. | Male. | Feinale. |
| Jalpaiguri ... | 142 | 108 | 56,745 ' | - 65,988 , | 69,380 | 64,661 |
| Darjeeling ... | 139 | 122 | 25,638 | 30,651 | 26,121 | 26,845 |
| Chittagong ... | 22 | 12 | 2,311 | 2,244 | 2,283 | 1,996 |
| Chittogong Hill Tracta | 1 | *** | 39 | 88 | *** | ** |
| Tripura State ... | - 36 | - | 2,680 | 2,365 | ... | .. |
| Total | 340 | 240 | 87,413 | 101,196 | 97,784 | 93,602 |

The new gardens that have been opened in the decade are fewer in Darjeeling than in Jalpaiguri, and a new development of the industry is its extension into the Eastern Hill Tracts, though the new ventures in this direction are small, and at present at least are employing very few coolies. The total number of employees in the industry was slightly less in 1921 than in 1911, for it had by that time not recovered from the disadvantageous position into which the war had thrown its markets. The old gardens were not working at full pressure as in 1911 and it is not possible to gauge the number that the new gardens are employing. There seems to have been a definite tendency to employ more women, though this may have been due to the fact that the Managers kept in employ the coolies who had settled on the gardens with their families, and in Jalpaiguri, for instance, had less of the Nepali labour which comes down for comparatively short periods and includes a majority of males than 10 years earlier.

The following table shows the changes which have taken place in the control of the gardens:-


The tendency of the present day is for gardens to pass out of the hands private Europeans and for Indians and companies with Indian directors to take a much larger share than formerly. There has been little development in this direction in Darjeeling, but a good deal in Jalpaiguri, while the spread of the industry in the Eastern Hill Tracts has been entirely at the hands of Indians.

The management of tea gardens is mainly in the hands of Europeans; 215 out of the 340 gardens have European managers. Figures for managers separate from the supervising and clerical staff in 1911 are not available, but. Europeans employed in clerical work are none and Anglo-Indians very few, so that the figures given below show what share Europeans and Anglo-Indians took in the conduct of the gardens in 1921 and 1911 :-

|  |  |  | Earopaens and Angio-Indians onRaged to managing. saperviaton and clorical wort. |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | \%981. | 191. |
| Jalpaiguri | ... | ... | 305 | 203 |
| Darjeeling | -••• | *** | 167 | 87 |
| Chittasong | ... | - | 25 | 8 |
| Clittagoug Hill | Tracts | -. | ... | ... |
| Tripura Sia:e | ** | -. | ... | $\cdots$ |

Twenty-three Europeans and Anglo-Indians were returned as skilled workmen in Jalpaiguri in 1911; 20 in Darjeeling and 2 in Chittagong. These must have been engineers and should more correctly have been returned as part of the supervising staff in 1911, so that the change is less marked than it appears in the table above, but still there appears to be decidedly more employment of Liuropeans ard Anglo-Indians, mainly Europtans, in tea than there used to be.

Thrs statistics for the castes and birthplace of tea garden coolies are probably the most useful of those given for the tea industry in Table XXII. They were obtained from the schedules of the general census and not from Industrial Census Returns and are to be found half-way down Table XXII, Part V. In Jalpaiguri district the most numerous people among the labour force are Oraons and then Mundas, in Darjeeling Khambus and Rais (Jimdars) and then Murmis. Half the labour on the Chittagong gardens is made up by the Shekhs (Muhammadans) and in Tripura State the indigenous Tiparas have been employed. Of the coolies in Jalpaiguri, 90,348 were born in the Chota Nagpur plateau and 29,018 in Jalpaiguri, district, mostly the children of imported coolies. Of the coolies in Darjeeling, 29,632 were born in the district, 8,359 on the Chota Nagpur plateau and most of the rest in Nepal. Most of the coolies on the gardens in Chittagong were born in the district. The same Part V of Table XXII shows the numbers of children under 14 employed in the tea industry. It is proportionately a good deal larger in Jalpaiguri than in Darjeeling and there is little child labour used in the gardens in the Eastern Hill Tracts. Apparently it is easier to find employment for girls than for boys.
231. Pasture.-The raising and care of farm stock supports in Bengal only 148,668 persons, and the reason for the proportion being so small lies in the minute subdivisions of agricultaral holdings and the fact.that, especially in Eastern Bengal, practically all the land, not used for homesteads and tanks, has been brought under the plough. The apparent enormous reduction in the number of eattle and bufalo breeders and keepers from 40,924 in

1911 to 8,585 in 1921 has come about through such persons in 1821 having much more often returned themselves as sellers of milk, butter, ghee, etc., than formerly. Apparently, too, many herdsmen, etc., have either done the same thing or returned themselves as cultivators or field labourers.
232. Fishing.-448,373 yersons were returned as dependent or fishing and 434,240 as fish dealers. Together they make up 1.86 per cent. of the total population. This high proportion is not to be wondered at considering the nature of the country and the resources, even though so imperfectly developed of its rivers, estuaries, and sea-board, and considering the fact that fish is the only form of flesh in which so much of the population allows itself to indulge. Fishermen and fish-dealers are not far short of a hundred times as numerous as butchers, and yet sea-fishing is not touched and there is comparatively little fishing in the mouths of the great estuaries. A few sections of the fishing community catch fish but do not retail them and a few others expose them for sale but do not catch them, but the majority catch and sell, and this explains the differences in the figures for catchers and sellers at different censuses which are given below:-:


The reasons for the decreased return of those who live by fishing, as well as of those supported by fishing and fish-dealing together at the last census, is partly due to the awakening of an agitation among the fishing communities such as the Jalia, Kaibarttas, Tiyars, Patnis, etc., directed towards raising their social status as high as that of the corresponding cultivating caste, the Chasi Kaibarttas. Fishing is held to be a derogatory occupation and if a fisherman has a little piece of land he prefers to call himself a cultivator.
233. Transport.-Transport in some form or other supports 16 per mille of the population of the Province. The proportion is highest in Calcutta and its neighborhood, 23 per mille in the Presidency division, 18 per mille in the Burdwan division, 14 per mille in the Dacca division, ouly 12 per mille in Northern Bengal and 11 per mille in the Chittagong division and Tripura State. Transport by air does not employ an appreciable proportion of the population of Bengal. Transport by road supports 647 per 100,000 , transport by water 483 , and transport by rail 342, while the remainder whose occupation is classified under this head, 82 per 100,000 , are employees of post, telegraph and telephone services.

Transport by road supported 357,970 persons according to the census of 1901. and the number rose to 458,429 in 1911 mainly owing to large increases in numbers employed in the maintenance of roads and bridges and in the number of owners of vehicles and their managers and employees. The increase in the number employed on constructions and maintenance of roads and bridges may be explained by the fact that a greater number were classed as labourers and workmen unspecified in 1901 than in 1911 and this number probably included persons working on roads. The same explanation cannot be given for the very much greater decrease in the number employed on roadmending and construction which the figures for 1921 indicate. The figure of 1011 has been reduced by half and there is little doubt that the statistics may be relied upon to show that District Boards and other public bodies are devoting very much less care and expenditure to communications by road than was formerly the case, though in most Bengal districts road communications are very bad indeed and it is this respect, perhaps more than in any other, that the country's civilization is backward. That better road communications are necessary, is indicated by the fact that; wherever a road fit for
cart traffic is made, carts appear on it. There was a great increase in such traffic between 1901 and 1911 when owners and drivers of wheeled vehicles rose in numbers from 69,794 to 107,826 . But during the last decade the the number has been slightly reduced. To a slight extent in the neighbourhood of Calcutta this is due to an increase in the number of mechanically driven vehicles which require fewer men in proportion to the work they can do than other vehicles, but the fact that the increase of the decade 1901-1011 has not been repeated in the last is mainly due to the fact that the improvement of road communications has not gone on as it formerly did. The bad condition of the roads is responsible for the fact that a primitive mode of conveyance. the palki, is still so extensively used. Bearers and owners of palkis, etc., are still more numerous than owners and drivers of vehicles drawn by animals, though they. have decreased very much in numbers. This decrease seems to be due rather to the fact that the middle classes who use them are not so well able to pay for them as they used to be, and to the fact, which is as much a result from this cause as a cause operating separately, that the number of Bihari immigrants who have come to Bengal to work as palki bearers has fallen off, than to the palki having been replaced by a less primitive means of transpori.

In some Eastern Bengal districts the net-work of rivers with which they are intersected affords a better means of communication than would be possible by road. Khulna, Bakarganj and the south-eastern half of Faridpur are 80 intersected by creeks and channels that all through the year the rivers are the highways of traffic rather than such roads as there are, and steamer communications must always prove less expensive than an extension of the railways. In the greater part of the Province boats afford the best means of getting about from village to village throughout half the year, and boatowners and boatmen in Bengal are twice as many as cart-owners and cartmen. The number supported by transport by water in 1901 was 278,262 and it rose to 311,180 in 1911, but has now fallen to 229,835 . The greatest increase in 1901-1911 was in those employed on and in connection with ships and inland steamers. The service of the latter was greatly improved and extended between 1901 and 1911, but during the war a large number of steamers were withdrawi and sent to Mesopotamia, a number being lost on the way. None were brought back, and by March 192I there had been no replacements. The trade of the Port of Calcutta too was at a very low ebb at the time of the census, and the Port population very - much decreased. The decrease in the number of boatmen was very great in Calcutta where lighters were doing little or nothing and their crews had been discharged.

Persons employed in railway transport and their dependents were 83,272 in 1901 and the number had almost doubled, 160,923 , in 1911, but during the last decade there has been little increase, for though there were some railway extensions during the decade which employ additional staff, there was little or no construction going on in 1921. Railway employees other than coolies according to the census of 1921 outnumber labourers whether employed on construction or maintenance by nearly two to one.

Under the head Transport it is only in the postal, telegraph and telephone services that there has been the same increase in the number of employees, some 22 per cent.; during this decade as in the previous one.
234. Railway and steamer coolies.-Statistics were prepared in the form for Part V. of the Census Table XXII for all those who returned themselves in the general census schedules as employed as steamer coolies, railway coolies and railway khalasis. These include-practically. all the porters of all sorts on railway and steamer routes, and the figures are to be found; along with similar figures for day labourers and coolies (including workers on docks and ships) in Calcutta and its suburbs, at the end of that part, of Table XXII. Ameng railway and steamer coolies there are 2,096 adult women, 3,046 boys and 288 girls under 14, io 26.830 adult males: Moet of
the women and boys work in Midnapore, Calcutta, Howrah, Hooghly, Jalpaiguri, Darjeeling, Rangpur and Pabna and no women and few boys in Eastern Bengal. Bauris, Bagdis and Santals are most numerous in Western Bengal districts, Bagdis replacing Bauris and Santals as the alluvial parts of the division are reached. Lodhas appear in Midnapore, and round Calcutta, Chamars, Muchis, Kurmis, Khandaits and Kahars come to the front. Muhammadan Shekhs are numerous in and about Calcutta as in Burdwan, but not in the rest of Western Bengal. In North Bengal Behari castes, Chamars, Kurmis, Nuniyas, etc., and Shekhs are numerous, but the indigenous Hindu cultivators hardly appear. In Darjeeling of course the Nepalese tribes predominate. In Eastern Bengal, too, the local Hindu cultivating classes do not appear and the coolies are still immigrants from the west, with a certain number of Muhammadan Shekhs, some of whom are local men and some immigrants. To take the list for Tippera as an example, rather more than a quarter of coolies are Shekhs and the others Turis, Khandaits, Rajbansis, Lalbegis, Nagras. Pans, Pasis, Mundas, Dhobas, Chains, Nikaris, Pawarias, Binds, and Baitis, hardly one of them Bengali castes.

Of' the whole number of railway and steamer coolies, 32,260 , only 9,008 were born in the Bengal districts in which they were working and most of the children who were working, 3,334 in number, and many of the others must have been the children of immigrants. 5,032 were born in the United Provinces, 4,879 in South Bihar, 3,676 in North Bihar, 2,325 on the Chota Nagpur Plateau in the Province of Bihar and Orissa, 1,824 in Orissa, 182 in Madras and 2,626 in other parts of India. The people of Bengal, therefore, leave nearly all the work of porters on the Railway and Steamer routes to immigrants.
235. Trade: Rural Markets.—Trade supports only 6.7 per cent. of the population of Bengal. The proportion is extraordinarily small compared with European countries and it falls below the average for the Province in all the districts and States except Hooghly, Howrah, the 24 -Parganas, Nadia, Darjeeling, Malda, Dacca, Faridpur and Chittagong. It must be very small indeed in rural areas. The great mass of the cultivators of Bengal have few needs which their land does not supply, and those needs very simple ones. There is little opportunity for the development of the distributing trades, which in all parts of the world find employment for a much greater number than do the collecting trades. In rural Bengal shops are practically nonexistent. One may go miles along main roads through some of the most thickly populated parts of the country and, see none. But hât khola, market places, are more frequently met with. Commonly, there are two market days in the week and on the other days the place is deserted, though an important hat may have a pormanent shop or two. Hat are scattered so profusely over the country that a cultivator in almost any district can go to one every day of the week without going more than 5 or 6 miles from home. As often as not he does not go for business. When his crops are on the ground, besides petty repairs to his homestead, and the care of his cattle which he generally leaves to his children, he has nothing to do. He has his meal about mid-day or little before, smokes a pipe, has a short sleep and about 3 o'clock in the afternoon sets out to whichever hat in the neighbourhood happens to be meeting. He may take with him a fine pumpkin he has grown and would like his neighbours to see, and he may bring home a bottle of kerosene oil, but he goes mainly to rteet his friends, hear the talk of the neighbourhood and find out the prices of various commodities, because such are the things that interest him. If he does buy anything he delights to enquire the price from several dealers, and haggle over it before he buys, for time is of no object to him. In fact the hatt is as much a place of recreation as a place of trade, and cultivator has less work to do, more time to waste in company with others, than almost anywhere else in the world. Where there are daily bazars, they commonly have two days a week which are hat days on, which the bazar is much
better attended than on other days. The following table shows the numbers of hats with and without daily bazars in each district in the Province, together with the number of hats per million of the population and the number of square miles to each hat on the average:-


Learing out the Chittagong Hill Tracts and the Darjeeling District these figures show that there are 6,787 hâts in the plains districts in British territory with an area of $\mathbf{7 0 , 5 3 7}$ square miles, i.e., $\mathbf{1 0 . 4}$ per square miles per hât. This gives the average distance between one hât and the next to be almost exactly four miles. In the Eastern Bengal districts it is only a little over three miles, so that the ordinary man can usually find four hâts during the week to attend without having to go more than four miles from home. In these plains districts there are 6,786 hâts to a male population over the age of 15 of about $14 \frac{1}{4}$ millions. If, therefore, every male aged 15 and over went to market one day a week, it would produce an average attendance at the bi-weekly héts of only just over 1,000 at each: Those who have
seen the crowds that do attend hats in rural parts of Bengal will realize that they are very often several times as numerous as this and that the figures prove that the average person aged 15 and upwards goes to market more than once a week.
236. The reason for the small proportion of the popuiation occupied in trade.-The foregoing discussion is by way of introduction to the census statistics for those engaged in trade. The existence of 80 many markets so well attended means that the supply of commodities, which are produced on the land and change hands between one cultivator and another, is kept very much in the hands of the cultivating classes themselves. They employ no entrepreneur, and in this fact lies the explanation of the small proportion of the population occupied in trade in Bengal compared, for instance, with the proportion in European countries. There is in this country very little retail trade in agricultural produce, and what there is, is carried on in towns only. There is of course a certain amount of collecting trade by dealers who buy up jute, rice, betelnuts, chillies, etc., in rural markets and bring them into the towns or forward them to Calcutta, but as elsewhere collecting trades and wholesale trades employ fewer persons than distributing trades and retail trades dealing with equal quantities of commodities would employ.
237. Classes of trade.-Trade in food-stuffs supports $1,534,256$ out of the $2,439,859$ supported by trade of all sorts, $62 ; 8$ per cent. The number has increased 10 per cent. since 1911, but the increase is more apparent than real and has arisen because some 100,000 of the people who catch and sell fish on this occasion seem to have preferred to return themselves as fish-dealers, who in 1911 returned themselves as fishermen. There has been some increase, though a much smaller one, produced in a like manner, in the figures for sellers of milk, butter, ghee, etc. The numbers supported by trades of other corte which employ considerable numbers are as given below :-

| Pieco-goods | ... | ... | ... | 186,964 |
| :---: | :---: | :---: | :---: | :---: |
| Money-lending, banking, etc. | .. | ... | ... | 165,111 |
| Articles of lusury | ... | ... | ... | 73,228 |
| Skina, leather, etc. | ... | '... | ... | 69,603 |
| Furniture, hardware, etc. | ... | $\cdots$ | ... | 47,054 |
| Jute . $\therefore$, | ... | ... | ... | 42,065 |
| Fuel .. | ... | ... | ... | 31,427 |
| Brokerage, etc. ... | $\ldots$ | $\cdots$ | ... | 30,637 |
| Wood | $\ldots$ | ... | ... | 24,651 |
| Clothing and toilet articles | ... | ... | ... | 22,439 |
| Chemical products | ... | ... | ... | 15,081 |
| Metale | ... |  | ... | 10,689 |

121,584 persons are "general storekeepers and shopkeepers otherwise unspecified " and their dependents. Few of these are general storekeepers, for the village shop, which as in the country in England sells all manner of things, is not wanted in Bengal, where agricultural produce is exchanged in the open-air markets and these are visited by itinerant dealers in the piece-goods, bangles, kerosene oil, etc., which make up most of the cultivator's wants not supplied by the land. After the food-stuff trades, piece-goods and money-lending are the most important. The former of these supports about the same number as 10 and 20 years ago. but the business of money-lending seems to have increased considerably during the last 10 years. It is certainly true that the number engaged in it is much understated in the statistics, for Muhammadans, the rules of whose religion forbid usury, avoid being called moneylenders if they can help it. The money-lender, moreover, is often a grain or jute dealer and often a middleman in the land-tenure system. and prefers to be called by any of these terms rather than money-lender. The leather-andskins trade has very much declined in recent years. It supported 101,258 in 1901, 86,670 in 1911 and now only 69,603 . Trade in jute has however prospered greatly. It now supports $2 \frac{1}{2}$ times as many as the 16,764 it supported in 1901. The wood, metal, and pottery trades have declined.
238. Public Force.-The Public Force bears a proportion to the whole population so much smaller than in other parts of lndia and in European countries, because so small a proportion of the army in India is stationed in Bengal. The Army in Bengal accounts for only 9 workers and 4 dependents per 100,000 of the population, and the Police Force for no more than 135 workers and 2225 dependents, while the Navy and the Air Force are absent. Order is maintained by a Public Force of only one to every 741 inhabitants, a much smaller prodortion even than in the United States of America which keeps but a very small standing army. Almost three-quarters of the Poiice Force consists of village watchneen. The Provincial Police Force and its dependents was 18,014 in 1901 and was more than doubled between 1901 and 1911 when the figure stood at 38,753 . During the last decade the increase has been by 16 per cent. to 44,929 . During the same period the number of the village chaukidars and their dependents has fallen to much the same extent as the regular police force has increased, so that the total dependent upon police service, 173,606 in 1901, increased bat little to 174,792 in 1911, and has decreased slightly to 171,515 in 1921.
239. Public Administration.-In the scheme of classification adopted for census purposes " Public Force" and "Públic Administration" do not correspond to "Government Service," as a large number of persons in the employment of Government are allocated to other Groups in the scheme. For instance, officers of the Forest Department are classed under "Forestry" which is treated as a part of "Pasture and Agriculture." The Medical, Education and Public Works Departments are comprised within " Professions and Liberal Arts" and the Postal and the Telegraph Department comes under "Transport." The statistics for Public Administration with those for Public Force do not therefore by any means indicate the number actually engaged in the administration of the country or supported by salaries drawn from Government. Public Administration was intended only to include persons employed in the Executive and Judicial establishments which administer Bengal but the fact that numbers belonging to other establishments. used such vague terms as "Government servant," "Government clerk " and were included under this head, has somewhat swelled the figures. Even so those supported by service in Public Administration in Bengal are no more than 303 per 100,000 of the population and the proportion is hardly more than onethird the proportionsin India as a whole. In other parts of India there are a great many more village officials, but those of them who are employed in the Revenue Administration have their place in the land-tenure system and are classed as landlords or landlords' agents. Still the Permanent Settlement is indirectly if not directly responsible for the small proportion of the population supported by service in Public Administration in the limited sense in which the expression is hete used, for it is due to the Permanent Settlement that the districts of Bengal are so much larger than is generally the case, and subdivision of districts means multiplication of officials of all sorts. Out of the 144,269 who find support in Public Administration,-115,126 are those in the direct employ of the State and their dependents and only 24,269 are under municipal and other local governing bodies (not including village servants.) The contrast appears strange to those acquainted with the corresponding figures for instance for England and Wales, but it was much more remarkable 20 years ago when employees of municipalities, etc., and their dependents numbered only 13,158 . The greater increase in their number has been in the last decade rather than in the decade before. Between 1901 and 1911 those supported by employment under the State fell somewhat, from 117,452 to 111,842 , but during the last decade there has been, a slight increase.
240. The Professions and Liberal Arts.-The Professions and Liberal Arts support 1,646 per 100,000 of the total population of Bengal. Religion supports 673, medicine 373, education 239, the law 184 and letters, arts and sciences 177. The proportion supported by religion is higher than in the neighbouring province of Bihar and Orissa, but not quite so high as in India as a whole.. Ninety-seven per cent. are actually priests, ministers and their families and only the remaining 3 per cent. are in subordinate positions. The number of priests and their dependents has
slightly decreased from 325,736 in 1901 to 311,526 in 1911 and 310,976 in 1921, but the number returned as religious mendicants, which was 118,368 in 1901, fell to less than half, 47,762 in 1911 and is now only 2,840 , and it would appear that the country has rapidly become less tolerant of persons who make pretensions to holiness and live by begging.

The Law supports a larger proportion of the population than in any other parts of India except Cochin and Travancore, and the proportion goes on increasing. There were but 54,942 dependent upon it in 1901, 75,795 in 1911 and 87,759 in 1921, and if the bar was overcrowded in 1911, it is very much more overcrowded now, for there is now one practising lawyer to every 800 males over the age of 20 in the population.

Medicine supports a larger proportion of the population than in any other province in India, and there is one medical practitioner to about every thousand of the population; but most of these practitioners have no better qualifications than a little knowledge of herbs and of a few simple drugs and their properties, and a stock of tricks and sayings to inspire their clients with faith in their capabilities. The numbers dependent on medicine have risen from 139,163 in 1901 to 163,005 in 1911 and 177,369 in 1921, and the number of doctors with the medical qualifications of the Calcutta University has increased much faster. The number qualified in Law is still however, much greater than the number qualified in Medicine.

The proportion supported by the educational profession in Bengal is on the same level as in India generally, lower than in Mhdras and Bombay, and very much lower thari in Cochin and Travancore; but it is increasing. In 1901 the teaching professing supported but 74,706, in 1911 96,842 and in 1921 113,571. Instruction is, however, less remunerative than either law or medicine for the dependents are only 1,568 per 1,000 workers in the educational profession against 2,099 in the medical, and 2,601 in the legal.

The Liberal Arts are of very backward development in this country and they make little or no progress.
241. Persons living on their incomes.-Persons living principally on their incomes are only 79 per 100,000 of the population of Bengal and the proportion is very decidedly less than in India as a whole. This is partly due to the fact that Bengal sends no recruits to the Indian Army and consequently has practically no army pensioners. The proportion is very low when compared with European standards, but this is not entirely due to the fact that this is a poor country and the people on the whole improvident. There are large numbers who make considerable fortunes in Bengal, especially from money-lending, but they do not invest their money and live in retirement as do those who have made their fortunes in European countries. The money-lender would not be content to put his fortune into gilt edged securities, for they would offer him but a very small return compared with that which he is used to obtaining in his business, and, though industrial investments would give him a better return, he has not yet learnt to put much faith in them. If the successful money-lender or trader in Bengal makes an investment it is generally by purchasing landed property. The return from such an investment is not great, and 20 years' purchase of the profits must usually be paid to buy an estate, but the purchaser acquires a status which he could not have obtained in any other way and there is absolute security. It is a loss to the country that its accumulations of capital should be used to inflate the value of landed property in this way instead of becoming available to capitalize industry, and the unfortunate experiences of some who put their money into unsound and ill-managed Swadeshi enterprises 15 years ago did much to perpetuate the tendency. The Census Statistics do not include among persons living on their incomes those who have invested their wealth in landed property, for these are necessarily classed with those supported by income from rent of agricultural land. The number returned as living principally upon their incomes in Bengal in 1901 was 37,861 and rose by 33 per cent. between 1901 and 1911, but has now fallen again to its former level.
242. Domestic service.-An agricultural population does not commonly keep many domestic servants, and a poor agricultural population like that of Bengal cannot affiord to do so. The total number of persons supported by domestic service is no more than $688,268,1,446$ per 100,000 of the population, and of these 109,922 belong to Calcutta and its suburbs. Among the latter number are 81,242 actual workers, so that outside Calcutta and its suburbs there is only one domestic servant to every 24 occupied houses; in other words domestic servants are only enough to supply one among every 24 families. The contrast between conditions in Bengal and in England in this matter is worthy of remark. There are undoubtedly fewer domestic servants employed in England than 10 years ago,but according to the census of 1911 there was one domestic servant among every 5 families in England and Wales. Whereas the number of domestic servants per 1,000 families in England has declined during each decade since 1881, the opposite has happened in Bengal. In 1901 the number dependent on domestics service was 411.894 , it rose to 526.890 by 28 per cent. between 1901 and 1911 and has risen by 31 per cent. during the last decade. Out-door servants have decreased in nambers partly because, in Calcutta especially, the motor has taken the place of the horse and trap. Indoor servants too have decreased in numbers in Calcutta, mainly on account of shortage of house accommodation and the fact that such new accommodation as has been provided in the decade has often been in the form of flats, while houses formerly occupied by one family now accommodation two or three. The number of indoor servants kept outside Calcutta has decidedly increased.
243. Unproductive Occupations.-The proportion supported by unproductive occupations in Bengal is 952 per 100,000 , the proportion being much the same as in India as a whole. It is remarkable that the proportion should be so great in so poor a country, that besides their cown dependents, every 100 workers between them support 3 people who make no attempt to earn an honest living, and that in Bengal the number engaged in unproductive occupations should have increased rather than diminished during the last 20 vears, though the pressure of the population on the means of subsistence in the Province has been very great. The figure was 396,127 persons in 1901, 431.669 in 1911 and 438,724 in 1921, but it seems likely that the increase during the last decade may have been more apparent than real, for there has been a large decrease in the number returned as religious mendicants and classified with those supported by religion, and it is likely that the number of beggars and vagrants has been swelled by the inclusion of a number of persons whom enumerators at former censuses might have described as religious mendicants. The number dependent on prostitution has fallen from 59,811 in 1901 to 43,333 in 1921, but it is still remarkably high. The actual number is almost certainly understated for there are in every country many more loose women than will admit to following the profession of prostitutes. Because there is some uncertainty in the return of those loose women who do not publicly advertise their profession, for example by living in the recognized prostitutes' quarters in the towns, it would perhaps be unwise to make too much of the decrease in the number of prostitutes in the country shown by the statistics of 1901 and of 1921, but the decrease has been so marked that it seems almost certain that there must have been a large reduction.
244. Mining.-Coal mining.-According to the figures of the general census, fewer persons $(97,424)$ were returned as supported by the coal mining industry than in 1911 when the number was 114,693. Workers have now been returned at 38,243 males and 29,069 females. The figures obtained from the Industrial Census returns show almost as many male workers $(34,498)$, but decidedly less than half the number of female workers. The managers may have omitted to return some of the women employed, especially on the surface, but it more probable that the census enumerators failed to make the distinction between workers and dependents with sufficient care. The result of the comparison between the figures obtained from the general census and from the industrial returns of 1911 is much the same, and on the whole the.
figures obtained from the industrial returns are the same reliable. The number of coal mines now found in Bengal is 202, and leaving aside 13 :, small as to employ less than 20 men, there are 189 against 129 in 1911. Ail but one in 1911 were located in Burdwan and the one was in Bankura. Ni,w there are two in Bankura, but they are so small as to employ only 53 persons between them, and 4 in Birbhum with 418 employees. There is omly the one coal-field, generally called the Raniganj coal-field, situated in Asansol subdivision but extending into Birbhum and Bankura. The Industrial Census returns show that the total number of employees has increased since 1911 from 37,607 to 46,015 , and here again there is a discrepancy between the statistics obtained by the general and the industrial censuses. This time again there is no doubt which statistics are to he held the more reliable.

The majority of the mines are controlled by registered companies and those which are privately owned are generally the smallest ones.

| Ninen coutroiled by- 192. 1911. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cumparies With- |  |  |  |  |  |
| Europenn directers |  | $\cdots$ | ... | 65 | 53 |
| Indiars directors | ... | ... | ... | 19 | 6 |
| Mixed Boards | ... | ... | ... | 18 | 21 |
| Prisately owned by- |  |  |  |  |  |
| Enropeane | $\cdots$ | ... | $\cdots$ | 8 | 7 |
| Indiaus | ... | ... | ... | 6] | 43 |

The progress of the decade does not show that Indians have made much progress towards taking a larger part in the control of the mining industry as they have in the case of tea, though there are 13 more mines owned by Indian companies and 18 more privately-owned by Indians than in 1911. The managing, supervising and clerical staff included 106 Europeans and Anglo-Indians in 1911 and there were 5 skilled workmen of the same class, but it now includes 221 Europeans and Anglo-Indians, and with one European returned as "skilled workman;"' there are twice as many Europeans and Anglo-Indians employed as there were 10 years ago.

The statistics of caste and birth-place for skilled and unskilled workmen are to be found in Parts IV and V of Census Table XXII. Santals are by far the most numerous ra e among the unskilled labourers and are twice as numerous as Bauris who are several times as many as other castes. Among the skilled workmen these two are the most numerous, but the Santals are fewer than the Bauris. The bulk of the labour that was not born in the Burdwan district comes from the Santal Parganas and Chota Nagpur. Immigrants are proportiqnately more numerous among the unskilled labourers than among the skilled workmen. Santals are very few among those occupied with the machinery and engines and among supervisors and those employed in incidental occupations. Kamars are most numerous among the staff employed in the maintenance of the machinery. Generally there are more immigrants among skilled miners than in other skilled occupations connected with the mines. As many as 80 boys under 14 were returned as skilled miners while among the unskilled labourers, 1,615 boys and 1,353 girls under 14 were returned.
245. Textile industries.-Textile industries ir Bengal employ 405.520 male and 110,390 female workers and they have 479,586 dependents of both sexes, so that the total number which these industries support is $1,023,489$ compared with 869,975 in 1911 and 801,527 in 1901. The increase during the last 10 years has been 18 per cent., double what it was in the previous decade. Workers in silk and their dependents have been very much reduced in numbers, from 50,393 in 1901 to 48,783 in 1911 and only 13.577 in 1921. The much less important wool industry has also decined and there are fewer employed in making rope, twine and string from jute and working in other fibres than there were. Those supportel by the
cotton industry fell in numbers from 578,123 to 460,807 in 1911 but have increased to 523,509 during the last 10 years, while those employed in jute pressing and jute spinning and weaving have increased from 140,078 in 1901 to 327,575 in 1911 and 463,418 in 1921. Though rope, twine and string making is more a cottage than a factory industry, the jute industries are factory industries in the main, and the figures obtained from the Industrial Census returns regarding them are more satisfactory than those obtained from the general census, especially for the reason that the returns of the general census so often failed to enable workers in jute weaving mills to be separated from those working in jute presses. The enumerators very often entered individuals as working in a pat kal which might mean either a juta press or a weaving mill. The cotton industry is in the main a cottage industry in Bengal.
246. Cotton mills.-Bengal has 18 cotton spinning and weaving mills each with more than 20 employees, and three concerns in which only ginning, cleaning and pressing cotton into bales is performed. The only cotton press of importance is in Chittagong and deals with cotton which comes down from the Chittagong Hill Tracts, for cotton is not at present grown in Bengal. A hundred and fifty years ago cotton was grown over most of Bengal; every cultivator had a patch of it if there was land suitable for its growth on his holding, his wife spun it and it was made over to be woven by a weaver in the same village, who was generally paid in grain. Conditions have altogether changed and the change was complete 80 years ago. The-East India Company had factories all over the province, but they were rather purchasing , agencies than maunfacturing concerns. They purchased cloth from weavers who worked in their homes and nothing was done in the "factories'' but washing and packing the cloth. The Company's weavers had certain privileges such as immunity from imprisonment for non-payment of their rent to their landlords, and permanent connections with the "factories,"'but they did not work in them. Bengal cotton was always of very short staple, and the Company's agents continually complained of the unevenness of the thread and the roughness of the cloth. Nowadays a cotton plant is hardly ever seen in Bengal and most of the ordinary cultivators would not recognize one if they saw it.

There are 12 cotton mills in the Province with more than 100 operatives each, viz., 6 in Howrah district, 3 in the 24-Parganas,' 2 in Hooghly, and one at Kusthia in Nadia. Nine of them have more than 400 each. The number of concerns has increased little since 1911 as the figures below will show :-

| Cotton Mills controlled byGovernment | -.. | $\cdots$ | 1931. | 1911. |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1 |  |
| Registered Companies with- |  |  |  |  |
| European directors | ... | $\cdots$ | 5 | 7 |
| Indian directors | -.. | ... | 3 | 73 |
| Mixed Boards | ... | .-. | 1 |  |
| Privately owned by- |  |  |  |  |
| Europeans | -.. | -.. | 1 |  |
| Indians | ..* | .-. | 7 | 4 |

Those with between 10 and 20 operatives, of which there are now 5 , were not onown in 1911. The total number shown employed at the beginning of the decade was 9,552 males and 1,286 females, and at the end of it 11,780 males and 1,955 females. Ten mills are managed by Europeans and there are 35 Europeans and Anglo-Indians among the supervising staff. Skilled employees number 5,113 adult males, 535 adult females, 447 boys under 14, and 14 girls under 14. The children are mainly emploved in machinery operation and in spinning, the women in scutching, winding and warping. Shekhs and Tantis are the most numerous castes and only a third of the skilled workmen were born in the near neighbourhood of the mills. The immigrants come mainly from the United Provinces and Orissa. A smaller proportion of the unskilled labourers comes from the neighbourhood of the mills and larger proportions from the United Provinces and Orissa, Orissa in this case sending almost as many as the United Provinces. The unskilled include 1,360 adult
women, 1,052 boys and 45 girls under 14 . A much larger number of $\mathrm{b}_{\text {res }}$ is employed in the mills in Howrah than in those on the Calcutta side of the river. The total number of looms worked by mechanical power is 2,371 .
247. The hand weaving industry: Census of handlooms.-Accomin' ts the return of the general census 497,628 persons in Bengal are dependent on cotton sizing and weaving and 23.279 on cotton spiming. (if thew, 211,384 are actual workers in sizing and weaving and 13,881 in spiming. According to the Industrial Census returns only 13.736 persons are emplori.i in cotton mills, so that according to these figures there are 211,499 actual workers in enton whose employment is in the cottare industry, aud in all some 500,000 must be dependent upon the cottage industry in the province.

Along with the general census, arrangements were made for a census of handlooms of all sorts. The enumerators at the time of numbering the houses for census purposes entered in the house-lists the fact of the existence of such looms, distinguishing between those with fly-shuttles merhanicall; operated and those in which the shuttle was passed across the warp from hand to hand. The supervisors had plenty of time between house numbering and the final census to test the entries, all concerned seem to have taken considerable interest in the matter, and the results can be relied upon as being sulistantially correct. The following table gives a summary of the result.s of this census of handlooms in each district. Statistics for the number in each part of a district are also available. They are contained along with the figures for those suffering from infirmities in each thaua in Census Register E. which has been made over to the District Officers:-

| Ditrict. |  |  | Nember of haxdlomit. |  |  | Handinoink per millicut of the popalation. | Tantiontria permiate mile. | Properifon of tooma xith as-ulatile (percent.). |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | With A5obuttin. | Without. | Total. |  |  |  |
| Buriwan | - | ... | 2,011 | 1,931 | 3,942 | 2,739 | 146 | 51 |
| Birbhun | -• | ... | 1,645 | 4,199 | 5,844 | 6,895 | 333 | 28 |
| Bankura | -.. | $\ldots$ | 2,428 | 5,746 | 8,174 | 8,014 | 311 | - 30 |
| Midnapore |  | :.. | 4,314 | 10,962 | 15,276 | 5,728 | 277 | 98 |
| Hooghiy | ... | ... | 3.877 | 2,111 | 5,988 | 5;544 | 507 | 65 |
| Howrah | ... | ..' | 589 | 510 | 1,099 | 1,102 | 207 | 54 |
| 24-Pargan |  | $\cdots$ | 967 | 5 | 972 | 370 | 20 | 99 |
| Calcutta | ... | . $\cdot$ | -•• | $\cdots$ | *- | ... | $\cdots$ | ... |
| Nadia | ... | ..' | 2.726 | 2,199 - | 4,925 | 3,311 | 177 | 55 |
| Murshidab |  | ... | 1,656 | 5,705 | 7,361 | 5,830 | 3.47 | 22 |
| Jefsore | ... | ... | 5,818 | 1,1i4 | 6,932 | 4,025 | 239 | b4 |
| Klulua | $\cdots$ | ... | 3,619 | 143 | 3,762 | . 0,584 | - | 96 |
| Rajshahi |  | $\cdots$ | 118 | 379 | 497 | 334 | 18 | 24 |
| Dinajpur | -* | ... | 88 | 3,841 | 3,929 | 2,303 | 160 | 3 |
| Jolpajguri | ... | $\ldots$ | 14 | 2,531 | 2,545 | ,2,718 | 87 | ... |
| Warjeeling |  | ... | *- | 464 | 464 | 1,641 | 40 | ; ... |
| Rangpur | '.. | $\cdots$ | 3 | 401 | 404 | 161 | 12 | 1 |
| Bogra | *- | ... | 274 | 1,591 | 1,865 | 1,779 | 137 | 15 |
| Pabna | ... | -•• | 2,929 | 5.693 | 8,622 | 6,204 | \$1,00 | 34 |
| Siuda | ... | ... | 1,025 | 903 | 1,9:8 | 1.956 | 102 | 53 |




The map in diagram No. 104 illustrates the proportion of handlooms to the population in each district and State of the Province. There is little hand-weaving done in Calcutta, the 24-Parganas or Khulna, or except in Pabna, in Northern Bengal. Handlooms are most numerous in Birbhum, Bankura, Midnapore and Hooghly in Western Bengal,. in Murshidabad,

Nadia, Jessore and Pabua, in the middle of the Province, and in Noakhali, Chittagong, 'lippera, Dacca and Faridpur in the lower delta. According to the returns there is an extraordinarily large number of looms in the Eintera Hill Tracts, more than one to every two families. They are contrivances o, string and bamboo, one end of which is held by the feet while the other end passes behind the body and the warp is kept tight by the operator leaning back while he passes the shuttle from hand to hand. Only a narrow strip of coarse material is woven and such contrivances can hardly be called looms. Much the same contrivances are to be found in the Darjeeling hills but were not returned as handlooms. Leaving aside the figures for the Chittagong Hill Tracts and Tripura State, Bengal has 153,211 handlooms, 3,220 per million of the population, and among them 34.7 per cent. are looms fitted with fly-shuttles. In the case of the others the shuttle is passed across the warp from hand to hand. The proportion of fly-shuttle looms is comparatively high in Burdwan, Hooghly, Howrah, the 24-Parganas, Nadia, Jessore and Khulna and again in Malda and in Dacca, Faridpur and Bakarganj, but it is comparatively low in Birbhum, Bankura and Midnapore, where looms are very numerous, and very low in Tippera, Noakhali, Chittagong where again handlooms are to be found in great numbers. Generally speaking, too, fly-shuttle looms are very uncommon across the north of the province from Dinajpur to Mymensingh. It is clear, therefore that much good might be done by a systematic attempt to popularize a suitable form of fly-shuttle loom; such as has been produced and used by the Serampore Weaving School, in the parts where flyshuttle looms are not common. Much has been achieved on these lines in the Madras Presidency. The looms with a fly-shuttle used in Eastern Bengal are mostly of an up-country pattern, and it is not uncommon to find a loom which has been brought, for example from Ludhiana in the Punjab, in use and being copied. The only fly-shuttle looms which I have seen in Tippera or Noakhali district while touring as Settlement Officer were looms from the Punjab or copies of them.

The fly-shuttle loom cannot always be used. It is not suitable for silk aud cannot be used at all for tusser as the thread is not strong enough and would too frequentiy break, but it can always be used for cotton weaving. Most of the looms in use are for weaving cotton, the thread used being almost always either imported from Englandor spun in the mills in Bombay. Handspiniing' cannot compete with spinning by machinery, though as things are at present, hand-weaving is able to hold its own. Cotton spinning and weaving together supported 576,015 persons in Bengal in 1901 and the number fell by 20 per cent., to 459,903 by 1911, but in the last decade it has risen again to 520,907 , by 13 per cent. There is apparently no shortage of looms tor there are three to every four actual workers in the cottage industry in the plains, but a number of those counted must have been very old ones.
248. Silk.-Silk spinning and weaving supported 50,393 persons in 1901 , and 48,783 in 1911, but the number returned in 1921 is only 11,587 , 4.526 supported by spinning and 9,061 by weaving. According to the census of $1901,78,446$ persons were supported by rearing birds, bees and silk worms and 42,659 according to the census of 1911. At the recent census those employed in rearing silk worms were counted separately and only 11 were found supported by rearing other small creatures, so that we may assume that practically all those who lived by rearing small animals in 1901 and 1911 were silk-worm rearers. The number supported 'in 1921 was 14,491 . In 1901, as the following figures show, there was as much rearing of silk worms in Rajshahi as in Malda, and $2 \frac{1}{2}$ times as much as there is in Malda now. Murshidabad also had something approaching as many silk worm rearers as there are now in Malda :-

| now |  |  | Xumber | al by rearl | norma |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1931. | 1911. | 1001. |
| Murshidabad | , ... | ... | 150 | 6,803 | 10,041 |
| Malda |  | ... | 13.222 | 34,598 | 34,383 |
| Rajshahi | ... | ... | 289 | 766 | 33,155 |

The decline is due to disease among the worms. It came very suddenly in Rajshahi in the decade before last, and in the last decade silk-worms have practically disappeared also from Murshidabad. The number of rearers in Malda was as many in 1911 as in 1901, but has been reduced by 60 per cent. in the last decade. Silk spinning is now confined to Malda where it employs 2,032 females and 564 males and supports 4,188 persons in all. Silk weaving belongs chiefly to Bankura where it suppocts 3,240 persons and Murshidabad, 2,918 . There is a good deal of it in the other districts of Western Bengal especially Birbhum, where it supports 957 persons, and some in Malda. As the figures below show, Malda and Bankura are the only districts where the testile silk industry is at all holding its own :-


The number supported by it elsewhere has been very remarkably reduced in the last 10 years, especially in Murshidabad. It was, however, in the year 1909 that the Bengal Silk Company had to close down so many of its filatures, and it is probable that many who were thrown out of work then went on calling themselves silk workers for a time and did so at the census of 1911. Probably, therefore, the decline in the industry was more equally distributed between the two decades than the statistics show. The numbers given include weavers of tassar and batta (a mixure of silk and catton). According to the industrial census there are now 81 silk filatures and mills, employing 4,111 males and 327 females, but only 4 have more than 100 employees each and none as many as 200 . In 1911 there were 33 , employing 6,705 males and 243 females. Two of them had 2,668 employees between them and 7 more had more than 200 employees each. Now 72 of the 81 are situated in Murshidabad district and most of them are new ventures on a very small scale privately*owned by Mnhammadans. Only 2 of the 81 are controlled by registered companies which have Indian directors. Four have European or Anglo-Indian managers.
249. Jute spinning and weaving.-By far the most important factory industry in Bengal is that of jute spinning and weaving. Bengal has 62 jute mills, $\mathbf{5} 6$ of which have more than 400 employees each. The industry is confined to the banks of the Hooghly and has grown very much, as the figures given . in the following table will testify:-


Measured by the number employed the industry has grown by 42 per cent. during the 10 years, though the rails in Calcuta itself have dechnod and the total number of concerns has anly increased by 12 . As the table below will show, the industry is still, as it was 10 years ago, almost entirely controlled by Europeans and every one of the mills has a European manager. while there are as many as 735 Europeans and Anglo-Indians among the supervising staff and 186 among the clerical staff :-

| . . |  |  | 1985. | 1911. |
| :---: | :---: | :---: | :---: | :---: |
| Mijls controlled by - | . |  |  |  |
| Companiex with- |  |  |  |  |
| European Directura | ... | ... | 54 | 19 |
| Indian Directora | $\ldots$ | ... | ... | . |
| Mixed Boardy .. | $\ldots$ | $\ldots$ | 6 | ... |
| Privately uwned by- |  |  |  |  |
| Europeans | -.. | $\cdots$ | 1 | 1 |
| Indians | ... | ... | i | $\cdots$ |

The statistics regarding age, caste and birthplace of skilled workmen and unskilled labourers in jute mills, to be found in Parts IV and V of Census J'able XXII, should prove very interesting. Among the skilled workers, who number 124,221 , there are 8,901 adult women, nearly half of whom are occupied in "finishing'" and the rest in "winding", and "preparing;" 721 are boys under 14 employed in "spinning" and "preparing," and 199 are girls under 14 mainly employed with the adult women in "finishing." Nuhammadans who call themselves Shekhs are more mumerous than any of the Hindu caste3, of which the commonest to be found are the Chamars and Muchis. Kaibarttas take a large share in machinery operation and maintenance and supply a fair number of weavers. Only rather more than a quarter of the skilled workmen were born in Bengal, most of them in the near neighbourhood of the mills; as many as 28,030 came from the United Provinces. 25,088 from North Bihar, generally Saran or Champaran, 19,597 from South Bihar and 8,762 from Orissa.

Among the unskilled labourers, $\mathbf{1 5 5 , 6 3 3}$, there is a much larger proportion of women and children, for there are $3 \overline{5}, 670$ adult women, $19,19 \overline{3}$ bors and 2,311 girls under 14. Apparently women are less often employed in Howrah than elsewhere and children less often in Hooghly. Muhammadan Shekhs are much more numerous among the labourers in the mills on the Calcutta side of the Hooghly than the other. Among the Hindu castes the Chamars are the most numerous. The number of skilled workmen who were born in Bengal was a quarter of the total, but only 2 out of 11 . of thee unskilled labourers were born in Bengal, so that. allowing for the fact that many were children of immigrant workmen, it will be seen that the people of Bengal take a very small share in the labour employed by the premier factory industry of the Province, as they take but a very small share in its control Of the unskilled labourers, 36,988 were born in the United Provinces, 29.607 in South Bihar, 23,218 in Orissa, 15,947 in North Bihar and as many as 10,786 in Madras.

The mills have 40,327 looms in all, those in the 24-Parganas 23,267, those in Howrah district 8,514, those in Hooghly district 7,583 and those in Calcutta City 963 .
250. Jute pressing.-To diminish the space required for transit jute is pressed into bales even for the journey from the jute centres of Easterur Bengal to Calcutta. In places like Naranyanganj, Chandpur, Madaripur and Serajganji jute to be sent down to Calcutta is made up in what are çalled kutcha bales at no very great pressure, and there are nowadays jute presses at a great many more places than these. The increase in the number of such presses has been very considerable of recent years as the figures below from
the industrial census of 1921 and 1911 for jute-growing districts of Eastern . Bengal show:-

|  |  |  |  |  | prese |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | . | 1mb | 1912. |
| Rajehahi | ... | ... | ... | 2 | ... |
| Dinajpnr | ... | ... | ... | 4 | ... |
| Jalpaiguri | ... | ... | -* | 3 | 1 |
| Darjeeling | ... | ... | ... | 3 | ... |
| Reogpur | ... | ... | $\cdots$ | 24 | ... |
| Paba | ... | ... | $\cdots$ | 15 | 18 |
| Dacca | ... | - | ... | 28 | 30 |
| Mrineasiogh | ... | $\cdots$ | ... | 33 | - 3 |
| Faridpur | $\cdots$ | ... | ... | 20 | 4 |
| Tippera | $\cdots$ | ... | ... | 13 | 2 |
| Cooch Behar | ... | -... | ... | 12 | 11 |

The increase has not been so great as the figures indicate, for in 1911 presses employing less than 10 men were not counted, and the industry being seasonal and the census coming at the very end of the season-almost, it may be said, ia the off season-many small presses had no doubt closed down. Jute to be exported from India requires to be very much more closely compressed, and made into what are called pucca bales at a much greater pressure, in more elaborately equipped presses. The presses located in Howrah, Calcutta and the 24 -Parganas are presses employed in making up bales for export, and there are one or two such presses, for example, at Narayanganj and Chandpur. The work of these presses is not seasonal to quite the same extent as that of the smaller presses. The figures of the industrial census, showing only 10,642 persons employed in jute presses, are no measure of the extent of the industry, for many times as many persons find employment in the height of the season, in August, September and October.
257. Hides.-Tanners, curriers, leather dresses, etc., number 12,917 male and 311 female workers with 19,619 dependents, making 32,847 in all supported by the hide industry, against 38,203 in 1911 and 29,628 in 1901. Before the war the export trade of India in leather was mainly in the hands of Germans, who bought up rough-cured hides, and much was expected of the leather industry after the war. The Industrial Census shows 25 tanneries, mainly in the eastern suburbs of Calcutta against only 10 in 1911, but they have not been successful and employ but very few more persons than the 10 in existence in 1911.
252. Wood.-Wood industries employ 137,132 male and 31,461 females with 233,011 dependents, in all 401,604 persons. This includes 138,889 persons supported by basket-making, etc., in which female workers, 29,863 , are almost as numerous as males, 38,873 . The rest are sawyers, carpenters and joiners, and practically all the workers. among them are males. Carpenters, etc., have increased steadily in numbers, more in the last decade than in one before, but the number of basket makers has declined as shown below:-'

|  |  | 1981. | 11. | 1. |
| :---: | :---: | :---: | :---: | :---: |
| Sawrerd, carpenters and ji.iners | $\cdots$ | 262,715 | 229,295 | $\underline{213.461 ~}$ |
| Basket-makers, etc. | ... | 128,889 | 139,750 | 164.701 |

The decade has shown considerable development of organized industry. in wood, for according to the Industrial Census of 1911 there-were only 12 concerns with 783 employees, and in 1921, 59 concerns with 2,435 employees were returned. The largest are two manufactories of three-ply wood for tea chests, one in the 24 -Parganas and the other in Jalpaiguri. The latter, the Buxd Saw-mills, has had a set-back, but should prove a paying proposition in the
end.
253. Metals.-Metal industries now employ 72,648 male and 3.135 female workers with 121,840 dependents, making in all 197,599 supported by these industries against 184,746 in 1911 and 172,876 in 1901. A number in the workers are small blacksmiths, who make and sell agricultural implements, etc., but the factory iron industries are developing and factory workers nutnumber the small blacksmiths, etc., by two to one. Wiork in iron supperts 154,406 , work in brass, copper and bell metal 36,474 , and work in other vievals, not counting the precious metals or imitation jewellery, 6.719. According to the industrial census the factory iron industries employ 45,515 males and 2,604 females. Among these are not included industries connectert with the construction of means of transport, railway and steamer workshops and so on. The following table shows what progress has been made in the last decade:-

|  | N"xistion or coscerixs. |  | Numbit oy explotyka. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1021. | 10:1. | 1931. |  | 13:1. |  |
|  |  |  | Nale. | Female. | Mase. | Female. |
| Iron fundries (a) - .. | 60 | 34 | 13,207 | 2,416 | 6,945 | 6.35 |
| Irod and ateel works (b) ... | 40 | 17 | 6,810 | 165 | 2,026 | 3 |
| Arms factories -.. | 3 | 7 | 5,726 | 3 | 5,924 | 1 |
| Engineering wurks (c) ... | 48 | 37 | .18,688 | 20 | 11,706 | 8 |
| Municipal works ... | 1 | 2 | 770 | $\cdots$ | $3!2$ | $\cdots$ |
| Lock and cutiery wnrks (d) | 7 | 1 | 191 | ** | 87 | $\cdots$ |
| Total ... | 159 | 108 | 45,482 | 2,604 | 27,080 | 647 |

(a) 12 in 1891 with $10-20$ employcen.
(b) 9 Iu 1921 wish to-i) empingore.
(c) 1 In 1931 with $10-20$ *mployeer. :
(d) f Ju thas with icmemployen

The irnn industry is not, like the jute mills industry, confined to the near neighbourhood of Calcutta, for the largest iron foundry. one with 10,789 employees, and an iron and steel works with 2,631 employees are situated in the Raniganj coal-field in Asansol subdivision of Burdwam. Most of the other iron foundries, 41 of them, are in Howrah, while most of the other iron and steel works are situated in the 24 -Parganas (16), and Calcutta (13), though some of them, small forges and little concerns making light steel trunis, are very small. Seven of the 159 factories are controlled by Government the largest being two arms factories. Of the rest, 30 including all the large ones are controlled by registered companies with European directors. There are four Indian companies and four with mixed boards. Twenty-four concerns are privately owned by Bengali bhadralok, but the majority of the small works are owned by Hindus of the Kamar caste, iron workers by tradition.

Statistics are to be found in Parts IV and V: of Census Table XXII regarding the numbers of women and children and the caste and birthplace, of skilled workmen and unskilled labourers employed in "Iron Foundries." " Iron and Steel Works " and "Machinery and Engineering Works." The skilled workmen in iron foundries include no females and only 151 boys under 35 to 4,449 males over that age. In the iron and steel works there are no skilled female workers and only 5 boys out of 2,583 skilled workmen. Machinery and engineeering works have practically no skilled female employees cither and only 191 boys to 10,488 skilled adults. There are, however, as many as 2,247 adult women, 458 boys and 168 girls to 7,406 adult males among
the unskilled labourers in iron foundries, practically all the females being emploved in the one large foundry in Asansol subdivision, but there are a number of boys at work in Howrah. Among the unskilled labourers in iron nond steel works there are fewer women employed. and again they are found only in Asansol. There are 159 boys and 5 girls employed, the boys mainly in and near Calcutta. Very few women are employed as unskilled labourers in machinery and engineering works and boys are only 131 to 6,548 adults. In the iron foundries, Kamars and Lohars, the blacksmith castes, are unexpectedly few, Muhammadan Shekhs, and Hindu Kaibarttas, Chamars and Muchis being in evidence among the skilled workmen. Among the unskilled there are many Bauris and Santals working in Asansol but few have come to the foundries near Calcutta. In the iron and steel works and the machinery and engineering works, Kamars are again few and the same castes in evidence as in the iron foundries.

By contrast with the state of things in the jute industry persons born in Bengal take a great deal larger share in the iron industries, but here again os will be seen from the statement below, the proportion of immigrants is much bigher among the unskilled labourers than among skilled workmen :-

|  |  | - SEILLED Morixix. |  | Urgitiled morkigar |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Tctal. | -Bora in Bengal. | Total. | Borthan Benģal. |
| Iron foundries ... | - | 4,60C | 2,611 | 10,277 | 3,717 |
| Irou and steel works | -.* | 2,588 | 1,663 | 3,857 | 998 |
| Machincry and enzineering works | $\cdots$ | 10,685 | 7,696 | 6,691. | 1,678 |

In the iron foundry in Asansol subdivision there is a large element from Chota Nagpur, which is mainly responsible for the fact that the tribes from those parts form more of the employees in the iron than in the jute industry, and, speaking generally, people from the eastern districts of the United Provinces and adjoining districts in Bihar take a much smaller part in the metal industries of Bengal than they do in the work of the jute mills.

Workers in brass, copper and bell-metal are numerous, for they supply the house-hold utensils which are most commonly used by all classes. The number of persons supported by brass, copper and bell-metal works is as follows :-

| 19.21 | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 36,474 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 1911 | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 48,261 |
| 1901 | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 32,147 |

Brass workers are found all over Bengal but especially in Western and Central Bengal, and the bell-metal industry belongs to Midnapore, Bankura and Murshidabad. The Industrial Census discloses 100 bell-metal factories in Midnapore district with more than 10 employees each. Fiftv-six have less than 20 and only 3 more than 50, but the total number of employees was returned at 2,179 males and 84 females showing that the figure obtained from the general census schedules is deficient. All the factories are privately owned and the industry is entirely in the hands of Indians, but is highly organized in Ghatal and Kharar in Midnapore district. The masters are enterprising and wealthy and obtain their materials in large quantitiestin from the Straits Settlements, copper from Japan and so on; they distribute the labour, pay by piece-work and have a steady demand for their finished articles from Bära Bazar in Calcutta. Bengal has one large brass factory with 754 employees and 34 others, 16 of which are in Midnapore district.
254. Ceramics-The manufacture of pottery, earthen bowls, bricks, tiles, glass, etc., is the means of subsistence of 280,146 persons, against 227,150 in 1911 and 199.970 in 1901 . The greatest increase has been among brick-makers. from 22,479 in 1901 to 34,781 in 1911, and 81,185 in 1951.

The increase is partly due to the fact that brick-making is a seasonal occupation which is taken up at the end of the dry season, and successive enumerations having taken place each later in March than the one before, each found more brick-fields opened and at work than the former one. There is no doubt, however, that there was an unprecedented demand for bricks, the price of them stood very high at the end of the war, and in the spring of 1921 a great deal of energy was put into brick-making. The Industrial Census discloses 412 brick and tile factories with 35,096 employees, against only 165 with 23,300 employees in 1911. Most of these were along the East Indian and the Eastern Bengal Railways northwards from Calcutta, though there were also 68 round Dacca. Glass is hardly made in Bengal and there are only 8 factories with 464 employees, all in or close to Calcutta on the same side of the river. There is one large pottery works belonging to Messrs. Burn \& Company at Raniganj with 1,296 employees, and a smaller with 306, in Calcutta, but potters are found all over the province and the total number of workers and dependents is 197,357, 4 per cent. more than in 1911, when it was 8 per cent. more than in 1901. The greatest number, 25,365 , is found in Dacca, but there are more than 10,000 in Mymensingh, in Faridpur, in Jessore, in Nadia, in the 24-Parganas and in Midnapore. They almost all belong to the Hindu Kumhar caste who are potters by tradition, and women often help the men, for female workers were returned as many as half the males.
255. Chemical products and analogous.-Work with chemical'products properly so called employs only very small numbers indeed, but manufacture and refining vegetable oils not only maintains its importance as an industry, but employs 148,006 persons against 122,887 in 1911 and 117,773 , in 1901. Oil presses are usually found singly. worked by the cultivator's cattle when he has no work to do for them on the land. The Industrial Census disclosed 104 oil mills with more than 10 employees each and only 4,063 employees in all, and no more than 3 with more than 100 each. No less than 62 of them were found in Calcutta itself. Chemical works are 12 in number with 2,010 employees; there is one large paint works in Howrah with 726 employees and one small one in Calcutta; 23 soap and candle factories with 851 employees mostly in the eastern suburbs of Calcutta; 10 drug and medicine works with 734 employees, including one, it may be noticed, at Dacca, well away from the industrial area round Calcutta; there are four paper mills, one returned in Calcotta being only a place where waste paper is collected and sorted preparatory to being used again by the mills. There are two large ones and a small one on the banks of the Hooghly in the 24-Parganas and one, the Bengal Paper mills, at Raniganj among the coal mines of Burdwan district. The total staff employed is 4,055 males and 673 females; the three large mills are controlled by companies with European directors and all four have European managers. In the mills the sorting is done by women and is accounted skilled labour, but there are no women employed as skilled operatives in other processes.' More than half the skilled workmen were born in Bengal and half the rest in the United Provinces. Among the unskilled labourers there are 562 women and 88 boys under 14 to 3,185 adult males, and two-thirds of the unskilled labour comes from the United Provinces. Statistics for skilled and unskilled workmen employed in the paper mills are to be found in Parts IV and V of Census Table XXII.
258. Food industries.-The food industries are of a simple nature, for out of the 413,890 persons they support, 283,913 are rice pounders and flour grinders and their dependents, and 57,321 are makers of butter, cheese and ghee. The number supported by food industries appears considerably less than 1911 or in 1901, owing to a great decrease among those returned as rice pounders and huskers; rice mills according to the Industrial Census employ only 4,309 persons and the rest are nearly all women who .work at home. Whether to return women who pound rather more rice than is actually wanted for household use as rice-pounders by occupation, or merely as dependents on their husbands, is a matter of some difficulty to decide, and too much must not be made of the reduction of rice-pounders and.flour-grinders and their
dependents, from 381,288 in 1911 to 283,931 in 1921. Of the latter number 171,844 are women workers, only 15,791 male workers and only 96,278 dependents.

Wheat hardly grows in Bengal but the Industrial Census disclosed 7 flour millis, 3 in Howrah and 4 in Calcutta, with 1,241 employees. The actual grinding in a modern flour mill does not employ many persons, and skilled labourers were returned at only 141, all adult males. There were only 15 women and 2 boys to 970 adult males among the unskilled and only 1 in 12 of the unskilled labourers was born in Bengal. More than half come from Orissa and more than a quarter from the United Provinces. Statistics for flour mills are to be found in Parts IV and V of the Census Table XXII. Three of the 7 flour mills are controlled by companies with European directors, one by a company with Indian directors and one bv a company with a mixed board, while the other two are privately owned by Hindus. . Five have European managers.

Rice mills number 137 but only 2 have more than 100 employees. One is controlled by a European company and two by Indian companies and all the rest are privately owned by Indians. They are mostly new ventures, for there were onlv 24 with more than 20 emplovees in 1911 and there are now 104. Sixty-nne, nearly half of the 137 mills returned in 1921. are to be found in the 24 -Parginas, but there are 22 in Burdwan, 5 in Birbhum, 2 in Bankura, 10 in Midnapore, 3 in Bogra and one each in Murshidabad, Rajshahi, Bakarganj and Cooch Behar, well away from the industrial area round Calcutta.

There are 51 sugar factories with 1,910 employees; of which 30 with 884 employees are located in Jessore, and 9 in Nadia.with 149 employees. These use both date-palm sugar and that obtained from sugarcane. The Cossipur factory, just north of Calcutta, belongs to a European company, employs as many as 646 persons and is much larger than the rest, all of which are the private property of Indians.
257. Industries of dress and the toilet.-Industries of dress support 363,097 persons and industries of toilet 219,552 . Practically all the latter are barbers of whom there is one actual worker to 630 of the population. The proportion is high when it is remembered that practically every Muhammadan wears a beard and so do a number of Hindus. But Bengalis do not shave themselves, and the barber is an essential member of society whose presence is required at a number of Hindu ceremonies. Of those occupied in dress about one-third are tailors, another one-third washermen and one-sixth shoemakers. The last have increased very much in number during the last decade. Shoes are certainly being worn much more than they were a few years ago and their import was impeded during the war. Most of those employed are mere cobblers, for only 94 boot and shoe factories employing more than 10 hands were disclosed by the Industrial Census, with 1,447 employees, and a small shoemaker, who can really make a new pair of shoes is not often to be met with. 91 of these factories were found in Calcutta, 3 controlled by European companies, one owned by a European and the rest by Indians. Tailors have also increased in number since 1911 by 10 per cent., and there has been some increase in the use of cut and tailored clothes, due in part to the shortage and high price of materials for the flowing dhotis which are the common habit of Bengal.
258. Building industries.-From the' nature of the house in which the average Bengali lives, it is not to be expected that the building industries should account for the occupation of a great proportion of the population. The eultivator can build his own house of bamboo mat and thatch, though he will perhaps employ a carpenter to help with the wooden framework and put on the corrugated iron roof, if he can afford to run to the expense of one. The gharami, the man who builds and repairs mat and thatched houses, is employed by the better classes, but he is very commonly only a cultivator who takes up such a joh when he has nothing to do on his land. Different
classification of the building industries has been the cause of some unevenness in the figures obtained from the general schedules at successive censuses.
259. Construction of means of transport.-Construction of meatis of transport supports 23,904 persons. This number does not include employets in railway workshops who have, in the statistics of the general census, feen included under the head of Transport by Rail. The figures are admittedh incomplete for the heading was originally designed for European countries where carriage makers, wheelwrights, etc., are classes by themselves, whereas the makers of carts, palkis, etc., in India are ordinary carpenters and returned themselves as such. It is interesting to note however that nearly 20,000 persons are supported by boat building, and that while large number zare so supported in the water districts Bakarganj 3,692, Dacca 2,432, Khulna 1,354 and the 24 -Parganas 8,386 (these include also workers in shipwrights' yards) there are very few in other parts.
260. Railway workshops.-There are now 31 railway workshops in Bengal, employing as many as 30,387 males and 727 females, against 15 in 1911 enploying 22,272 males and 463 females. The most important are those at Kharagpur in Midnapore district for the Bengal-Nagpur Railway, which have doubled in size since 1911, at Lillooah in Howrah district for the East Indian Railway, at Kanchrapara in the 24-Parganas for the broad gauge section of the Eastern Bengal Railway, at Saidpur in Rangpur district for the metre gauge section of the same railway, and at Pahartali close to Chittagong for the Assam-Bengal Railway. The total number of Europeans and Anglo-Indians employed are 28 as managers, 201 in supervision, 31 in clerical work and 369 as skilled workmen. The total number of skilled workmen is 19,067 adult males and 57 boys under 14 years old. None of the skilled workers are females. Muhammadan Shekhs are the mont numerous caste, but Kamars and Lohars are numerous in the engineering and allied trades and Kaibarttas in other trades. There are also a number of Brahmans and Kayasthas returned among skilled workers. 7.385 were born in Bengal, 4,109 in the United Provinces, 1,996 in North Bihar, 1,603 in Madras, 1,210 in South Bihar, 786 in Orissa and only 104 in Chota Nagpur while 1,712 came from other parts of India, generally from the Punjab. Madrasis are employed mainly at the Bengal-Nagpur Railway works. The Assam-Bengal Railway works at Chittagong depend more on Bengali labour than the works of the other large railways. Among the unskilled labourers there are 716 adult women, 173 boys and one girl to 9,946 adult males. Nearly all the women and boys are employed at Kharagpur. There Goalas are more numerous than Muhammadan Sheikhs, and Kurmis are almost as many, while the next caste in numbers is Telinga. Elsewhere Sheiks are generally the most numerous and after them Chamarsand Chhatris at Lilooah and Goalas and Chamars at Kanchrapara. Unskilled labour is obtained almost entirely from the neighbourhood in the works in Chitta--gong, Tippera and Darjeeling districts, but at Kharagpur most of it comes from Madras, Orissa, the United Provinces and further provinces such as the Punjab and the Central Provinces. Lillooah depends mainly on the United Provinces and so a less extent does Kanchrapara, while more at Saidpur come from Bihar. Full statistics of caste and birth-place of workmen appear in Parts IV and V of Census Table XXII.
261. Steamer workshops.-There are four workshops maintained in connection with inland steamer traffic, and employing 933 males. The largest is at Barisal and the second at Narainganj. Twelve Europeans and Anglo-Indians are employed and the labour force is almost entirely Bengali; Muhammadan Shekhs are the most numerous caste among skilled and unskilled alike. It is interesting to note that, as in the Railway workshops, a certain number of bhadralok are working.
262. Shipwrights' and dockyard workshops.-Shipwrights' and dockyard workshops are 11 in number and are all to be found at the Port of Calcutta, except a small one at Chittagong. The total namber of employees is 12,327. Two belong to Government and the remaining 9 to registered compa-
nies, the directors of 8 of which are Europeans. All are managed by Europeans. In 1911 there were 9 concerns but the total staff employed was only 6,918. Besides the managers, 174 other Europeans and Anglo-Indians are employed, mainly in supervision. Among the skilled workmen there is one woman and 115 boys to 7,325 adult males. Muhammadan Sheikhs are the most numerous caste, then Kaibarttas and Pods, though as many as 399 Chinamen are employed as carpenters, etc. Nó less than 5,129 of the skilled were returned as born in Bengal. Among the unskilled labourers there are 37 adult women, 97 boys and one girl under 14 to 4,086 adult males. Muhammadan Sheikhs are the most numerous caste and then Goalas and Chamars. Only 1,284, not much more than a quarter, were born in Bengal, 1,008 in the United Provinces, 774 in Orissa, 527 in North and 511 in South Bihar. Statistics are given as also for operatives in steamer workshops, in Parts IV and $V$ of Table XXII.
263. Miscellaneous industries.-Among miscellaneous industries the most important is that of workers in precious stones and metals, enamellers, imitation jewellery makers, gilders, etc. They, and makers of rosaries, beads and other bangles, necklaces, spangles. lingams and sacred threads, are practically 200,000 . The number has been reduced somewhat since 1911 when it was twice as many as that of tailors, milliners, dress-makers, etc. According to the statistics of the General Census the number of printers has decreased very much since 1911, but the figures of the Industrial $\cdot$ Census do not bear out the same conclusion. They show 243 printing presses with more than 10 employees each and 14,117 altogether, and there are a great many more smaller ones, for every town has one and sometimes several hand presses. Ten of these presses belong to Government, 13 to companies with European directors, 12 to companies with Indian directors, and the rest are privately owned, 11 by Europeans and Anglo-Indians and the rest by Indians. Five of them, all in Calcutta, have more than 400 emplovees each, the largest outside the city being the temporary ones engaged in printing the Settlement Record-of-rights at Jessore, Bankura and Berhampore.
264. Birthplace of factory operatives generally.-From the statistics in parts IV and V of Table XXII which have been prepared for skilled and unskilled workmen in Collieries, Cotton Spinning and Weaving Mills, Jute Mills, Silk Filatures and Mills, Iron Foundries, Iron and Steel Works, Machinery and Engineering Works, Paper Mills, Flour Mills; Railway Workshops, Steamer Workshops, and Shipwrights' and Dockyard Workshops, an interesting analysis can be made of the share which people from different parts of India take in the organised industry in Bengal. It is given in the following table. Tea is an organised industry, but it is part of agriculture, and, being of an entirely different nature from other factories, tea gardens and their coolies are left out here, though railway and steamer coolies, and day labourers (including workers in docks and ships) in Calcutta and its suburbs, are included:-

|  |  | Stamer prit 10.009 morizrs bobm in - |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Beagal. | Nortb Ribar. | Sonth |  | Oriman. | Prited | Medrus | Other parta of India. |
| Skilled workmen | ... | 3,910 | 1,490 | 1,362 | 133 | 691 | 1,974 | 230 | 177 |
| Cnsikilled workmen | ... | 2,835 | 919 | 1,657 | 612 | 1,367 | 1,812 | 334 | 449 |

Among both skilled and unskilled together, those born in Bengal are 3.187 per 10,000 , decidedly less than one-third, and the proportion born in Bengal is very much lower among the unskilled than among the skilled. In hoth cases the proportion of Bengalis is lower than the figures show for they include a number of children of immigrants, probably rather more among
the skilled than the unskilled, for skilled labourers stay on longer than uuskilled and bring up their children to do the work they do. North Bihar people are rather more numerous than South Bihar people among the skilled but are not much more than half as many among the unskilled. Skilled workmen from Chota Nagpur are very few. The proportion is four times as high among the unskilled but is still small. Oriyas are twice as many among the unskilled as among the skilled, but people from the United Provinces are more numerous among the skilled than the unskilled. People from Madras and other parts are few in number but more numerous among the unskilled than among the skilled. Both among skilled and unskilled the province of Bihar and Orissa supplies very many more operatives than does Bengal itself. The United Provinces supplies half as many to the skilled as Bengal itself does; and two-thirds as many to the unskilled.
265. Castes and tribes in industry.-Appendices to Parts IV and V of Table XXII show the castes which supply the greatest numbers to the workers in organised industry. Among skilled workmen Muhammadans are just one-third of the total, and when tea garden coolies are not included less than a quarter of the unskilled. The Hindu castes which supply the largest numbers are as given below, the tea-garden coolies being excluded:-


Most of the first six castes in the list are probably immigrants to Bengal and so are practically all of the last two. The Kaibarttas have taken the lead among the Bengali castes, and it will be noticed that more of both the Chasi Kaibarttas and the Jalia Kaibarttas are skilled than unskilled.
266. Mechanical power used in mines and industry.-Statistics of the mechanical power used in industry in Bengal are to be found in Part VI of Census Table XXII. Out of 2,814 concerns in the Province, each with as many as 10 employees, 1,349 ; almost half, use some sort of mechanical power. In the case of 987 it is obtained from steam engines which drive machinery directly, in the case of 96 oil engines, in the case of 22 waterpower, and in the case of 21 gas engines. The horse-power of the steam engines totals 262,237 , of the oil engines 3,169 , of the water-power 1,787 , and of the gas engines 1,702 . Together they generate 268,895 horsepower. In 39 establishments the machinery is driven by electricity generated on the premises by steam engines developing 55,452 horse power, by oil engines developing 452 horse-power and by water-power developing 26 horsepower. The total power of the dynamos is 28,135 kilowatts. In 244 establishments the machinery is driven by electricity supplied from outside. Two hundred and twenty of these establishments are in Calcutta or its suburbs. The power which generates the current supplied to industrial concerns having been counted with that of concerns whose machinery is directly driven by steam, etc., in estimating the total power in use in Bengal we should
exclude that of the motors in these 244 establishments and put the total at 324,825 horse-power. For the size of the country it is infinitesimally small compared with European standards. 96,967 horse-power of it is generated in Calcutta and its suburbs.

The greatest users of power are the following:-

| . $\quad$ - $\cdot \cdot$ |  (HOBSE-PUFKB OY ESGEKE C'SED)- |  | Eectricit: rapphed from outride (horsepower of motori). power of molots). | Total harse pow |
| :---: | :---: | :---: | :---: | :---: |
|  | To drive machners diremis. | Todrive dspamer |  |  |
| Jute mills ... | 162,368 | 30.246 | 12,362. | 204,976 |
| Collieries :.. | 20,821 | 110 | 2,425 | 23,356 |
| Railmay workshops ... | $\therefore 4,873$ | 7,300 | 30 | 12,203 |
| Cotton mills ... ... | 11,610 | 53 | 45 | 11,708. |
| Ten factories ... ... | 8,417 | 31 | 107 | 8,555 |
| Jute presses ... ... | 3,558 | 450 | 2,280 | 6,288 |
| Arms factories ... | 1,302 | 942 | 3,433 | 5,677 |
| 3achinery and engineering works. | 796 | 3,212 | 1,284 | 5,202 |
| Shipwrights' and dockjard workshops. | 2,970 | 399 | 2,127 | 5,496 |
| Paper milla ... . ... | 1,875 | 1,802 | 1,300 | 4,977 |
| Iron and steel works ... | 97 | 3,885 | 211: | 4,193 |
| Tramway workshops ... | ...... | 3,730 | ...... | 3,730 |
| Iron fonndries ... | 1,120 | 2,345 | 166 | 3,631 |
| Bice suills ... ... | 2,472 | .... | 539 | 3,011 |
| Oil mills ... ... | 2,839 | 60 | 40 | 2,939 |
| Flour mills ... .i. | 2,213 | .... | . 290 | 2,503 |
| Brick and tile factories ... | 1,663 | .....* | $\ldots$ | 1,663 |

In addition there are electric power stations with engines of 29,799 horsepower. The jute mills dwarf every other industry as users of power, with engines developing nearly nine times the energy of those used in the colleries, which in turn is twice as much as in the cotton mills or railway worshops. Electricity is by far the most convenient form in which power can be transmitted to different parts of a factory, and about a quarter of the machinery of the jute mills is driven in this manner. Electricity generated on the premises is the favourite method of driving machinery in railway workshops, machinery and engineering works, and iron foundries, and has been adopted in the most up-to-date of the paper mills, while arms factories, shipwrights' workshops and to a less extent jute presses use electricity supplied from outside.
267. Occupations according to religion.-The statistics of occupations according to religion are to be found in Census Table XX. Muhammadans are almost double the number of Hindus among the ordinary cultivators, but among the landlords and middle-men Hindus are nearly twice as many as Muhammadans, and nowadays nearly all the great landlords are Hindus. In Moghul times there were many great Hindu landlords but there were also a number of great Muhammadan zamindars. One by one nearly all the greaf. Muhammadan families have been dispossessed, and often have disappeared. In Tippera, for example, the families of the Muhammadan zamindars of Sarail, Baradakhat, Gangamandal, Patikara and Dollai Parganas covering
half the district, have lost their lands to Hindus. Only Homnabad remains and it is disintegrating rapidly. The same story is repeated elsewhere. The laws of inheritance among Muhammadans which prescribe minute subdivision among heirs are partly to blame, but very many Muhammadans lost their lands in the early days of British rule, for the more astute Hindus quickly took advantage of masters whom they served in the capacity of managers and agents, and made the most of the opportunities which the first operation of the Sale Laws after the Permanent Settlement gave them. Old Hindu families suffered along with the Muhammadans, but the supplanters of both were almost always Hindus. When one counts them up it is surprising how few of the present great landlord families of Bengal date back earlier than the first days of British rule, while among the families that have since acquired great landed properties that of the Nawab of Dacca is one of the very few instances in which they are Muhammadan by religion. In the occupations which are not agricultural Hindus commonly take a decidedly larger share than in proportion to their numbers, but there are some notable exceptions. Muhammadans outnumber Hindus in the furniture and building industries and among carters, etc., take a larger share in the inland steamer traffic and slightly outnumber Hindus among the boat population. They are in a strong majority arnong laskars employed on sea-going vessels and in the crews of lighters, etc., in the Port of Calcutta. They supply most of the tailors and butchers, and have a predominant interest in trade in means of transport, but they are out numbered by Hindus 3 to 1 in Trade generally, by 2 to 1 in the Public Force, 3 to 1 in Public Administration and nearly 5 to 1 in the Professions and Liberal Arts. They are not greatly outnumbered in domestic service and are in a slight majority in the unproductive occupations.
268. Workers and dependents.-The census schedule was to be filled up for a worker by an entry of his occupation in a column provided for the purpose and the next column was to be left blank. In the case of a dependent the second of those two columns was to be filled up with the occupation of the person by whom the dependent was supported, and the first column was to be left blank. It is inevitable that a certain number of such papers as the census schedules should be filled up carelessly, and the fact that the column for workers came before the column for dependents meant that more dependents must have been mistakenly entered as workers than vice verad $\hat{a}$. A certain number of instances came to light during the course of tabulation in which there had undoubtedly been mistakes of this sort made, i.e., when a female was recorded as an actual worker in the occupation of police constable or village watchman, but it is not possible to detect such an error except in a few instances. The wife of a potter for example may help her husband with his work or she may not, and if she was mistakenly entered as a worker no incongruity would be obvious. The student of the census statistics should bear this point in mind, that the statistics probably somewhat overstate the proportion of workers among the total population, and that there are really rather more dependents to each thousand workers than the 1,837 which the figures indicate. .The system of enumeration having however been the same all over India, not only at this but previous census enumerations, the figures of this census for Bengal are safely comparable with the figures for other parts of India and for Bengal at previous censuses. The proportion of dependents to workers varies very much from occupation to occupation. The variation depends to some extent on the economic advantages or disadvantages of the man engaged in each several occupation, the value of his remuneration, the standard of living in his walk in life, etc., but they are influenced by a number of other circumstances besides, e.g., whether the occupation is one in which a man's wife and children can work with him; whether custom permits a woman of the class which follows a particular occupation to find work independently, for instance, by husking paddy or keeping a little shop; whether a particular occupation is much in the hands of immigrants from outside the Province who have left their dependents at home, and so on. The variations are extremely interesting and the figures in the following table showing the numbers of dependents per

1,000 workers in a number of the most common occupations followed in Bengal in 1911 and 1921 are worthy of examination:-


In Bengal in 1911 there were 1, 799 dependents per 1,000 workers; rather fewer than the 1,837 . which the statistics of 1921 show. The result is somewhat unexpected seeing that there has been so great a fall in the birth-rate in the last four years and consequent reduction in the proportion of young children to adults, and the change must in part be accounted for by a rather different distinction between dependents and workers having been made, especially in respect of those supported by the food industries and those employed in labour in the fields, and to some extent, by reduction of immigration. The proportion is noticeably higher in Eastern Bengal than in Central and Western Bengal, partly because the birth-rate has been much higher in Eastern Bengal and partly because the organized industries in the neighbourhood of Calcutta attract workers, many of whom leave their dependents at home. Generally speaking the proportion of dependents is higher in the occupations connected with agriculture than in others, and these support a lower proportion of the total population in Central and Western Bengal than elsewhere. In the table above the very low proportion of dependents to workers among tea garden coolies is due to the fact that women and children find employment as easily as the men and the coolies belong to a class the women of which are permitted by custom to work out of doors. The same may be said of coal-miners, but in their case more of them are temporary immigrants than in the case of tea garden coolies, who are imported for long periods. The statistics show a large decrease in the number of dependents upon coal-miners in the last ten years and an increase in the proportion of female to male workers, but this is not borne out by the figures obtained from the Industrial Census return and too much must not therefore made of it. The low proportion of dependents in the food industries is due to the fact that so many females are engaged in paddy-husking, grain parching, etc. Here, too, there has been a great change in the last 10 years due to the decrease by 100,000 in the number of women returned as workers in paddy-husking. The greater number of dependents to metal workers than to textile workers is due to the fact that more of the factory textile industry is worked by immigrants than in the case of metal industries. Ceramics is mostly brick and tile-making, engaged in in Bengal by the very poot and by immigrant labourers. Domestic servants have few dependents, partly because there are many females among them,
commonly orphan girls or widows and always poor women, and partly hecause many domestic servants are immigrants, cooks from Orissa, etc. . The rise in the proportion of dependents in this case is due to the reduction in the numbers of servants who are immigrants from beyond Bengal. The same cause explains the increase in the case of those employed in transport, especially carters and boatmen. The different proportions in the case of those engaged in legal, medical and educational professions- in public administration and among the landlord class, and the changes which have taken place since 1911 are very interesting. In 1911 the lawyers had proportionately far the largest number of dependents and the landlords came next. In both cases the number of dependents has been very much reduced. The legal profession is becoming overcrowded and is not so remunerative to the average practitioner as it was;" while rents have not risen with the rise of prices and the landlord class are not nearly so well off as they used to be. The ordinary cultivators and field labourers together have much the same number of dependents as they had 10 years ago, in spite of the fall in the birth-rate. They have not suffered in the same manner from the rise of prices as those with fixed incomes, for the increase in the value of agricultural produce has been to their advantage rather than otherwise. Those employed in public administration were not as well off as the lawyers or the landlords in 1011 and had fewer dependents than the doctors. The number has not been reduced in this case to the same extent as in the case of lawyers and landlords, but there has been a decided reduction, whereas in the case of the medical profession there has been so great an increase that doctors have more dependents now than those engaged in public administration. The educational profession has always been poorly paid and the number of dependents on the school masters is much less than upon other professional men, but during the lnst decade it has very decidedly increased.
269. Employment of women,-According to the census figures Bengal has 2,271,887 females who are actual workers, 157 per 1,000 male workers, which is a far smaller proportion than is found in India as a whole; in which there is commonly 1 female worker to 2 male workers:"Half the females returned as workers were among those supported by ordinary cultivation, three quarters of a million ordinary cultivators; a quarter of a million field labourers and nearly 100,000 rent receivers. Tea employs another 100,000 women; fishing 35,000 , textile industries 418,000 , basket-malking 30,000 , pottery 35.000 , rice pounding and husking 170,000 , trade in foodstuff 145,000, domestic service 115,000 , begging 120,000 and prostitution 35,000 . These are in round numbers the occupations in which women are most often found in Bengal. Women workers outnumber men only in cottor spinning (a very small industry in Bengal) rope, twine and string making, silk • spinning. rice pounding, grain parching, trado in fuel, midwifery, etce; begging, and prostitution. By contrast with conditions in other countries than India, it is curious that among tailors, milliners, etc., men outnumber women by 13 to 1, by 9 to 1 in trade in textile materials; etc., and even in domestic service by 3 to 1 .

As has been mentioned in the last paragraph the arrangement of the census schedules made it inevitable that the number of female workers should be exaggerated, but even the figures as they stand show that not nearly so many of the female population are working and earning as in European countries. For comparison with European standards, it will be convenient to express the measure of occupation of women in Bengal as the number of females occupied per 1,000 aged 10 and over, for that is the form in which the measure is commonly expressed in Europe. Practically no girls under 10 are earning noney in this country, except a few beggar children, and we may take it that all the $2,271,887$ occupied females were over age of 10 . The total number of females aged 10 and over is $16,130,044$, so that the number of occupied females per 1,000 aged 10 and over is about 141. The corretwice as great, 325 , and thelend and Wales the census of 1911 was more than in the eniployment of women in England.
sUbSIDIARY TABEE I.-GENERAL DISTRIBETION BẊ OCCUPATION.

subsidiary table i.-General distribution by occupation-concld.


SCBSIDIARY TABLE II.-Distribotion by occupation in natubal division.

| Oceapxtion. | NOMBER PRE YIILB OP TOTAL POPULATION SUPPORTED IN- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Deagel. | Weat Bengal (Bariman Division). | OentralBRenkal(PrasdeneyDivalon.) |  | bast bemeat |  |  | Stkrim. |
|  |  |  |  |  | Dacca Division. | Chittagong <br> Dirlalon and Tripura Sente. | Whole of Eat Bengal. |  |
| 1 | 9 | 3 | 4 | 5 | 6 | 7 | 8. | 9 |
| TOTAL ... ... -- | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 7,000 | '1,000 |
| A.-Production of ravematorials | 788 | 750 | 870 | 870 | 818 | 808 | 815 | 951 |
| 1.-Exploitation of animgla and vogstation. <br> II.-Exploitatiod of minocale | 717 | 738 13 | ${ }^{679}$ | 870 | 815 | 808 | 813 | 981 |
| 8.-Preparation and supposy of miatorial subatances. | 143 | 167 | 218 | 86 | 130 | 128 | 128 | - 28 |
|  | 78 51 | $\begin{gathered} 107 \\ 18 \\ 48 \end{gathered}$ | $\begin{gathered} 119 \\ 23 \\ 74 \end{gathered}$ | 49 19 39 | $\begin{aligned} & 57 \\ & 14 \\ & 59 \end{aligned}$ | $\begin{aligned} & 70 \\ & 11 \\ & 47 \end{aligned}$ | 81 88 85 85 | ${ }_{13}^{8}$ |
| C.- Publice administration and tibaral arts. | 23 | 22 | 38 | 13 | 29 | 24 | 24 | 8 |
|  | 4 18 18 | $\begin{array}{r} 4 \\ 3 \\ 16 \end{array}$ | 5 7 83 | 3 1 9 | $\begin{array}{r}3 \\ \hline \\ \hline \\ \hline\end{array}$ | 3 3 19 | 1 8 8 19 | 9 3 4 |
| D.-miacellaneota ... ... ... | 46 | 81 | 70 | 31 | 32 | 40 | 38 | 15 |
| IX.-Persons living prinelpxily | 1 | 1 | 3 | $\cdots$ | $\cdots$ | 1 |  |  |
| $\begin{aligned} & \text { X. Domeatic kervicy } \\ & \text { XI. }=\text { Losuflliently dewribed } \end{aligned}$ | 14. | ${ }_{32}$ | ${ }_{39} 9$ | ${ }_{1}^{14}$ | ${ }_{13} 11$ | 18 | 10 | 9 |
|  | 9 | 8 | 9 | 11 | 8 | 19 | 9 | $\pm$ |

Sifbsidiary table IIf.-Dusteibution of teg agricultural, indugtriak, commercial, professional and oteek population in NATUBAL DIVISION ÄND DISTEICTE.

| Ditrict and natural divtion. | atrioultube |  |  |  | indubtay incleping mimme. |  |  |  | conmbrior |  |  |  | Phopzbions |  |  |  | athins |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\underset{\substack{\text { Pnputation } \\ \text { and } \\ \text { ancicububry }}}{ }$ |  |  |  |  |  | PRAOMNGOKOM ropuliktios op |  | Fopulation apported by comatierce |  | PIBdWFTAEE ONOGYMETOLA GOMY FROLAL |  |  |  | 15EnfGMTAEE OX <br>  |  |  |  | pemcimenan on FOPGKATIOR"OM- |  |
|  |  |  | A Aetant | Doppanad gatss. | tuinustry. |  | Amat | Depeua |  |  | (Aotuan | ${ }_{\text {amema }}$ |  |  | $\xrightarrow{\text { A ctunl }}$ | mosod |  |  | \#otinat | mend |
| 1 1 | $\cdots$ |  |  |  |  |  | 5 | - | 10 | 12 | 19 | 13 | 4 | - | 10 | ${ }^{17}$ | ${ }^{3}$ | 19 | $20^{-}$ | 9 |
|  | 80,792,468 |  |  |  | $\begin{aligned} & 2,719,802 \\ & B 67, A E X \end{aligned}$ |  |  |  | 2,770,360 463,454 | ${ }_{80} 8$ | 48 |  |  |  |  | 8 | 3,710,084 ess,017 | ${ }_{*}^{*}$ |  |  |
|  |  |  |  | ${ }_{4}^{48}$ | B67,85I |  |  | c | 403,464 | 00 |  | 68 | 180,806 |  | 30 | ${ }^{4}$ | cas,017 | a | ${ }^{8}$ | 0 |
|  |  | ¢ 878 | $\because \square$ |  | tus. 6 bir |  |  |  |  | - ${ }^{62}$ |  |  | 17,093 |  |  |  |  |  | 11 | ${ }_{8}^{99}$ |
|  | $\mathfrak{c c}$ |  |  |  |  | - ${ }^{186}$ | "4 |  |  | \%r | $\cdots{ }^{1}$ |  |  |  |  | ${ }_{8 i} 8$ |  | ${ }^{78}$ | ${ }_{3}^{86}$ |  |
| Hoonhiy … | $\therefore{ }^{8655}$ |  |  |  | $\underbrace{304288}$ |  | $\therefore 8$ |  | ${ }^{\text {a }}$ | T, |  | ${ }_{4}^{81}$ |  |  |  | ${ }_{8}^{8}$ | - $\begin{array}{r}181.263 \\ \hline 126.663\end{array}$ | ${ }^{4}$ | - | 8 |
| obntral brnaal (Tnestimsicy | *,8ea,sed |  |  | 0 | 1,170,008 | \%e |  | ${ }_{6} 2$ | 818,774 |  |  | 54 | 214,209 |  |  | 87 | 817,047 | * | $s$ | 4 |
|  |  | $\underset{\substack{7626 \\ 7062}}{\substack{0}}$ |  |  |  |  |  |  |  | [re ${ }^{87}$ |  |  |  |  |  |  |  | (80 |  | 78 80 68 48 49 49 |
| data benast | a,3 | \% |  | cs | 488,70\% |  | is | ${ }^{2}$ | ceco,031 | 4 |  | 18 | 00, 6 65 |  | 3 | $\bullet$ | 647,290 | ${ }^{\text {se }}$ |  | 4 |
| Chssiati suri- | 8,8s6,324 | 54 | 5 | ${ }^{6}$ | 443,552 |  |  | ${ }^{*}$ | -440,088 |  |  | 10 | 84,476 | - | 3 | - | (27,00] | 51 | 05 | 4 |
|  | , |  |  | ${ }_{86}^{68}$ | ${ }_{5}^{78,120}$ | - 12 |  |  | - 68.7098 |  |  | 31 |  | 8 | ${ }_{88}^{88}$ | 88 |  | ${ }_{8}^{88}$ |  |  |
|  | ${ }_{\text {c }}$ |  |  | 8 | 8,16 |  |  |  |  |  |  |  | \%, |  | ${ }^{6}$ | 6 |  | . |  |  |
| magre $=$ | cen |  |  | ${ }_{\substack{80 \\ 80}}^{\substack{0}}$ | cisk | $\cdots$ |  |  | coin |  |  |  |  |  |  | ${ }^{39}$ |  | ${ }^{8 / 8}$ | ${ }_{69}^{69}$ | 88 |
| Kaide | Tu, |  |  |  | 119,024 |  |  |  | $\because$ |  | ${ }_{68}^{68}$ | 48 |  | $\stackrel{15}{3}$ |  | ${ }_{88}^{88}$ | 110.106 | ${ }_{71}^{88}$ | 89 | ${ }_{4}$ |
| cocos migaz .. | S86,480 | -067 |  | ${ }^{6}$ | 15,4Et |  | ${ }^{17}$ | \% | 20,3is |  | 07 | 3 | s,aso | ${ }^{1}$ | ${ }^{11}$ | ${ }^{8}$ | 10,008 | 3 | 3 | 57 |
| mast amwanc - | 15,855,475 | - 0 er |  | 7 | 8,174,267 |  | 3 |  | 3,206,584 |  | 85 | 5 | 538,781 | 8 | 2 | 71 | e5e,ses | $s 8$ | 48 | 87* |
| Danos divimoin |  |  |  |  | ${ }^{786,088} 8$ | 4 |  |  |  |  | 8 | ${ }_{69}^{4}$ | 2346872 |  |  |  |  |  |  | ${ }_{80}^{68}$ |
|  | , |  |  | ${ }_{80}^{80}$ |  |  |  |  |  | \% |  |  |  |  |  | $\xrightarrow{84}$ |  | \% |  | \% |
| -ntitabite Drvi- |  |  |  | ${ }_{2}$ |  |  | 31 | ${ }^{\text {and }}$ |  |  | 98 | ${ }_{08}{ }^{\text {H }}$ |  |  | 30 39 | 71 |  | ${ }_{8}^{87}$ | * | ${ }_{88}^{88}$ |
|  | 3,310,4 |  |  |  |  |  |  |  |  |  |  | ${ }_{8}^{65}$ |  |  |  |  | 112.512 |  |  |  |
|  | 147,418 | 77 |  | ${ }_{6}^{76}$ |  |  |  | ${ }_{5}^{80}$ |  |  | ${ }_{81}^{8: 8}$ | \% |  | 4 | 80 | 1 |  |  | ${ }_{5}^{6}$ | ${ }_{8}^{6}$ |
|  | 265.308 |  | 1 | 0 | s3,76 |  | 74 | ${ }^{0}$ | $\mathrm{fr,a20}$ | 3 | 8 | ${ }^{2}$ | 2,870 | 1 | 3 | 5 |  | 41 | 4 | 4 |
|  | 77,507 | 0 | ${ }^{4}$ | 38 | 78 |  |  |  | 1,502 | 9 | at | 38 | 380 | $\bullet$ | 8 | 3 | 1,804 | 3 | 74 | ${ }_{6}$ |
| R | 30,78: |  |  | 4 | coe,ces | 868 |  |  | [,24,00) | - | , | 8 | 23,364 | 4 | 36 | 0 | 16 | 205 | $s *$ | 4 |

[^8]
## SUBSIDIARY TABLE IV.-Occopations combinkid with aquicileture where agriculturic is the gubsidiary occupation.

|  | NUKBZE PEE MTLLE WHO ARE PAKTIALLT AGMOULTCHESJ. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bangal. | Wowt Denani (Buri)~an Dlyision.) | Oenteral Dananl (Prenidency Divedon.) | Kirth Benkal (Hestinibl Mridion an! (ionoh Ebher). | Eaft Bmgon |  |  | Mkx. |
|  |  |  |  |  | Dace: Diviaton. | Chitengiong Dislation 0.14 Tripurt Beate. | Whole of Yat: Benzal. |  |
| 1 | 2 | 8 | 4 | 8 | 1 | 7 | ! | - |
| TOTAL ... ... ... | 18 | 21 | 19 | 12 | 18 | 23 | . 20 | 5 |
| A.-Production of raw materiate | 2 | 8 | 8 | 3 | 2 | 1 | 2 |  |
|  | 2 | 8 | 8 | 8 |  |  | 2 | 1 |
| nurals ... | 8 | 8 | 188 |  |  | $\cdots$ | ** | $\cdots$ |
| 8.-Prepapation and mupaly of mataplal subletancos. | 85 | 88 | 45 | 81 | 78 | 188 | 86 | 188 |
|  | 88 | 61 | 17 | 61 | - 76 | 101 | 49 | 218 |
|  | 87 | 87 85 | 60 | 68 | 83 | 8 | 74 | 218 |
| C.-Publig adminiatration and Ilbartal arta. | 125 | 189 | 78 | 164 | 144 | 182 | 140 | 83 |
| VI, Prajly farce | 174 | 285 | 107 |  |  |  |  |  |
|  | 71 | 83 | 43 | 116 | 218 110 | 101 | ${ }_{6}^{178}$ | 121 |
|  | 125 | 168 | 78 | 132 | 132 | 148 | 137 | 0 |
| D.-Miscoilaneous ... .... ... | 29 | 22 | $20^{\circ}$ | 18 | 20 | \$7 | 30 | - |
| 1X.-Mermas Ifriug on thele | 72 | 102 | 22 | 185 | 170 | - 38 | 09 | $\cdots$ |
| X. - Domotic service | 18 | 15 | 14 |  |  |  |  |  |
| X1.-Insumciently desoribed jeoupations. | 84 | 27 | 28 | 29 | 46 | ${ }_{80} 8$ | 26 68 | ${ }_{10}^{9}$ |
| XII,-Undroductiva me... | 12 | 18 | 7 | 15 | 8 | - 11 | $\bigcirc$ | $\cdots$ |




## SUBSIDIARY TABLE V.-OccupationS combined with agriculture where agriculture is the principal occupation.


subsidiary table vi.-Occupations of females by sub-clagses and selected orders and groups.


SUBSIDIARY TABLE VI.-Occupations of females by sub-Classes and selected orders and groups-concluded.

| Group No. | Oecmpation. | NOMEER OF ACTOAL WOAxERE. |  | Namiter of trantan per l, 500 smane |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Malen. | Pemaleal |  |
| 1 | 2 | 8 | 4 | 8 |
| 100 | IV.-Traminert ... ... ... ... ... ..i ... ... ... | 3944,005 | 17.788 | 60 |
|  | 20. TRANSPORT BX WATER ... ... ... ... ... ... .. | 109,034 | 182 | 2 |
|  | Labonrers employed on the constraction and msintenance of streame, siveris and cauala. | 64 | $\cdots$ | $\rightarrow$ |
|  | 21. TRANSPORT BY ROAD ... ... ... ... ... ... ... | . 769,030 | 14,017 | 88 |
| 118 | Labourers empiosed on roade and bridgear ... ... ... ... | 49,8:0 | 12,356 | 38. |
|  |  | 801,447 | 182,558 | 228 |
|  | 26. TRADE IN TEXTILES ... ... ... ... ... ... ... | 78,385 | 7,768 | 85 |
|  | 30. TRADE IN POTTTRRY, BRICKS AND TILES ... ... ... | 1,257 | 628 | 500 |
|  | 33. OTHER TRADE IN FOOD STUFFS ... ... .- -- ... | 474,894 | 144,784 | 304 |
| $\begin{aligned} & 131 \\ & 133 \\ & 133 \\ & 136 \\ & 136 \end{aligned}$ |  | 198, 080 | 54,174 | 433 |
|  | Grocers and sellers of vegetable ofl, salt and other condlments ${ }^{\text {a }}$... Sellers of milk, butter, ghep, cheese, ponltry, eggs, etc. | 187.415 47,336 | 10,929 | 468 |
|  |  | ( 47,356 | 18,235 | 343 235 |
|  | Gralo eud poise dealera ... ... ... ... ... ... ... | 68.635 | 41.487 | 004 |
|  | 38. TRADE IN FUEL ... ... ... ... ... ... ... .- | 8,277 | 8,768 | 1,180 |
|  | 39. TRADE IN ARTICLES OF LUXORY AND THOSE PERTAIFLNG TO LETTERS AND THE ARTS AND SCIENCES. | 25,925 | 2,966 | If4 |
| 149 | Dealers in common bangles, besd, necklaces, finh mall articles toys, hanting and fishing rackles, flowern, etc. | 4.087 | $9 \times 5$ | 948 |
|  | C.-Puguc administration akd liberal arts ... .. ... ... ... | 352,800 | 17,174 | 89 |
|  | VI.-Publie force ... ... ... ... ... ... ... .- ... | 68,685 | - | $\cdots$ |
|  |  | 238,342 | 18.770 | 75 |
|  | 46. RELIGION ... ... ... ... ... ... ... ... ... | 91,930 | 2,247 | 25. |
| 168 | Religious mendicants, laciates of monatries, atc. ... ... ... | 1,203 | 85 | it |
|  | 48. MEDIALVE | 46,757 | 10.481 | 22* |
| - 172 | Miduiven, vaccinvtors, componders, narses, mameura, etc. ..- | 1,693- | 0.431 | 2006) |
|  | 49. INSTROCTION ... ... ... ... ... ... ... ... ... | 41,579 | 2,648 | 50 |
|  | D. - Miscellaneous ... ... ... .. . ... ... ... ... ... | 883,819 | 352,08a | 379 |
|  | Ix-Pareons livins prineipally on thair incoma ... ... ... - ... | 10,208 | 3,440 | 537 |
|  | $\text { x.-Domestio service } \quad . \quad . .$ | 338,881 | 118,985 | 345 |
| 181 | \& Cooks, mater-carticts. door-keeperk, watcbmen and other Indoor servants. | 330,677 | 116,363 | 3sers |
|  |  | 408,530 | 54,393 | 13* |
| ${ }^{\prime} 187$ | Labourers and workmen ptherwist nnspecised | 226,508 | 50,609 | 398. |
|  | XII.-Ungroduotive ... ... ... ... ... ... ... ... ... | 128.202 | 157,882 | 1,232 |
|  | 65. BEGGARS, VAGRANTS AND PROSTITJTES ... ... ... | 114,695. | 157,569 | Tr374 |
| $\begin{aligned} & 189 \\ & 190 \end{aligned}$ |  | 114,687 | 191.648 33.521 | $\begin{array}{r} 1,453 \\ 4,490,125 \end{array}$ |
|  |  |  |  |  |

SUBSIDIARY TABLE Vil.-Ntmbers scpported by selected occupations, 1921, 1911 AND 1901.


SUlSSIDIARY TABLE VII.-Numbers hupported by selected occepations, 1961. 1911 and 1901-continued.


SLBSIDIARY TABLE VII.-Ncmbers supported by selected occcpatioxs, 1921,
.$\quad$ 1911 axd 1901 -contiviued.


SUBSIDIARY TABLE VII-NCMbers supported bi selected occupations, 1921, 1911 4ND 1901-continued.


SUBSidiary Table vil.-NUMBers stpported by selected occupations, 1991, 1911 AND 1901-continued.

sLbsidlary Table Vil.-Nubers supported by selacteju eccepations, 19.1 , 1911 asd 1901-concluted.

| $\begin{aligned} & \text { Grurpr } \\ & \mathbf{N O}_{0} \end{aligned}$ | Ociarstuas. | Pronlatit in slipulted in $18 \%$. | liquinatino suramited tu pall. | Fupriarion supportel it ltwe. | percentatie of - hatitioy. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1211-21. | 19,1]-11. |
| 1 | : | \% | 1 | 5 | 8 | 7 |
|  |  | 688,268 | 528,890 | 411,884 | + 91 | + 28 |
|  | 2. - Duncusic selitle | 688,288 | \$26,830 | 471.894 | + 31 | + 28 |
| $\begin{aligned} & 1 \times 1 \\ & N: 4 \\ & \times 1 \end{aligned}$ | Shaks, wateresarilers, door-becpers, watc:imet and other thiton wervaths. | 072.312 | \%i\|l|,37.4 | 3*7,42 | $\pm 33$ | + |
|  | Eriphte resanas, cusiunen, dor-bopy, etc. ... ... | $\begin{gathered} 19,614 \\ 1.830 \end{gathered}$ | 21.3:1 | 24.10: | - $\mathbf{g r ~}^{1}$ | - 11 |
|  | 21.-1noufficianty demeribed occupatiom ... | 880,187 | 1,348,830 | 2.988,717 | - 27 | - 85 |
|  |  befinite ucctepatus. | 888,187 | 1,348,930 | 2.958,117 | - 27 | - 55 |
| 1,1 | Hanntimiurers, basinessmen atd coutractars otherwie alatucitios. | 18312: | 14,17\% | 0.635 | + 89 | + ${ }^{16}$ |
| 1530 | Cxiliters, ar cos:utauts. inowk-keperts, clerkt and <br>  | 366.41 | \|N3. 172 | 22.1736 | $+115$ |  |
| $\begin{aligned} & : \sqrt{i} ; \\ & \text { lin } \end{aligned}$ | ent दimpo. <br> Bfechatics or harkise uncrectied <br>  | $\frac{s_{i i}^{1}, i k i}{s_{i}}$ |  | - 2.85 | [ ${ }^{6}$ | - 4in |
|  |  | 452,870 | 445,819 | 407,856 | + 2 | + 8 |
|  | H. -INMates of isila siyluve axd eiobrtalis ... | 13,687 | 14,160 | 11,429 | $-2$ | + 27 |
|  |  | \$38.724 | 631,889 | 898,127 | $+2$ | + 9 |
|  |  I'rocurstand prostatutes | 343.314 13,343 |  | $\bigcirc$ |  |  |
|  |  |  | 471.月6iy | $\cdots$ | + | + |
| 191 | Other uxcluxitod uon-pratuctite indnstriea ... | 2:9 |  | 303) |  |  |

## subsidiary table vili.-Occupations of selected castes.

BENGAL AND BIKKIM.


SULSIDIARY TABLE VIII--(occlpations of sflected castes-continted.
BENGAL AND SIKKIM,


SUBSIDIARY TABLE VIII.-OccUPations of selected castes-concluded.
BENGAL AND SIKKIM.


SUBSIDIARY T'ABLE IX.-Number-of persons employed on the 18te Marce 1921 on Railways and in the Irbigation, Telegraph and Postal Departments in Bengal.


\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow{5}{*}{Indinatrial attablishmotic.} \& \multirow{5}{*}{Total
number of whalishweath.} \& \multicolumn{13}{|c|}{} \& \multirow{5}{*}{} \& \multirow{5}{*}{Namber of ct illuren of outh sexes per 1.1009 adults.} \\
\hline \& \& \multirow{4}{*}{District where chitefy toontod.} \& \multicolumn{12}{|c|}{Nenurn of pembons maplotsu.} \& \& \\
\hline \& \& \& \multicolumn{2}{|l|}{\multirow{2}{*}{Total.}} \& \multicolumn{4}{|c|}{Direction, supertblon aud olerical worky} \& \multicolumn{2}{|l|}{\multirow{2}{*}{8kulid workwen.}} \& \multicolumn{2}{|r|}{\multirow[b]{2}{*}{Onokillei}} \& \multicolumn{2}{|l|}{\multirow[b]{2}{*}{Culwren.}} \& \& \\
\hline \& \& \& \& \& \multicolumn{2}{|l|}{Bu-OMcans and Auglo-Ibiliane.} \& \multicolumn{2}{|c|}{Indana} \& \& \& \& \& \& \& \& \\
\hline \& \& \& Malces. \& Fenilas. \& Malos. \& Femates. \& Malea. \& Fewalcs. \& Malos. \& Pem.lot \& Make. \& Fenakcs. \& Maks. \& Perames. \& \& \\
\hline 1 \& 1 \& 3 \& 4 \& 6 \& 6 \& 7 \& 6 \& \(\bigcirc\) \& 10 \& 11 \& 19 \& 13 \& 14 \& 13 \& 16 \& 17 \\
\hline TOTAL ... , .. \& 2,814* \& ...... - \& 878,308* \& 174,732 \& 6,588 \& 59 \& 20,893 \& 16 \& 220,888 \& 17,817 \& 282,168 \& 144,155 \& 45,408 \& 22,876 \& 292 \& 87 \\
\hline I, GROWING OF
PROLUCTS. \& 43 \& Jatraiguni, Darjoeling and Cbilthigong ... ... \& 31,634 \& 102,017 \& 513 \& 2 \& 1,383 \& 1 \& 2,683 \& 3.6 \& 6,936 \& 83,910 \& 18.114 \& 12,729 \& 1,193 \& 238 \\
\hline Tea-gardens ... ... \& 40 \& Dl:to dito ... ... \& 87,413 \& 101, 136 \& cos \& 9 \& 1,389 \& 1 \& - 9,673 \& 846 \& 64,916 \& 83,313 \& 17,980 \& 17,474 \& 1,204 \& 231 \\
\hline IL-MINES ... ... ... \& \(202{ }^{\circ}\) \& Burdwan ... ... ... ... ... ... \& 84,993* \& 12,517 \& \& 4 \& 1,605 \& 9 \& 8,130 \& 45 \& 33,087 \& 11,113 \& 1.815 \& 1,353 \& 240 \& 67 \\
\hline Corl mines \(\quad .\). \& \(202{ }^{\circ}\) \& Dillo ... ... ... ... ... ... \& 24,483* \& 12,517 \& 917 \& 4 \& 1.665 \& 2 \& 3,130 \& 45 \& 23,097 \& 11.113 \& 1,615 \& 1,123 \& 310 \& 67 \\
\hline TV.-TExTILE AND OUNNBCT. BD INDUSTMES. \& 41 \& \begin{tabular}{l}
Hroghly, IIowrali, Tind m, 2t-Parganas, \\
Oslenth, Pabua, Muralildabill, Rangpur \\
Dncea, Mymentlazh anil Faridulat
\end{tabular} \& 205,521 \& 60,538 \& 1,236 \& 10 \& 6,084 \& 1 \& 295,163 \& 0.915 \& 111,993 \& 37,091 \& 11,813 \& 2.651 \& 197 \& 84 \\
\hline \begin{tabular}{l}
Cotton apinalng and waiving hilis. \\
Jule dremes
\end{tabular} \& 18 \& Hoorhity, Humrah, 24-1'urknmar, Oaleatte and Nailk. \& 11,780 \& 1,05! \& 46

195 \& ${ }^{1}$ \& 921 \& $\cdots$ \& B,560 \& 349 \& 4,891 \& 1,850 \& 1,05s \& 43 \& 177 \& ${ }^{37}$ <br>

\hline Jace dremea ... ... \& 18 \& 1lowrah, $24-$ Pargatias, Rangpur, Paban, Decca, Mymendingh, Farletpar nud Tippern. \& 1,070 \& $$
\pi \mathbf{m}
$$ \& 193 \& \& 1,510 \& $\cdots$ \& 1,564 \& 64 \& 8,318 \& 33 \& 885 \& 188 \& 61 \& 45 <br>

\hline Jute mills
Bile

flatures and milla \& $$
{ }_{61}^{60}
$$ \&  \& \[

$$
\begin{array}{r}
231,888 \\
4,111
\end{array}
$$

\] \& 47,090 \& ${ }^{975}$ \& \& $\begin{array}{r}3,980 \\ \hline 44\end{array}$ \& $\cdots{ }^{\prime} 1$ \& $\underset{\substack{115,191 \\ 2,319}}{1}$ \& 9,010) \& \[

$$
\begin{gathered}
99,457 \\
\hline 640
\end{gathered}
$$
\] \& 35670

105 \& ${ }^{19,103} 1$ \& 2,314 \& ${ }_{97}$ \& ${ }_{33}{ }^{33}$ <br>
\hline V.-Lbathis industrigs \& 88 \& Hooshly, 24-Parganas and Calcatta ... ... \& 2,811 \& 510 \& 35 \& $\cdots$ \& 914 \& ... \& 701 \& $\cdots$ \& 1,788 \& 333 \& 79 \& 7 \& 181 \& 3 <br>
\hline vi. -WOOn sndostries ... \& 0 \& Howrala, 24-Pargndia end Cakute -- ... \& 2.344 \& 11 \& 36 \& $\cdots$ \& 939 \& .. \& 1,007 \& ... \& 280 \& 85 \& 93 \& , \& ${ }^{68}$ \& 4 <br>
\hline VLL-METAL INDUBTIIES ... \& 405 \&  3 idnaport. \& 33,348 \& 2,851 \& ${ }^{263}$ \& ${ }^{8}$ \& 2,532 \& 3 \& 24,929 \& 12 \& 44,808 \& 2.147 \& ${ }^{80} \mathrm{~S}$ \& 171 \& 48 \& 18 <br>

\hline | Im foundrion |
| :--- |
| min and stcel works .... Machalacry atudenglaecrins worken. | \& \[

$$
\begin{aligned}
& 80 \\
& 40 \\
& 40
\end{aligned}
$$

\] \&  \&  \& \[

$$
\begin{array}{r}
2.418 \\
185 \\
205 \\
20
\end{array}
$$

\] \& \[

$$
\begin{aligned}
& 155 \\
& \hline 81 \\
& \text { si } \\
& 001
\end{aligned}
$$
\] \&  \& 67\%

674
740 \& $\ldots{ }^{. .}$ \& (, \& \&  \& 9, 9137 \&  \& $\ldots$ \& $\underset{\substack{1: 3 \\ y \\ 1 \\ 1}}{ }$ \& 11
4
$y$ <br>

\hline VIM.-GiASS AND RAKTHKN- \& $481^{\circ}$ \& | Bu-dwan, Jooghly, Howruh, 2t-Pagnnan, |
| :--- |
|  | \& 30,713 \& 4,143 \& s) \& ... \& 1,336 \& - ... \& 13.727 \& 1.032 \& 11.093 \& 4.207 \& 1,473 \& 0il \& 179 \& dy <br>

\hline Brick, the and Arebitict factortes. \& 412 \&  Ducca and Clytitarong. \& 29,131 \& 6,505 \& 49 \& ... \& 1.203 \& ... \& 13,473 \& 1,031 \& 13,437 \& 4,032 \& 1.40.3 \& m, \& 1.3 \& \% <br>
\hline
\end{tabular}

sebsidiary table X.-Dispribution of industries and pelisons faployed-condzidrd.

|  |  | general disthibution of industhes and feksons employmd. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Detrict where risefy tocat cid. | nuaben of peasars emphoved. |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | aires ion, sup | erpidon |  |  |  |  | Euskllien | atouresk |  |  |  |
|  |  |  |  |  | Burcted | , \%and | 11.10 | wos. | skile | km |  |  | cris |  |  |  |
|  |  |  | Mataes. | Pemale. | 3 Ha \%ose | Femater | Male | Fenasicz | M*ica. | Femalic. | Matcs. | Ferrates. | $\mathrm{Ma}_{\text {aicses }}$. | Fermicus. |  |  |
| 1 | 2 | 3 |  |  | ${ }^{\circ}$ | 7 | 8 | ${ }^{9}$ | 10 | 11 | 12 | ${ }^{13}$ | 1. | 15 | ${ }^{16}$ | ${ }^{17}$ |
|  | 14 |  | 18,620 |  | ${ }^{236}$ | 1 | J,437 | ... | 3,924 | ${ }^{174}$ | 20,623 | 1,0:32 | 405 | 13 | 73 | ${ }^{4}$ |
| Parer mills .- | 5 |  | 4.055 | ${ }^{673}$ | 76 | 1 | ${ }^{77}$ | ... | 69 | 119 | 3,445 | s63 | * ${ }^{\text {a }}$ | ... | 170 | 13 |
| s. -Foudindestmes ... | 255 |  | 7,955 | 8.871 | 58 | - | 1,50, | 2 | 1,061 | 30 | 5,524 | 4.789 | 203 | 2 | 238 | 24 |
|  | $13^{7}$ |  <br>  | 1,788 | 1, $\mathrm{BLF}_{7}$ | 15 | $\cdots$ |  | $\cdots$ | 3117 | $\cdots{ }_{7}$ | (970 | $1{ }^{15}$ | 57 | $\cdots$ | 518 | $19^{2}$ |
| di-Industurs of dikas .. | 139 | 24.Parganas aud Culisutea ... ... ... .. | 2,974 | ${ }_{\text {a }}^{8}$ | 4 | ${ }^{3}$ | 248 | $\cdots$ | 1,3\%0 | 13 | 1,067 | 22 | 173 | --- | 14 | 3 |
| xil.-funatumindestmies | 21 |  | ${ }^{220}$ | 10 | 17 | $\cdots$ | * | ... | 632 | ${ }^{\text {8 }}$ | 178 | 2 | ${ }^{10}$ | ... | 11 | 11 |
| miliolichdingindustars | 56 | Hooghly, 24-Parganas, Dawen aua bakaranij ... | 2,061 | 543 | 23 | $\cdots$ | 203 | 1 | 193 | ... | 1,369 | ${ }^{308}$ | 53 | 31 | 153 | $* *$ |
|  | ${ }^{3}$ |  kong. | 50,428 | 79 | 574 | 16 | 1.333 | -- | ${ }^{31,446}$ | 3 | 16.163 | 7:3 | 292 | 4 | 1.) | ${ }^{6}$ |
| - Smilxus morestiopa ... | 1 |  | 50,347 | 729 | 243 | 12 | ${ }^{89}$ | ... | 13,124 | ... | 8,946 | 716 | 173 | - | 24 |  |
|  | 14 |  | $\begin{gathered} \text { 12,233 } \\ \hline 933 \end{gathered}$ | $\cdots 3$ | (t) | $\cdots$ | \% 5 | $\cdots$ | 7,1030 |  | 4,11884 | ${ }^{-} 37$ | 198 | $\cdots .1$ | ${ }^{+\cdots}$ | ${ }_{8}^{17}$ |
|  | 22 | Patrauas and ciatuatas ... ... ... ... | 78 | 5 | ** | - | -142 | $\cdots$ |  | ... | 1.67. | $4^{4}$ | 17 | 7 | 13 | 8 |
| xvi-minder hlesevmixtry | 293 | Cnlcutus ... ... | ${ }^{18.728}$ | 56 | ${ }^{884}$ | 4 | 1.935 | $s$ |  | 23 | 4.308 | 14 | 233 | ... | 3 | 14 |
| Prioting presex ... | 34 | Dits ... ... ... ... ... ... | 18,074 | ${ }^{38}$ | 101 | 10 | 1,712 | 1 | 8,041 | 18 | 3,3*0 | - | 1ヶ3 | ... | 3 | 13 |

 prbyone is $101 L$ to 1921,


PABY tomumber of employace.


SUbSidiary table Xil.-Organization of establishments.

| Clam of todastrial erablebimenta. | TYPE OP ORGANIZATION. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Oider Local Gorerament or Local sutbority. | Rgoiftraid coxpaxibs with diagetohs. |  |  | Privately ofned gi- |  |  |
|  |  | Buropernt or AceloIndisus. | Lediapa. | Of difyreat races. | Boropeana or AngioIcdinas. | Indiana. | Jol at owner: of differeat racts |
| 1 | 2 | 8 | 4 | 3 | 6 | 7 | 8 |
| TOTAL $\quad .-\cdots$-.. | 68 | 535 | 170 | 73 | 182 | 1,770 | 15 |
| 1.-arowtes of special proderte .-. .-. .- | 2 | 185 | 82 | 7 | 36 | 27 | - |
|  | $\cdots$ | 184 | 82 | 11 | 26 | 27 | $\cdots$ |
|  | - | 65 | 72 | 18 | 8 | 81 | 1 |
| Ir.-Tertion and coemected indistries -- .- -- | 1 | 172 | $n$ | $s$ | 42 | 209 | 1 |
|  |   <br>   | - $\begin{array}{r}3 \\ 49 \\ -8\end{array}$ | $\begin{array}{r}8 \\ \hline 8 \\ \hline\end{array}$ | $\ldots \begin{array}{r}\frac{1}{3} \\ \cdots\end{array}$ | 7 75 13 | 7 109 1 68 | $\stackrel{\square}{\square}$ |
| \%.-Lentrem ludetris - - - | - | - | 3 | 1 | 1 | 23 | 1 |
| n.-Woed minatrice ... | - | - 7 | - | 2 | 3 | 48 | 1 |
|  | 7 | 37 | 5 | 8 | 8 | 238 | 1 |
| Iron formifiet <br> It oo a od sicel work <br> Mentury acd caglocerige works | $\cdots{ }_{-}{ }^{\mathbf{1}}$ | $\begin{array}{r}3 \\ 4 \\ 4 \\ \hline\end{array}$ | 1 1 1 | - 4 | 1 2 4 | 31 31 13 | $\cdots 1$ |
|  | 3 | 9 | $\theta$ | ${ }^{\prime}$ | 9 | 385 | $\cdots$ |
| Brick, dib and firebrtek thetorte -- ..- | 8 | 8 | 7 | 5 | 4. 9 | 300 | - |
|  | 1 | 23 | 18 | 8 | 10 | - 137 | $\cdots$ |
| $\text { Puper mill - } \quad-\quad-\quad \ldots \text {. } \quad-$ | - | 4 | - | $\cdots$ | 1 | $\cdots$ | $\cdots$ |
|  | 4 | 10 | 5 | 2 | 8 | 228 | $\cdots$ |
|  | $\pm$ | 3 | $\frac{1}{2}$ | - 1 | $\cdots$ | $133^{2}$ | $\square$ |
| - | 1 | 8 | 4. | - | 2 | 120 | 5 |
| Min. -Furaiture indmetriat $-\cdots \quad-\quad$... Y | - | 2 | 1 | - | 2 | 12 | 4 |
| tul.-tanden indertrice - - - - - - | -- | 8 | 1 | - | $\theta$ | 43 | - |
| (IV.-Workerops maintainet of coursetion with | 14 | 37 | - 3 | $\boldsymbol{6}$ | $s$ | 23 | 1 |
| Reliwhy worlebope <br> Steamer morknioph .n. <br> Soipmiktra jerds and doekyerd morzahope | - $\begin{array}{r}11 \\ 2\end{array}$ | $\begin{gathered} 17 \\ \mathbf{2} \\ \mathbf{8} \end{gathered}$ | $\cdots$ | $-\begin{array}{r}3 \\ -1\end{array}$ | $\underline{=}$ | $\cdots 1$ | $\underline{\square}$ |
|  | 1 | 10 | - | $1 \quad 1$ | 3 | 7 | - |
|  | 12 | 27 | 14 | - | 15 | 227 | $\cdots$ |
| Prinionppene - - - - | 10 | 13 | 13 | - | 11 | 297 | - |

[^9]SUBSIDIARY TABLE XIII.-Place of origin of skinled employees.

subsidiary table xiv.-Place of orian of unskilied labourebs.

|  | TOTAL MOMNRE OF OHEMEN. |  | hath plack |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | bemasla |  |  | North Blinar. | sooth Blhar. | Ohota Nagpur plateau. | Orlen. | Uilted Yrovlduxts. | Mauras. | Otber parta of ludin. | Outelde ladita. |
|  | Mnles. | Yemala. | Datrict of entumorablon. | Aulfoiutng diatricta. | $\begin{aligned} & \text { Othor } \\ & \text { dutricta, } \end{aligned}$ |  |  |  |  |  |  |  |  |
| 1 | 2 | 8 | 4 | 6 | 6 | 7 | 8 | 9 | 10. | 11 | 12 | 18 | 14 |
| total ... ... ... | 418,438 | 170,016 | 136,088 | 22,187 | 18,483 | 38,092 | 83,977 | 122,042 | 81,788 | es,184 | 13,284 | 37,83! | 368 |
| Colliertion ... ... ... ... | 24,702 | 12,464 | 17,671 | 8,073 | 81 | 431 | 9,853 | 12,128 | 18 | 658 | ${ }_{10}$ | 250 | .* |
| Cotton apinnjng, weaving and other , milla, | 6,888 | 1,405 | 1,024 | 929 | 81 |  | 849 | 88 | 3,403 | 2,344 | 315 | 337 | $\cdots$ |
| Jate mlilin ... ..- ... ... ... | 117,659 | 87,881 | 21,180 | 0,987 | 1,789 | 15,947 | 20,007 | 2,368 | 28,218 | 86,988 | 10,788 | 8,436 | B |
| Sluk Atatifer ndid milla ... ... ... | 1,519 | 142 | 1,086 | 33 |  | 1 | 8 | $\cdots \quad$ - | 38 | 4 | ". | 1 | ..* |
| Iron foundries ... ... ... ... | 7,6e4 | 2.418 | 3,887 | 182 | 249 | 34 | 1,168 | 3,198 | 875 | 1,380 | 28 | 247 | $\cdots$ |
| Iron amblatal worka ... ... ... | 8,605 | 162 | 684 | 169 | 804 | 903 | 488 | 939 | 440 | 1,348 | 1 | 161 | 19 |
| Muohluery and exglneeriag worke .. | 1.671 | 12 | 1,054 | 881 | 803 | 4e8 | 631 | 198 | 2,105 | 1,443 | 41 | 197 | $\cdots$ |
| Paper millt ... ... ... ... | 8,273 | 562 | 497 | 969 | $8{ }^{6}$ | 900 | 404 | 4 | 154 | 2,168 | 3 | 81 | 1 |
| Floar mallin ... ... ... ... |  | - 18 | 87 | $\bigcirc$ | 98 | 39 | 69 | 12 | 808 | 271 | $\cdots$ | 18 | .. |
| Rallwas morkibope ... ... ... | 80,118 | - 717 | 2,180 | 263 | 278 | + . 63 | 881 | 297 | 680 | 2,495 | 93 | 2,188 | 1 |
| Stominer workthope ... ... ... | 140 | " | 61 | 2 | 18 | 13 | 1 |  | 18 | 97 | ." | 1 | .. |
| Elinpwrtahite and doskyard work- shojen. | 4,183 | , 50 | 403 | - 118 | 739 | 587 | sil | 16 | 774 | 1,009 | 2 | 110 | $\cdots$ |
| Ten garton coollen ... ... ... | 187,40 | 177,871 | 65,827 | 3,784 | 801 | 1,018 | 1,970 | 99,906 | 950 | 201 | 884 | 40,819 | 3 |
| Stentmer cooltor, rallway coollod and rallwny thalath. | 20,97a | 2,384 - | 0,009 | 1,880 | 1,118 | 8,676 | 4,879 | 2,393 | 1,824 | 5,030 | 182 | 3,690 | 6 |
| ${ }^{7}$ Day-labourert and coolteu (Including workure in dookn aud alifgu) In Oaloutta aun Suburbs. | 83,835 | 4,048 | 11,441 | 7,841 | 10,731 | , 11,888 | 21,886 | 2,954 | 18,300 | 12,138 | 20 | 1,078 | .$^{819}$ |

SUBSIDIARY TABLE XV.-DIbTRIbUTION of CERTAIN Races in certain indecstriafi ESTABLISUMENTS.

| Ohem of stadatifen. | Number of eatabllobtenata. | ECROPEAKB AND ANGLGINDIANA PKPLOTED AS- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Mamajint. |  | 8cpATAYT, |  | Clzhicat myaty. |  |  |  |
|  |  | Materes. | Pemates. | yaler. | Pemales. | Yales. | Femekes. | Matea. | Fersel. |
| 1 | 2 | 8 | 4 | $\checkmark$ | 6 | ' | $\bigcirc$ | $\bigcirc$ | 10 |
| total ... ... ... ... ... | 2,814" | 782 | $\cdots$ | 2,804 | 30 | 838 | 30 | 601 | 17 |
| I.-Growink of sgeelst prodants ... ... ... | 348 | 218 | ... | 285 | 2 | 10 | - | $\cdots$ | - |
| Teagardent me ..., ... ... ... | 340 | 215 | -* | 360 | 4 | 10 | .- | - | - |
| If.-minat -Doal minet ... ... ... ... ... | 202. | 78 | .." | 118 | 4 | 20 | - | 1 | - |
| IV.-Textlie and connected Industrian ... ... | 884 | 144 | $\cdots$ | 900 | 7 | 168 | 0 | 7 | - |
| Cotton anlonior, wetylor and other milla | 18 | 10 | ... | 34 | 1 | 2 | $\cdots$ | - | - |
| Jute prinet Jote milla ale | ${ }_{62}^{168}$ | ${ }_{68}^{61}$ | ... | 133 738 | $\cdots$ | 1\% | $\cdots$ | -2 | $\cdots$ |
| giti niaturet abd mille ... ... ... |  | ... | $\ldots$ | $\ldots$ | $\cdots$ | ... | -- | - | $\cdots$ |
| V.-Lemither industries ... ... ... ... ... | 38 | . 12 | $\cdots$ | 16 | $\cdots$ | 8 | ... | 3 | - |
| v.-Wood indurtrice ... ... ... ... ... | 89 | 8 | ** | 17 | $\cdots$ | . 1 | - | - | - |
| MI.-Matal Industrias ... ... ... ... ... | 305 | 84 | ... | 800 | , | 406 | 7 | 48 | - |
| Iron foubilicex <br> Imanadeteel morks <br> Machlnery and englaceriog works $\because$ | 60 40 40 | $\begin{array}{r}4 \\ \hline\end{array}$ | $\cdots$ | 133 138 190 | $\cdots$ | 15 858 | $\cdots$ | $\cdots$ | $\cdots$ |
| vill, -0jass end eapthan ware industrice ... ... | 421 | 11 | ... | 42 | $\cdots$ | $\boldsymbol{*}$ | - | 1 | $\cdots$ |
| Brick, the ad atebrick fastorim ... -* | $\cdots$ | ... | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | $\cdots$ | - | $\cdots$ |
| IX. -indurities connected with ehemieal produets | 184 | 38 n | ... | 170 | 1 | 13 | $\cdots$ | 18 | $\cdots$ |
| Paper milla ... ... ... ... ... | 5 | 5 | ... | 70 | 1 | 1 | $\cdots$ | 13 | $\cdots$ |
| - -Food Induztrias ... ... ... ... ... | 238 | 21 | .. | 33 | $\theta$ | 2 | $\cdots$ | 2 | , ${ }^{-}$ |
|  | ${ }^{737}$ | 5 | $\cdots$ | ? | $\cdots$ | 1 | $\cdots$ | $\cdots$ | $\cdots$ |
| xi.-Induatrice of drena . ... ... ... ... | 138 | $\theta$ | $\cdots$ | 20 | 2 | 8 | 1 | 2 | - |
| XII.-Furalture industries ... ... ... ... | 21 | 3 | ... | 14 | ... | $\cdots$ | .. | - | - |
| XIII.-Buildint leduatrias ... ... ... ... ... | 58 | 10 | $\cdots$ | 10 | $\cdots$ | 3 | - | -- | - |
| XY.-Workthopt maintalned in connection with the mantenance of means of transport. | 83 | 84 | … | 450 | 2 | 80 | 14 | 408 | $\cdots$ |
|  |  |  |  |  |  |  |  |  |  |
| Mailway wortriope Steamer workabnpe | 81 11 | 28 3 11 | $\cdots$ | 201 <br> 137 <br> 8 | $\cdots$ | $\cdots$ | $\cdots{ }^{.1}{ }^{18}$ | 18 28 28 | $\cdots$ |
| $\mathbf{x Y}$.-Production apoliontion and tramamizalon of phyalcal forcen. | 22 | 17 | $\cdots$ | 55 | 3 | 8 | 2 | 18 | - |
| :IT-Industry of luxury ... ... ... ... ... | 283 | 44 | $\cdots$ | 198 | * | 105 | $\theta$ | 72 | 17 |
| Printing presen ... ... ... ... ... | $24^{3}$ | 33 | ... | 90 | $1: 8$ | 50 | 2 | 89 | 17 |

[^10]SUBSIDIARY TABLE XVI.-Proportional distribution per 1,000 OF ADULT WOMEN AND OF CHILDREN OF EACH SEX IN DIFFERENT industeies.

| Weama sed chidgen. | Primclpal impatriza of explotimet. |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\underset{\substack{\text { Tlatite. } \\ \text { tions }}}{\text { Then }}$ | Coltherien. | Cotton | Jute millis. |  | Iron rotited. riea. | Erick, the and ins. brlek factorieal | $\begin{gathered} \text { O1! } \\ \text { mllis } \end{gathered}$ | Rion | Paper cille. | Othorm |
| 1. | \% | 3 | 4 | 6 | 3 | 7 | 8 | 9 | 10 | 11 | 12 |
| $\underset{\text { adelt womea }}{\text { OLidrasa }}$ | ${ }_{518}$ | ${ }_{4}^{78}$ | 15 | 287 315 | 16 | 14 | 32 34 | $\underline{-1}$ | 10 | 1 | 47 |
| Maker  <br> Peoulen $=-$ | 269 258 | 98 98 | 15 | 291 | 16 | 7 | ${ }_{13}^{21}$ | - | 1 | 1 | $\stackrel{89}{88}$ |

SUBSIDIARY TABLE XVII.-Distribution of power.


- Details of powec ing 30 colleriea are not available and are omitled from columen 8 to 8


## APPENDIX TO CHAPTER XII.

## Alphabetical list of commonest and host typical returns of occupation.



## APPENDIX TO CHAPTER XII.

## Alphabetical list of commonest and most typical returns of occupation.



|  | Oroup Mo. |  |
| :---: | :---: | :---: |
| Cooly (unspecified) | 187 | Grarland geller . . |
| Cooch Behar clert | 162 | Gardeaer . - |
| Co-operative Audit Society's clerk | 111 | Gas works |
| Co-operativa clerk . | 163. | German silver ornarent yeller |
| Co-operative store-keeper | 185 | German silver article meller |
| Cork maker . | 9 | German eilver worker |
| Conrt of Wards' servant | 3 | Glasaware seller |
| Cow keeper | 11 | Glase factory worker |
| Cow dung seller | 129 | Gluss bangle maker . |
| Crab seller | 131 | Glass bangle scller |
| Cultivators of another's land (Bogra) | 2 | Gold dealer |
| Cuitivator of gervice holding (chakran) . | 2 | Goidsmith's dust washer |
| Cultivator - | 2 | Guvernment Surveyor |
| Cultivator (Jhum) | 2 | Govarnment Engineer |
| Dafadar, police $\quad$, | 159 | Grain dealer |
| Dak bungalow chankidár | 181 | Grain parcher - |
| Dancer : . . | 178 | Gramophone seller . |
| Dancing girl | 178 | Grass cutter |
| Darji | 77 | Gcindstone seller |
| Date stigar maker | 71 | Grocer . |
| Day labourer . | $1 \times 7$ | Groom . |
| Deatist | 171 | Guard (Railway) |
| Dentiet's clerk | 172 | Guard (forest). |
| Diviner | 179 | Gunny broker |
| Doctur . | 171 | Gur maker |
| Dockyard workman | 105 | Gur seller . |
| Dog-buy . - | 182 | Guru - . . , |
| Domentic service | 181 | Hair seller . |
| Door seller | 46 | Hakim (physician) |
| Draper | 140 | Hammer man |
| Draughtaman . | 176 | Haudloom worker |
| Drawiug ruaster | 173 | Hanger ou - . |
| Drug seller . | 178 | Harmooium repairer . |
| Drum maker | 96 | Hawker of cluth . |
| Drummer | 178 | Health officer . |
| Larwan | 181 | Hide curer .. . |
| Dye seller | 128 | Hide dealer |
| Earth worker | 86 | Hinge seller . . . . |
| Editor | 177 | Hulder of rent from property |
| Elementary school teacher -. | 173 | Hutueopathic doctor - |
| Elephant driver | 132 | Honey collector . . |
| Electric fitter | 93 | Honey seller |
| Electric light worker | 93 | Horn dealer |
| Embroiderer; ${ }^{\text {a }}$ - | 77 | Horn comb maker |
| Embroiderer in gold and silver | 98 | Horoscope maker |
| Engine driver (Railway) | 118 | Horse dealer |
| Eugine driver (anspecified) | 186 | Hospital nurse . . . |
| Engineer and surveyor | 176 | Hospital clerk . $\cdot$ |
| Estimator - . | 176 | Hospital cooly . . . |
| Erorcist | 179 | Hospital gervant - |
| Eye doctor | 171 | Hutel keeper . |
| Eye powder maker . | 60 | Hukka maker |
| Farmer of fishing wrights - | 154 | Hukks seller . |
| Farm servant on monthly pay. | 4 | Hunter - ${ }^{\text {a }}$ |
| Farmer (cultivator) . . | 8 | Ice factory worker - |
| Farrier . . | 48 110 | Idol dancer |
| Ferry man jimar - . | 110 9 | Idol maker and seller Indoor servant |
| Fire wood collector . | 147 | Indoor servant |
| Fire wood seller | 147 $\cdot 58$ | - Ink man (press) <br> Inspector of schools |
| Firework maker | - 58 | Iron foundry worker |
| Field labourer | 17 | Iron founder |
| Fiaherman <br> Eish broker | 122 | Iron monger . |
| Fiuh curer | 69 | Iron work mistry |
| Flatterer | 191 | Ironware factory |
| Flour seller . | 136 | 1 Ironing . |
| Flour grinder | 65 | Jailor . |
| Flute master | 178 | Jail warder |
| Fodder sLop | 139 | Jatra party . . |
| Forest Ranger | 8 | - Jatra party proprietor . . |
| Founder (iron) | 46 | Jetty markar |
| Fortune-teller | 179 67 | Jetty cooly . . . . ${ }^{\text {Jewellery maker }}$ |
| Friod rice maker | 67 | Jewellery maker - - * |
| Fried rice celler | 136 | Jewellery seller . - |
| Fruit seller | 135 | Jham cultivator • - |
| Eruiterer . | 135 | - Judge - - |
| Furniture seller | 141 | - Judge's court peon |
| Gambler | 191 | Judge's bearer - . |
| Gaaja seller - | 137 | Jungle cutter - - |
| Ganja society clerk | 137 75 | Jute broker |
| Ganja preparer Garland maker | 75 99 | Jute dealer <br> Jute weaver |




## GOVERNMENT OF BENGAL.

## REVENUE DEPARTMENT.

Jupisdlotion.
CALCUTTA, the 8te AUGUST 1923.

## RESOLOTION-No. 6241Jur.


#### Abstract

Read- The Report on the Census of Bengal and Silkim, 1921, by Mr. W. H. Thompson; I.c.s., Saperintendent of Censas Operations, Bengal.


Thé censns operations of the sixth census of Bengal, which was taken on the 18th March 1921, were conducted by Mr. W. H. Thompson, i.c.s. ; and separate reports have beөn prepared by him on Bengal and Sikkim and on the city of Calcatta. . These reports have been perused with much interest by the Governor in Council, who desires to place on record the following observations regarding the operations and their results.
2. The resalts of the census show that the population of the province has increased from $46,305,170$ in the year 1911 to $47,592,462$ in the year 1921. The area of the province, exclusive of the largest rivers, is 82,244 square miles and is practically the same as it stood on the 1st April 1912, when the provinces of Bengal, Assam, and Bihar and Orissa were reconstituted. The population is now larger than that of any other province of the Indian Empire; ten years ago it was rather less than that of the United Provinces, but Bengal has now just over a million more inhabitants than that province. Between each successive census from 1872 to 1911, the population grew in an increasing proportion, which rose from 6.7 per cent. in 1872-81 to 8 per cent. in 1901-11. This increase has now fallen to 2.8 per cent., and all parts of the prorince have felt the disabilities of the pist decade, amongst the chief of which were the phenomenal rise in prices caused by the war and the advent of influenza in disastrous epidemic form. With the exception of Howrab, Calcutta, the 24-Parganas and Khulna, the districts of Western and Central Bengal have lost population. In Northern and Eastern Bengal the districts have gained, except Pabna and Malda; as in the previons decade the Chittagong Division has been the most progressive locality in the province. The fwo districts which have done better in the present than in the previous decade are Jessore and Bakarganj, though Jessore still shows a small decline in population.
3. Density.-The average density of population is 579 persons per square naile compared with. England and Wales 64f, Beigium 662, the United Provinces 414, Bihar and Orissa 340, Madras 279: the Punjab 184, and Bombay 143. There are however great inequalities ranging from the sparsely populated hill tracts of Darjeeling, the Chittagong Hill Tracts and the Tripura State to the thickly populated industrial area of which Calcutta is the centre and to the centre of Eastern Bengal which supports a population of no less than 1,050 persons to the square mile. It is remarkable that the population is growing most rapidly in parts where the density is already great; but the statistics of agriculture analysed. in chapter I of the report would indicate that one reason for the difference in the growth in the popalation to the east and to the west is to be found in the fact that the soil on the east can support considerably more persons than it can on the west.
4. Urban population.-The urban population of Bengal, which is dealt with in chapter II of the Report, has increased by 8.2 per cent. during the decade 1911-1921 to 3,211,304, which is 67 per thousand of the whole population. Whilst, however, the average country town has grown only 2 per cent., the average industrial and commercial town outside Calcutta has increased by 16.9 per cent. As might be expected from the results given in the preceding
paragiaph, the towns of Western and Central Bengal which are not industrial contres have generally lost population during the decade, but such places as Bhadreswar, Baidyabati and Champdani have together increased by more than 40 per cent. Certain towns in Northern Bengal have grown considerably, notably Bogra by 35 per cent. and the railway centre of Saidpur by 63 per cent. Dacca has increased by 10 per cent. and has now a population of 119,450 inhabitants, within 500 of that of Patna and not quite half of that of Lucknow. The jute centres in Eastern Bengal have alse grown fast. Calcutta with its five suburbs, Cossipore-Chitpur, Manicktola. Tollygunge, the South Suburban Municipality and Garden Reach, and Howrah now has a population of $1,327,547$ or 4.3 per cent. more than in 1911 . G:owth has been slower than in previous decades, but on the other hand there has been a great development in suburban passenger traffic on the railways.
5. Migration.-The statistics of migration in and out of the province are discussed by Mr. Thompson in chapter III of the Report. Bengal has $1,839,016$ immigrants against 686,195 emigrants. These figures are however somewhat illusory, for on the whole the majority of the immigrants do not come to settle and make their homes permanently in Bengal. They come to Bengal, take up the lion's share of the employment which industrial development has thrown open, earn a little money and then go home again. There has been a remarkable development of permanent Muhammadan emigration from the district of Mymensingh up the Brahmaputra Valley into Assam.
6. Religion.-Muhammadans now form 53.55 per cent. of the population, Hindus 43.72 per cent., Animists 1.79 per cent., and others 0.94 per cent. Even as far back as 1881 Muhammadans were slightly more numerous than Hindus, but from decade to decade they have increased faster mainly because they predominate on the more rapidly increasing healthier and wealthier Eastern Bengal districts. Animists now number over threequarters of a million, Buddhists a littie over a quarter of a million, and Christians some 150,000 .
7. Age, Sex and Civil Condition.-Mr. Thompson has given more space in his reports than his predecessors did to the statistics of age, sex and civil condition aud has set forth in chapters $\dot{\text { V , VI }}$, and VII some valuable figures and interesting conclusions. The vast majority of the population can only guess at their ages, a failing which is by no means confined to the illiterate classes. Nevertheisss, Mr. Thompson has been able to show. how the statistics can be adjusted and analysed for practical purposes. Some of the characteristics of the statistics of sex are unusual as compared with those obtaining in European countries. There are only 932 females per 1.000 males as compared. with 1,101 in England, and there is a higher proportion of males at birth in urban than in rural areas. It is interesting to note that the proportion of femalos born per 1,000 males fell from 939 to 9.30 in the year 1914 , and this was the average for the next five years. A similar phenomenal fall has been observed in almost all countres during the war. both in councries actually at war and in other non-belligerent countries. The universality of

- marriage in Bengal continues to be the most remarkable feature of the statistics of civil condition ; thus, whilst only 55 females per 1,000 of the female population between the ages of 15 to 20 are unmarried in Bengal, the proportion in England and Wales is 988 . The average age of a bride in Bengal is 12 years and that of the bridegroom 20 years. It is however a significant fact that the age of marriage, especially of males, is rising. The other remarkable feature of these statistics is the large proportion of widows: more than onethird of the Hindu females between 30 and 35 are widows, and the proportion ises to two-thirds between 45 and 50 .

8. Infirmities. -The numbers afflicted with insanity ( 41 per $100 ; 000$ ), deaf-mutes ( 67 per 100,000 ) and lepers ( 33 per 100;000) are all less numerous than in 1911, but the number totally blind ( 72 per 100,000 ) is slightly more. Leprosy is very much less prevalent than it was 40 years ago. when it was
as common in the Rajshahi and Presidency Divisions as it is now in the Bardwan Dirision; the greatest improvement has been in the Presidency Division where the proportion of lepers to the total population is now only 29 per cent. of what it was in 1881.
9. Language.-Though 80 different languages are found spoken in Bengal, there is not another province in India which presents the same homegeneity in the matter of language, except the United Prorinces in which 99 per cent. speak some form of Hindi. Bengali is the mother-tongue of $9 z$ per cent. of the total population of Bengal. The other languages most frequently spoken are Hindi and Crdu spoken by 3.3 per cenc. The other languages are mainly Kherwari, Oriya, Tipra (Mrung), Eastern Paharia (Khaskura), Arakanese (Maghi), but there are many varieties of the TibetoHimalayan, Assam-Burmese and Draridian languages.
10. Education.-Anyone who corild write a letter to a friend and read an answer to it ras returned as literate in the census schedules. In Bengal only 104 per mille of the population of the age of 5 and over hare reached this standard - 181 per mille in the case of males and 21 per mille in the case of females. There has beeu considerable progress since 1911 when the corresponding proportion for males was 161 and for females only 13 ; and Bengal stands nest to Burma, which leads the rest of India in this respect. The rate of literacy is highest in the Presidency Division.
11. Caste.-There was no sign of revolt against the caste system. As usual, the entry of caste in the census schedules created some disturbance in the public mind. Those who belong to Hindu castes low down in the social scale who bave begun to share in the privilege of education put formard various extravagant claims to caste distinction by meane of the adoption of a new caste name. In ancient times the king was the last appellate anthority on the question of caste, and at the census attempts were made to thrust the Census Superintendent into a similar position-a position which he rightly refused to accept. These attempts howerer at changing caste render the statistics of caste less reliable than they were formerly and certainly make their comparison with the results of any previous census less valuabl It is not uninteresting to note that the Census Superintendent estimato that the. numbers of the depressed classes in Bengal amount to $11,250 \mathrm{na}$.
12. Occupation.-Pasture and agriculture serport some four-fifths of the population, including those who depend un-1 agricultural rents and their agents. About tro-thirds of the, total an ordinary cultivators. Industry sapports only $7 \frac{1}{2}$ per cent. of the popalocion, transport $1 \frac{1}{2}$ per cent., and trade a little more than 5 per cent. of tbr cotal. The professions and liberal arts support a little over $1 \frac{1}{2}$ per cest. Domestic servants (less than $1 \frac{1}{3}$ per cent.) are comparatively few. 1 ung with the census a special count of handlooms was made. which shows that though hand-spinning has almost disappeared, hand-wearing with machine-made thread is-still an important industry. The statistics of the industrial census obtained by means of returns which were filled up by the owners and managers of all factories with ten or more employecs bave been carefully tabulated and should prove valuable.
13. Costs of the operations.-The total additional expenditure incurred by Government and the Corporation of Calcutta on account of the census operations amounted to Rs. $3,55,771$ as compared with Rs. $3,02,781$ in 1911. The increase is almost entirely due to the increased rates of par which had to be given to the clerks and others engaged in tabulation sad compilation. As usual. the bulk of the work of the actual censue was performed by a large host of unpaid workers who deserve great praise for the efficient performance of their duties.
14. General.-In conclunion His Excellency in Council desirs, is expreses his appreciation of the excellence of the organisation of thes operations and the accuracy aud eare with which they were carried out. In particular, be wishes to thank Mr. W. H. Thompson for his services in organising and conducting the operations and for his eminently valuablo and interesting report. Ho also desires to thank the District Ufficers and thr: numerons officials and nou-officials who helped to bring the operationg to a successful conclusion for their valuable services. The namex, of the officers commended by Mr. W. H. Thompson for their gord work will be recorded in the Appointment Department.

By order of the Governor in Council,
M. C. McALPIN,

Secretary to the Government of Bengal.

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[^0]:    These figures differ from those appearing in diagram No. 5 becance here the hill districts are excloded.

[^1]:    

[^2]:    

[^3]:    - Imperial Gasetteer of India (1907), Folome I, page 431.

[^4]:    - In aldition 78 Europenna, 9 Anglo. Indiana and 36 Indians returned indefinite beliofa based on Wentern methods of thought.

[^5]:    - Report published on page 496 of Vol. II of the Proceedings of the All-India Sanitary Conference held at Madris, 1912.

[^6]:    but the difference has been greater in respect of deaths than in respect of births, and the proportion of females living in 1911 had been reduced by 1921 rather more than in the Province as a whole. In Central Bengal, the proportions at birth and in death are both below the average proportions to much the same extent, and the reduced proportion of females is due in the main to migration. In Northern Bengal, the proportion of females at birth has been higher than the average and the proportion at death lower, with the result that the reduction of the sex proportion in the population does not show itself as in the rest of the Province. In the Dacca Division, the proportion at birth and death are much the same as on the average for the Province and the reduction of the sex proportion much the same also. In the Chittagong Division, the proportion of females at birth has been low and at death high, and the reason why the sex proportion has not fallen lower, is the emigration of males to Burma, the Chittagong Hill Tracts (excluded from the table because vital statistics are not returned in that district), Tripura State and elsewhere.

[^7]:    - Sir George Grierson in the introduction to his pamphlet comparing the statiatics of the Linguistic Sarvey of Iodia with the langunge figures of the Census of 1911 .

[^8]:    
    $61 \%$

[^9]:    

[^10]:    

