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# CENSUS OF INDIA, 1921.

## VOLUME XXV.

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# TRAVANCORE.

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## PART V.—ADMINISTRATIVE VOLUME.

BY

MURARI S. KRISHNAMURTHI AYYAR, M. B. & C. M.,
FELLOW OF THE ROYAL STATISTICAL SOCIETY,
CENSUS COMMISSIONER, TRAVANCORE.



TRIVANDRUM
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# CENSUS OF INDIA, 1921.

## TRAVANCORE.

### PART V.

# ADMINISTRATIVE VOLUME.

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## CHAPTER I—ENUMERATION.

**1. Appointment of the Census Commissioner.**—The appointment of the Census Commissioner was made on the 8th November 1919, 16 months before the Final Census, while in the 1911 and 1901 Censuses, the appointments were made 17 and 18 months, respectively, in advance of the Final Census. Officers in charge of the Census Operations in all Provinces and States in India, are designated "Provincial Superintendents" except in the case of Travancore where the officer is designated "Census Commissioner" as a special case.

**2. Interview with the Census Commissioner for India.**—I was relieved of the duties of the Sanitary Commissioner and put in exclusive charge of the Census on the 16th August 1920, interviewed the Census Commissioner for India in Madras on the 6th November 1920 and discussed with him the arrangements made here. Copy of Notes on the interview is given in Appendix I.

**3. Records of the last Census.**—The first duty of the Census Commissioner after his appointment is to get all records of the previous Censuses and books of reference from the Huzur Office where they are kept. A list of the records, by no means a complete one, was found among the records and as per that list, the records were taken. As there was no knowing, whether during the interval between Censuses, any of the contents of files had been removed for reference and if so kept back, all the records required were not found. As regards books of references, some were missing. In the absence, in the present staff, of any officer who worked in the superior grade in the last Census, everything have had to be done *de novo*. In the interval between Censuses, several important matters bearing on Census might have been published and if there does not exist a Department entrusted with Census work, there is no chance of those publications being got and notes taken from them for the next Census.

**4. Census Regulation and the Appointment of Census Officers.**—The first operation in connection with Census consists in the passing of the Census Regulation and the issue of a Notification in the Gazette by Government informing the public of the taking of the Census and requiring all officers of Government to render every possible assistance for the purpose. The Division Peishkars and Commissioner, Devikulam and the Heads of the Forest, Marine, Police, Excise, Sanitary and other Departments, the members of which are entrusted with Census work are to be appointed as District Officers and the Tahsildars, Presidents of Municipal Councils, Sanitary Officers and Divisional Forest Officers as Charge Superintendents. For Enumerators and Supervisors, the school masters may be appointed as was done in this Census as the step was found to be satisfactory.

**5. Village Register.**—The preparation of the Village Register should be taken up in hand early. If before the next Census, Revenue Settlement Operations have not been undertaken and the Pakuthies sub-divided into convenient units of

G. P. T. 1908-250. 20-6-23.

administration, the old undefined Karas will have to be taken as units in Rural areas and Census Towns, and Wards in Municipal Towns. Pakuthi and Town maps showing the boundaries of Karas and Wards should be got from Tahsildars and Presidents and the changes made in the boundaries since this Census, should be distinctly shown in the maps.

**6. Census Divisions.**—Each Municipal Town and each Taluk excluding the Municipal area and each Division of the Reserved Forest may be constituted into a Charge and placed under a Charge Superintendent. In Municipal Towns, a Block may consist of 50 houses and 30 houses in Rural areas. Special areas or institutions as Railway Stations, Jails, Seaports, big Landing Ghats, Military Lines, etc., should be formed into separate block or blocks. Also portions excluded from and included in any area during the intercensal period should be treated as separate block or blocks. Reserve Forests situated in the midst of inhabited Karas should be constituted as special blocks of the Karas, while those quite separated from and outside the control of Revenue authorities should be formed into separate Karas called "Hill Karas" of the Pakuthi. Similarly outlying parts of the Taluks should be constituted into separate Pakuthies called "Hill Pakuthies" of the Taluk and the Forest Department entrusted with the Census work in them.

**7. Issue of Calendars and Census Code in advance.**—It will be necessary before the commencement of the operation that a calendar showing the dates on which each operation should be commenced and completed, and the date of submission of several returns, be drawn up and published so that the officers may know beforehand what all are required to be done and when they should be done. The Code of Census Procedure, Part I, should be prepared sufficiently early and supplied to the Superintendents as soon as they are appointed. The instructions for House Listing and House Numbering should be printed on the wrappers of the schedules of House Lists so that they might always be at hand for ready reference to the subordinates entrusted with the work. Sufficient interval, say one month, should be left between each operation to allow time to review the returns of each operation and point out defects.

**8. House Listing and House Numbering.**—Instead of preparing one House List for each unit and extracting from it the Block List to be attached to the Enumeration Book, House Lists for each block should be prepared, at the first instance, for each block of the units instead of all the blocks. For House Numbering, stencil plates, though supplied this time, have not been used in Rural areas. It is reported that with an ordinary brush, the House Numbering can be better and more quickly done than with stencil plates. Except in the case of Towns, the use of stencil plates may be dispensed with. The House Listing and Numbering should be entrusted to the regular Revenue agency in Rural areas and Conservancy staff in Towns.

**9. Preliminary Enumeration.**—For Preliminary Enumeration, the Enumerators should be given training immediately after their appointments, by the Charge Superintendents. Complete instructions should be printed on the wrappers of Enumeration Books. The posting of Enumerators was done this time at this office and this increased the office work enormously. The Charge Superintendents may be entrusted with this duty. There should be one Enumerator for 3 blocks in Rural areas and 5 in Towns and a Supervisor for each unit. The teacher-enumerators should be posted to places in which their schools are situated so that the help of their students may be made available to them. At least the Supervisors should, if possible, be selected from persons having previous Census experience. Considering that education has much advanced in the State and particularly in Towns, the Household Schedules should be freely used as information supplied in them is found to be complete and accurate.

**10. Final Census, Non-Synchronous Tract and Provisional Totals.**—The power of appointments of Enumerators and Supervisors for the Final Census should be given to the Charge Superintendents as was done this time. For each block, there should be one Enumerator and for every 10 blocks, a Supervisor.

As long as this State is declared to be non-synchronous area on account of the difficulty of taking night Census, no further division into synchronous and non-synchronous in a non-synchronous area is correct. Either the Census should be taken on the morning of the date fixed for the Census in India or the next morning and the Census throughout the State, including the inmates in Hospitals, Jails and Asylums, and Travellers, etc., should be taken at one and the same time. The Charge Superintendents should be asked about the facilities for the communication of the Provisional totals after the Final Census and suitable arrangements made for such communication.

**11. Special Arrangements for Railways, Ports, Etc.**—Special arrangements on the lines followed this time and described in the Census Code and instructions issued by the Census Commissioner for India in this connection should be adopted.

**12. Special Censuses.**—For Factory Industrial Census, the instructions issued by the Census Commissioner for India should be followed. It is better that if any other special Census be taken, it should be done by the regular Revenue and Conservancy agencies, some time either before or after the Preliminary Enumeration so as not to interfere with it and the Final Census.

## STATEMENTS.

### I. Census Divisions and Agency.

| DIVISION. | NUMBER OF | | | NUMBER OF | | | AVERAGE NUMBER OF HOUSES PER | | |
|---|---|---|---|---|---|---|---|---|---|
| | Charges. | Circles. | Blocks. | Charge Superintendents. | Supervisors. | Enumerators. | Charge Superintendent. | Supervisor. | Enumerator. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Southern . | 17 | 230 | 9,133 | 16 | 247 | 2,565 | 13,458 | 871 | 83 |
| Central . | 22 | 197 | 10,114 | 18 | 225 | 3,602 | 15,651 | 1,252 | 78 |
| Northern . | 18 | 164 | 9,349 | 17 | 241 | 2,666 | 14.879 | 1,049 | 94 |
| High Range . | 3 | 39 | 909 | 2 | 181 | 393 | 5,920 | 65 | 30 |
| Total . | 60 | 630 | 29,505 | 53 | 894 | 9,226 | 14,374 | 852 | 82 |

### II. Number of Forms Supplied and Used.

| DIVISION. | (A)—SUPPLIED. (B)—USED. | | | | | | | | | | | REMARKS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | * Enumeration Book Covers. | | * Block Lists. | | GENERAL SCHEDULES. | | | | * OTHER FORMS ISSUED. | | | |
| | | | | | Actual Number. | | Per 100 Houses. | | Household Schedules. | Boat Tickets. | Travellers Tickets. | |
| | a | b | a | b | a | b | a | b | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Southern . | 11 | 10 | 11 | 10 | 92 | 90 | 43 | 42 | 8 | .. | 18 | |
| Central . | 11 | 10 | 15 | 14 | 122 | 118 | 43 | 42 | 11 | 6 | 19 | |
| Northern . | 12 | 11 | 13 | 12 | 103 | 100 | 41 | 39 | 8 | 3 | 22 | |
| High Range . | 1 | 1 | 2 | 1 | 10 | 9 | 85 | 77 | 1 | .. | 2 | |
| Total . | 35 | 32 | 41 | 37 | 327 | 317 | 43 | 42 | 28 | 9 | 61 | |

* 000s omitted.

## III. District Census Charges.

| District or State. | District Office Establishment. | House Numbering. | | | Remuneration of Census Officers. | | | Travelling Allowances of Census Officers. | Local Purchase of Stationery. | | | Postage. | Freight. | Miscellaneous | Total. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | | | 4 | | | 5 | 6 | | | 7 | 8 | 9 | 10 | | |
| | | Rs. | Ch. | C. | Rs. | Ch. | C. | | Rs. | Ch. | C. | | | | Rs. | Ch. | C. |
| Southern | ... | 80 | 10 | 10 | 279 | 13 | 2 | ... | 8 | ... | ... | ... | ... | ... | 367 | 23 | 12 |
| Central | ... | 108 | 16 | 4 | 235 | 22 | 7 | ... | 36 | 23 | 14 | ... | ... | ... | 381 | 6 | 9 |
| Northern | ... | 123 | 5 | 9 | 328 | 12 | 0 | ... | 23 | 15 | 0 | ... | ... | ... | 475 | 4 | 9 |
| High Range | ... | 3 | 26 | 4 | 82 | 20 | 4 | .. | ... | ... | ... | ... | ... | ... | 86 | 18 | 8 |
| Total | ... | 316 | 2 | 11 | 926 | 11 | 13 | ... | 68 | 10 | 14 | .. | ... | ... | 1,310 | 25 | 6 |

## CHAPTER II.

### ABSTRACTION AND TABULATION.

**13. Census Offices.**—The office of the Census Commissioner was organised with one clerk and 2 peons and at the beginning of the Malabar Year 1096, the strength of the office staff was as follows :

| | |
|---|---|
| Manager (1) | Clerks (8) |
| Accountant (1) | Peons and Daffadar (9) |
| Typist (1) | Mochee (1) |

The Permanent Advance was Rs. 50 at first and subsequently increased to Rs. 200. The office was located till the end of the Malabar Year 1095, *i. e.*, for a period of 8 months, in my private quarters free of rent and then removed to the completed buildings of the new Ophthalmic Hospital under construction. The Central Office and the Slip Copying, Sorting and Compilation offices were also held in the same building. As the number of public holidays inclusive of Christmas holidays and Sundays comes to about 100 in a year and if all the holidays are to be availed of, the work will suffer much, the office should be closed only on important holidays and Sundays.

**14. Slip Copying.**—The slip copying was done this time at the Central office. It was given to understand that the system followed last time in having the work conducted in Taluks was found to be unsatisfactory and caused much confusion and difficulty in the Central office. The advantages of having the work performed under the eye of the Census Commissioner cannot be denied, but the disadvantages are also many. The Copyists and Sorters are generally youths just fresh from schools and not expected to realise their responsibilities and not amenable to discipline. It is well known that only in big towns where there are several educational institutions and a large number of educated men not dependant on Government service, that agitations on political and social problems are much in evidence than elsewhere. The views are likely to spread more in places where a large number of educated youths are collected as in a Central Census Office. This time when these persons came to know of the attempted strike in the Madras Census Office for lowering their outturn and increasing their wages, they attempted to strike work here ; but the attempt was nipped in the bud. Again, there was a strike attended with disturbances among the school boys in connection with the raising of school fees and unfortunately the Census Office happended to be in the midst of the storm centres, the High Schools, where the disturbance and strike originated. The Sorters, many of whom had just left schools and had therefore many friends and school mates among the students on strike, sympathised with them and prepared to join them. Even in this they were frustrated. With all the success in preventing strikes, Police Guards have had to be put in the office both day and night to see that the slips are not removed or otherwise interfered with. The whole period was one full of anxiety and uneasiness.

**15. The defects in having the Copying done in Taluks.**—The inconvenience and difficulty felt last time in having the slip Copying conducted in Taluks do not appear to be caused by any fault in the system itself, but only due to the procedure followed. The copied slips should not have been sent to the Central Office. The Sorting also should be done at the place where slips are copied. The second defect consisted in entrusting the work to Tahsildars (Charge Superintendents) who have multifarious duties to perform. The best way is to form one office for each Revenue Division at its Head Quarters, the work of the High Range Division being attended to at Kottayam and each office put in charge of a selected officer and trained at the Central Office. The whole work from the slip copying to the preparation of the Compilation Registers should be done there. The special officers should be appointed a couple of months before the Final Census and given training by the Census Commissioner. The Census Code, Part II, should be drafted by them under the supervision of the Census Commissioner and printed and each supplied with a copy. It is not difficult to find the required staff in each Division, inasmuch as on

the present occasion several Copyists from the mofussil parts had applied and were appointed. The Census Commissioner may go out on tour and examine the work done at each office. This arrangement will be both economical and efficient.

**16. Sorting.**—The order in which the Tables are taken for sorting requires modification from that given in the Imperial Code of Census Procedure. No sorting of slips is required for the preparation of the first 6 Tables. Instead of taking Table VII first, Table XIII may be taken. After that, Tables IX, XXI, X, XI, XVII, XIX and XX. These do not require sorting by age periods. Then VII, VIII, XIV, XV and XVI may follow.

**17. Units for Sorting.**—The smaller the units taken for sorting, the more accurate are the results obtained though it may involve much time and trouble. The detection of omissions and their rectification are easier in small units. This time for 3 Pakuthies where mistakes were found, re-sorting was done. One sorter was detected placing Chetty slips (non-Malayali) under Malayali. About 200 slips of one Pakuthi were missing and re-sorting of the Pakuthi was done and on account of difference among sorters, as to the joining the student strike or not, the slips of the sorters not inclined to join the strike, were found removed and placed among the slips of others. If Taluks have been taken as units it would not have been possible to detect mistakes and much less to rectify them. It may be possible to know whether in a village a particular caste predominates or not. If it is found in sorting the village that the number is low, doubt will be roused and slips may be taken to find out the mistakes and rectify them. If on the other hand, Taluk is taken as unit the difference in the number of the particular caste may not be striking and even if doubts arise it is not possible to find in which village of the Taluk it is to be found.

**18. The Use of Slips.**— From the intimate knowledge acquired in this Census in the use of slips, I am inclined to doubt whether the slip system is the best one and whether the old system of strokes which was superseded by the slip system cannot be improved. The chances of error are multiplied in the slip system and besides there are other drawbacks. Difficulty was experienced at the close of copying, on account of the misplacement, of the want of slips for Musalmans and some categories of the Christians. The required colour papers for the slips were not available either in the shops or Stationery Department and no time had to be lost, as delay for a day means the loss of Rs. 150, the pay of the Copyists for a day. Other papers were used and the particulars stamped with rubber stamp. When the copying is made from the schedules in the slips there is the chance of mistakes being made and again when the sorting is made, the entries in the slips which are not always legible, there is again the chance of mistakes arising. In addition, there is the chance of putting the slips in the wrong pigeon-holes and lastly there is the difficulty in counting. It is within the experience of officers now whose pay is disbursed in one rupee notes that they have to be counted several times before being satisfied with the number. Besides, the slips being of different colours, the impression left by pencil writing is not always clear in all of them. And certainly after repeated handling with wet and greasy hands, the entries become illegible and the slips stick together and when they are separated the entries are completely obliterated. In addition to the usual disadvantages incidental to the slip system observed in other parts, Travancore has to meet with peculiar disadvantages. The time when the sorting commenced coincides with the onset of the Monsoon and by the time the last and most difficult Table (XVII—Occupation) is taken up for sorting, the Monsoon is at its height and the daily rains and absence of sunshine seriously interfere with the sorting of the already illegible slips. The advantage obtained from this slip system is said to be that it saves time and labour ; but even this does not seem to be correct. If Tabulation is done at the Head Quarters of each Division, it may be possible to get Copyists and Sorters on a rate of pay lower than that given in this Census for they had come from distant places for Rs. 15 this time.

**19. The Drawback in the System.**—The chief defect in the old system is said to be the confusion caused by the "Sea of Strokes". But if smaller units are taken for Tabulation, this defect can be removed. After the close of sorting, I tried

the old system as an experiment. It was found that a Sorter was able to prepare the compilation register for all the 15 Tables (VII to XXI) from an Enumeration Book in 3 days. At this rate, the Copying, Sorting and Compilation, leaving the preparation of the Imperial Tables, can be finished for the whole population by 200 persons in 6 months time. The time actually taken for conducting these operations in this Census was 8 months and the average number of persons daily at work was 230. Thus, there is not only saving of time but of expense also by adopting the old method. As regards accuracy, the old system is by far the best adapted to secure it. The most inportant advantage in this system is that it is possible to compare the total number in each Table with the total number given in the wrapper of each enumeration book and satisfy that nothing is omitted. The time taken and expenses involved in getting down the slips and enumeration schedules to the Central offices and checking them are saved. The cost of stationery and printing of slips is a substantial saving.

**20. Printing of Forms, Tables and Report.**—One of the important items to be attended by the Census Commissioner after getting all the records of the previous Censuses is to settle the Press where the Forms, Tables and Reports have to be printed. In previous Censuses, while the forms were printed in the Government Press, the Reports and Tables were done in private Presses. In British Indian Provinces where there are Government Presses and facilities for undertaking Census work exist, the work is done there and it seems to be but right that all Government work which can be done in Government institutions should be invariably done there. This time the whole printing work was done at the Government Press. The work done as far as the printing of forms and the Report is indeed satisfactory. But, the printing of Tables was not so. According to the rules of printing once the strike order is given, the Press does all the work and the author sees only the completed volume. As the office of the Census Commissioner for India requested for the supply of a copy of each of the finally printed Tables in advance, I got a copy of each Table and when I perused them I was surprised to see that while the Census Commissioner for India had detected and made corrections for 68 mistakes in all the Tables, the final copies had come out with 115 mistakes, including a few of the corrected mistakes of the Census Commissioner for India not being embodied. It is not known whether the finally printed Tables are usually verified in other provinces and if so done whether they will be found free from mistakes. Anyhow as I detected the mistakes, corrigenda became necessary and they were added at the end of the Volumes. If it is decided in the next Census to have the work done in the Government Press, I would advise my successor to pay particular attention to the following points:—

(1) To satisfy himself that the required quantity and quality of types are in stock.

(2) To have a special staff consisting of experienced compositors and proof readers and examiners appointed solely for the Census.

(3) As the number of holidays in the Press comes to about 120 days in a year, all except for important holidays and Sundays, the work should not be stopped.

(4) An officer experienced in proof reading and correcting should be appointed in the Census Office and he must attend the Press daily to see that the work is carried on properly.

If it is decided to have the work done in Private Presses, conditions must be prescribed as to the size of the type to be used and the number of lines to be printed in a page. In the previous Census Reports, the types are big and only 50 lines are found on a page while in the Reports of British Indian Provinces, the types are smaller and 60 lines are printed on a page. If these details had been attended to the cost of printing and stationery and the bulk of the Report could have been reduced.

The question of cost requires consideration. The practice, however, of debitting the cost of types purchased, additional accommodation provided, etc., to the Census is incorrect, particularly so, when it is not certain that the types purchased

are solely used for Census and that they are not disposed of and the sale proceeds credited to the Census, after the completion of the work. This procedure does not seem to obtain in British India.

**21. Stationery.**—The arrangement for the supply of stationery is as important as that of printing. It is usual to get the supply from the Government Stationery Department. But it must be said that the supply this time was not satisfactory and it is evidently due to the rise in the price of papers and their diminished output. The paper for slips was recommended to be of a certain colour and thickness; but as papers of the required sort were not available at the Stores and in the local shops, they were not supplied. To facilitate handling in sorting, the paper should be thick and in order that the pencil entries made in them be legible after repeated handling, the colour should be light. But the papers supplied were thin and of deep colour and much difficulty was felt and much time was spent in sorting. The supply of paper for the Report was not as recommended by the Census Commissioner for India. Instead of printing paper, writing paper was supplied. The advantage of using printing paper is that big tables can be printed in them and afterwards cut into foolscap size. But the writing paper being of foolscap size, great difficulty was felt in printing big tables and the figures have to be crowded. This has in a way contributed to the unsatisfactory printing of the tables. The kind of paper recommended for printing full page diagrams was not supplied in time. As the paste boards in stock in the Stationery Department was found insufficient, the Census Commissioner had had to arrange and purchase them. It would facilitate work if all the items of stationery required for the whole Census work be got down and kept in the Census Office and issued to the Press when required instead of getting now and then from the Stationery Stores.

## CHAPTER II.—STATEMENTS.

### I.—Copying the Slips.

| OFFICE. | Population dealt with. | Number of Copyists. | DATE OF | | Average daily out turn per head. | Remarks. |
|---|---|---|---|---|---|---|
| | | | Commencement. | Completion. | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Travancore ... | 4,006,062 | 285 | 4th April 1921. | 18th June 1921. | 414 | |

### II.—Sorting.

| PERIOD. | NUMBER OF UNITS SORTED FOR TABLE NO. | | | | | | | | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | VII. | VIII. | IX. | X. | XI. | XII. | XII—A. | XIII. | XIV. | XV. | XVI. | XVII. | XVIII | XIX. | XXI. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| Up to the end of May 1921. | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | | |
| June ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | |
| July ... | 473 | ... | ... | ... | ... | ... | ... | ... | | ... | ... | ... | ... | ... | ... | |
| August ... | ... | 473 | ... | 473 | 473 | ... | ... | 439 | 473 | 473 | 473 | ... | ... | ... | ... | |
| September ... | ... | ... | 473 | ... | ... | 473 | 473 | 34 | ... | ... | ... | ... | ... | ... | 444 | |
| October ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 473 | 473 | 473 | 29 | |
| Total .. | 473 | 473 | 473 | 473 | 473 | 473 | 473 | 473 | 473 | 473 | 473 | 473 | 473 | 473 | 473 | |

## CHAPTER III.—FINANCE.

**22. Census Expenditure.** In the calculation of the Census expenditure, no uniform principle has been followed. The pay of the Census Commissioner was not included in 1901 Census while it was included in 1911. I have given in the annexed Statement the expenditure incurred and the figures are compared with those of the last Census.

In British India while the cost of printing including the preparation of maps done at the Government Presses and Survey Departments are not included in the Census charges, the cost of stationery supplied from the Stationery Stores to the Census seems to have been included in the Census expenditure. In this State, the cost of stationery supplied from the Stationery Department for the Census is not included in the Census expenditure whereas the cost of printing done in the Government Press and of maps prepared in the Survey Department are included. The statement of expenditure incurred and disbursed from the Census Department Budget, is given below for each year, under several heads and the total for 1911 Census is also given for comparison.

STATEMENT OF CENSUS CHARGES.

| Serial No. | Item of Expenditure. | 1095. | | | 1096. | | | 1097. | | | 1098. | | | Total. 1921 | | | Total. 1911 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Rs. | ch | c. | Rs. | ch | c. | Rs. | ch | c. | Rs. | ch | c. | Rs. | ch | c. | Rs. | ch | c. |
| 1 | Census Commissioner's Salary | 827 | 16 | 6 | 8,601 | 8 | 2 | 8,640 | .. | .. | 3,180 | .. | .. | 21,248 | 24 | 8 | 21,943 | 21 | ... |
| 2 | Personal Assistant's Salary. | .. | .. | .. | 450 | .. | .. | 1,748 | 12 | 4 | 450 | .. | .. | 2,648 | 12 | 4 | 5,162 | 3 | 8 |
| 3 | Manager's Salary | .. | .. | .. | 1,200 | .. | .. | 1,675 | 22 | 3 | .. | .. | .. | 2,875 | 22 | 3 | | | |
| 4 | Pay of Office Establishment | 649 | .. | 7 | 4,579 | 22 | 6 | 4,949 | 1 | .. | 1,866 | 23 | 13 | 12,044 | 19 | 10 | 11,960 | 22 | 10 |
| 5 | Remuneration to Supervisors and Enumerators of Preliminary Enumeration | .. | .. | .. | 926 | 11 | 13 | .. | .. | .. | .. | .. | .. | 926 | 11 | 13 | 7,135 | 4 | 1 |
| 6 | Pay to Temporary Tabulation Establishment | .. | .. | .. | 13,643 | 3 | 3 | 14,879 | 20 | 12 | .. | .. | .. | 28,522 | 23 | 15 | 13,974 | 17 | 4 |
| 7 | Office rent | .. | .. | .. | 66 | 3 | 9 | 87 | 14 | .. | .. | .. | .. | 153 | 17 | 9 | 1,319 | 19 | 13 |
| 8 | Purchase and repair of furniture | 447 | 20 | 14 | 2,599 | 15 | 9 | 49 | 27 | .. | .. | .. | .. | †3,097 | 7 | 7 | 949 | 16 | 11 |
| 9 | British Postal charges | 14 | 14 | 2 | 76 | 11 | 5 | 17 | 4 | 15 | 10 | 1 | 7 | 118 | 3 | 13 | 100 | 19 | 1 |
| 10 | Telegram charges | 8 | 14 | 11 | 110 | 11 | .. | 35 | 21 | 2 | 5 | 13 | 4 | 160 | 4 | 1 | 155 | 15 | 5 |
| 11 | Travancore Anchal charges | 165 | .. | .. | 1,104 | 21 | .. | .. | .. | .. | .. | .. | .. | 1,269 | 21 | .. | ... | ... | ... |
| 12 | Printing and binding of Report, Tables and Forms | 189 | 14 | 6 | ‡7,565 | 7 | 8 | 1,081 | 10 | 1 | 2,300 | .. | .. | 11,136 | 3 | 15 | 5,880 | 26 | 15 |
| 13 | Printing of maps and diagrams | .. | .. | .. | .. | .. | .. | 333 | .. | 14 | 479 | 13 | 14 | 812 | 14 | 12 | *4,991 | 13 | 6 |
| 14 | Purchase of books and periodicals | 116 | 27 | 13 | 127 | 15 | 8 | 89 | 13 | 13 | .. | .. | .. | 334 | 1 | 2 | 197 | 20 | 4 |
| 15 | Purchase of Tar | .. | .. | .. | 316 | 2 | 11 | .. | .. | .. | .. | .. | .. | 316 | 2 | 11 | 126 | 2 | 8 |
| 16 | Purchase of Stencil Plates. | .. | .. | .. | 279 | 25 | 8 | .. | .. | .. | .. | .. | .. | 279 | 25 | 8 | 152 | 19 | ... |
| 17 | Card board tickets | .. | .. | .. | 577 | 20 | 9 | .. | .. | .. | .. | .. | .. | 577 | 20 | 9 | 108 | 14 | 6 |
| 18 | Miscellaneous | 116 | 13 | 12 | 1,694 | 13 | 2 | 368 | 6 | 13 | 146 | 12 | 14 | 2,325 | 18 | 9 | 1,682 | 18 | 1 |
| 19 | Travelling allowance | .. | .. | .. | 611 | 4 | 10 | .. | .. | .. | .. | .. | .. | 611 | 4 | 10 | 1,175 | 4 | 2 |
| | Total | 2,535 | 10 | 7 | 44,530 | 1 | 7 | 33,955 | 14 | 13 | 8,438 | 9 | 4 | 89,459 | 7 | 15 | 77,017 | 5 | 15 |

† The amount realised by the sale of furniture was 1991-27-3.

‡ This amount includes the cost of the Types (6456-21-2) and cost of accommodation (383-7-0).

* Of this amount Rs. 4,000 was spent for the purchase of camera and outfit for the preparation of maps.

¶ The amount does not include the charges for printing Forms and Slips.

# APPENDIX I.

## NOTES ON THE CENSUS ARRANGEMENTS IN TRAVANCORE.

### Travancore.

I had a talk with Dr. S. Krishnamurthi Ayyar at Madras about the Census arrangements in Travancore.

2. The arrangements in this State are peculiar, in that on account of the dearth of Enumerators the preliminary enumeration is done by a limited official staff who divide up the Blocks between them, each man taking 3 or 4 Blocks. For the final enumeration the officials of the State are specially mobilized so that each Enumerator after 4 or 5 days' training is able to revise the Schedules of a single Block and thus complete the Census. On the present occasion by employing schoolmasters the Superintendent of Census Operations has been able to raise 8,638 Enumerators for the preliminary enumeration as against 1,294 at last Census. This is very satisfactory and should secure greater care and accuracy in the Census.

3. The Census divisions are based on the previous organization, the *Kara* or residential village being the village unit and the Taluk the Charge. The returns of the number of Circles and Blocks are not yet complete but operations are well forward house-numbering being almost completed; and as the staff is composed almost entirely of State officials the final arrangements should present little difficulty. The Superintendent of Census Operations thinks that there will be no hitch over the railway enumeration and that the new rules will work well. Special arrangements are being made for the floating population on the sea, canals and backwaters, the organization centering round the customs *chowkey* and mooring ghats. There will be no place in which no final enumeration is made but throughout the State the final enumeration will be done by day instead of by night.

4. The Schedule closely follows the Standard Schedule, sects of religions will not be taken nor, in most cases, subcastes, but the distinction between Malayala and Non-Malayala will be made throughout. I notice that the draft instructions still retain the distinction "from birth" in the case of deaf mutes. This has been discarded and the instructions should be corrected accordingly. As at last Census the number of those suffering from elephantiasis, a disease prevalent in the State, will be asked. Special columns are inserted to obtain the number of persons who have *migrated from* the village within the last ten years. This would hardly be considered an appropriate enquiry on a General Schedule but it is rendered possible by the special conditions and should give some useful statistics.

5. Tabulation will be carried out at a Central Office at Trivandrum where the necessary clerical labour is available. Paper for the Schedules and slips has been obtained locally and the printing is undertaken by the Government Press.

6. The Superintendent of Census Operations has instituted some interesting subsidiary enquiries on various subjects by means of special questionnaire. Besides the Special Industrial Schedules for organized industries there is a Schedule for non-factory (*i. e.*, Cottage Industries) asking for detailed returns both of persons engaged and material used in manufacture. There is also a full questionnaire regarding the size of families and some special returns are being collected from hospitals which also bear on the question of fecundity. The Superintendent of Census Operations hopes that the conditions under which these enquiries are undertaken will secure a high degree of accuracy in the statistics obtained. If this is so, the information will be of considerable interest and value, but the Superintendent of Census Operations should not hesitate to reject any material of the accuracy of which he has any doubts whatever.

Pachmarhi,
The 1st December 1920.

(Sd.) J. T. MARTEN,
*Census Commissioner for India,*
7-11-20.

## APPENDIX 2.

## EXTRACT FROM ADDENDUM TO FIFTH NOTE ON THE CENSUS OF 1901.

### The ages of the people.

It is easy to calculate the mean age of the population by sex and civil condition. In order to ascertain the number of years lived by the aggregate population we must first determine the total number of persons living at the close of each age period. The sum of these totals multiplied by 5, the difference of the age divisions, and raised by two and-a-half times the number of persons of that sex or civil condition, gives the number of years lived. The mean age is obtained by dividing this last number by the number of persons living.

An example taken fron the report which I quote will show how the calculation is worked in detail:—

Resultats Statistiques du Denombrement de 1891, Paris 1898 Pages 223, 224 and 414.

| | |
|---|---|
| Number of males enumerated ... ... | 18,932,354 |
| Deduct age not stated ... ... | 9,859 |
| Male population for the purposes of the calculation ... | 18,922,495 |
| Deduct population under 5 .... ... | 1,667,153 |
| Remains population living at 5 and over ... | 17,255,342 |

Adding to population under 5 the population under 10 and deducting the total from the original 18, 922,495 we get—

| | |
|---|---|
| Population living at 10 and over ... ... | 11,577,495 |
| and so on | |
| Sum of these totals ... ... | 111,141,696 |
| Multiplied by 5 ... ... | 555,708,480 |
| Initial figure (third line) multiplied by $2\frac{1}{2}$ .... | 47,306,237·5 |
| Total years lived ... .... | 603,014,717·5 |

Divided by 18,922,495 gives mean age 31 years $10\frac{2}{3}$ months.

The process can be applied to any civil condition or group of ages. It might be worth while to determine the mean age of the population in one or two famine districts for comparison with the mean age of the population of the province or of the selected districts at the last Census.

4. In connexion with this as well as with the general question of the value of the mean age of the living, the following remarks of a leading German statistician deserve consideration:—

"Great caution is necessary in drawing far-reaching conclusions from statistics of the mean age of the living. Like all large statistical averages, such figures are of value rather for the questions which they suggest than for the answers which they supply. In the case of mean age this remark applies equally to its variations at different periods. Nothing could be more fallacious than to assume, as has been done in France, that a rise in the mean age of the living of itself indicates an increase in the duration of human life, for it is clear that the mean age is affected not only by mortality but also by the course of the birth-rate. If the births increase, the numbers in the younger age groups increase also, and this reduces the mean age of the living. On the other hand, if the birth rate declines, the converse result follows. A population which is actually dying out is bound to show a constant rise in the mean age of the living." As, however, in famine areas we get both a reduction in the births and an increaese in the deaths, it is possible that the results may be of interest.

5. The same authority gives the following method for calculating the aggregate of years lived and the mean age of the population from the age return by single years. "It is sufficient" he says "to assume that the persons shown in the *nth* year of life have in each case lived $n-\frac{1}{2}$ year, that those shown in the first year of life were on an average half a year old, that those in the second year were a year and-a-half, and so on. In fact, owing to the rapid falling off in the higher ages, this method slightly exaggerates the number of years lived. This error is small with groups of single years, but increases substantially if, as is the case with the French calculations, five-year groups are used to compute the number of years. Having ascertained the total number of years lived by the aggregate population, this total divided by the number of persons gives the mean age of the living.

* * The smaller the range within which the mean age is reckoned the more useful are the results. In this manner brief and telling expressions may be arrived at for the differences between particular sections of the population." He gives as instances the school-going ages, the ages of criminality, of maturity of physical powers, etc.

6. It is possible that this method, if applied to the returns of 100,000 ages of each sex, might give interesting results. Or again, it might be applied to the total population after adjustment and distribution by single years.

7. An excellent account of the graphic method referred to in paragraph 2 of my note of 13th August will be found in Newsholme, *Vital Statistics*, pages 265, *etesq*. It seems to me simple and easy to work, and even if the results are only approximate, they will be better than the chaos of absurdities, which the recorded ages present. I gather that before applying the graphic method, the ages must be grouped into 5-year periods by the arithmetical process described in Mr. Hardy's memorandum already referred. There are in fact four stages to be gone through.—

(1) arithmetical construction of 5-year groups;
(2) expression of these as rectangles;
(3) formation of a curve;
(4) determination of the single year on the curve.

Simla,
The 29th August 1901.

H. H. RISLEY,
*Census Commissioner for India.*

(True Extract.)

## Proceedings of the Government of His Highness the Maha Raja of Travancore.

Read again :—

(1) G. O. No. 7542, dated the 7th November 1919, sanctioning the taking of the Census of the State and appointing Sanitary Commissioner, Mr. Murari S. Krishnamurti Iyer, as the Census Commissioner.

Read also :—

Letter No. 10, dated the 10th January 1923, from Mr. Murari S. Krishnamurti Iyer, forwarding his report on the Census of the State which took place on the 18th March 1921.

ORDER THEREON R. DIS. NO. 379/24/G. A. DATED, TRIVANDRUM, 2ND MAY 1924.

1. His Highness' Government have perused with interest the Report submitted by Mr. Murari S. Krishnamurti Iyer on the Census of the State, taken on the morning of the 18th March 1921. The report consists of an Introduction and 12 chapters with six appendices. The Introduction deals mainly with the procedure and machinery of the Census, and it is stated that this is the first census which was synchronous throughout the State as regards both time and date and synchronous with the rest of India in respect of date. This is also the first time when separate statistics were collected in respect of the Malayalee Hindus. The provisional totals were ready within 15 hours of the taking of the census, much earlier than in the case of any of the previous censuses. The difference between the provisional and the final totals was only 96, a negligible difference in a population of over four millions. A distinguishing feature of the census of 1921 was that special censuses were taken of Labour and Wages, of Markets and Internal Trade, of cottage industries and the size and sex of families in addition to a census of cattle which was taken in 1911 also. In paragraph 13 of his Introduction, Mr. Krishnamurti Iyer emphasises the need for the establishment of a permanent Department of Statistics with a view to develop and complete the enquiries made at each census, to collect and collate figures for the use of the succeeding censuses and to maintain census records. He is also of the opinion that the Department of Statistics should be charged with the duty of taking the decennial census so as to ensure the continuity and the accuracy of the work and to reduce the margin of error. The necessity for collection of Statistics has already been recognised by Government and the nucleus of a statistical staff has already been brought into existence. The question of constituting a separate Statistical Department on the lines sketched out by the Census Commissioner or on other lines is engaging the attention of Government. The operations connected with the census received careful attention at the hands of the different Heads of Departments and their co-operation, coupled with the enthusiasm of Mr. Krishnamurti Iyer, contributed in no small measure to the success of the census in general.

2. Chapter I of the Report deals with 'the distribution and movement of the population'. The area of the State is 7625 square miles which is 31 sq. miles more than that returned at the last census. The increase in the area of the State is not the result of any change in its boundaries but the outcome of the survey of certain hill tracts left unsurveyed before. The administrative divisions numbered four, as against five at the census of 1911. For the purposes of the last census, the State was divided into three Natural Divisions, the Sea Coast, the Inland and the Mountainous, a division based on the geological formation of the country and the conditions of life in the respective regions. In regard to the total population, the figure arrived at is 4,006,062. In paragraph 8, Mr. Krishnamurthi Iyer institutes an interesting comparison between Travancore and other Indian States on the one hand and certain European States on the other, in respect of area and population. He points out that, while Travancore occupies the seventeenth rank among the Indian States as regards area, it is third in point of population. Though Hyderabad, Kashmir and Norway are each more than eleven times as large as Travancore, Hyderabad is only thrice and Kashmir and Norway each three-fourths as populous as this State. Mysore, Gwalior and Ceylon are four times as extensive as this State, while the number of people returned there is only one and a half, three-fourths and nine-eighths respectively, of that in Travancore. In size, Denmark, Switzerland and Formosa are each twice this State, but the population enumerated in them ranges between 76 and 95 per cent. of that in Travancore. Lastly, Baroda, Wales and New Jersey, though each of them is equal in area to this State, have only between one-half and three-fourths of its inhabitants. As regards the density of population, it is pointed out that there are on an average, 525 persons to each square mile of area. The provinces of Delhi and Bengal and the Cochin State alone show a greater density in India than Travancore, the respective figures being 823, 608 and 662. Of the foreign States, all except Belgium, Holland and England and Wales are less dense than this State. If the entire population were distributed at equal intervals over the whole surface of the State, each person will get 1·2 acres of land; but the actual distribution of the population is quite uneven, the density on the sea coast, and in the Inland and Mountainous Divisions being 1266, 832 and 200 respectively per square mile. The variation in density between the last and this census is most marked in the mountainous division and this is especially due to the circumstance that the portion of the country is being fast opened up by the extended cultivation of tea and rubber. There is still considerable scope for extension of

cultivation in the Mountainous Division and it is hoped that the influx of population into this area will continue, thus tending to relieve the pressure of population in the other two regions.

3. In paragraph 19, Mr. Krishnamurthi Iyer indicates the active steps taken during the decade to meet the demand for the subsistence of a growing population by both extensive and intensive cultivation. The activities of the Agricultural Department, the spread of the Co-operative movement and the steady increase in the volume of trade are hopeful signs.

4. Paragraphs 20-28 deal with the question of 'the movement of population.' The population enumerated in this census shows an increase of 16·8 per cent. over that in the previous one, the percentage of increase during the previous censuses of 1911, 1901, 1891 and 1881 being 16·2, 15·4, 6·5 and 3·9 respectively. The rate of increase, though unique in India, is considered by Mr. Krishnamurthi Iyer as quite normal in Travancore in view of the satisfactory state of public health and the economic prosperity of the people in general during the last decade. Mr. Krishnamurthi Iyer has calculated the death rate at 20 per mille of population and the birth rate at about 35 and in justification of the accuracy of his calculation in regard to the birth rate, Mr. Krishnamurthi Iyer observes as follows :—

"That this is the normal birth rate of the country will be clear from the consideration of the following facts. The number of births depends upon the number of married females in the reproductive ages of 15 to 45. The number of married females of those ages, at the commencement of the decade, was 5,98,142. At the rate of 247·5 births for 1,000 wives, as found to be the case in India (vide para 762 of 1901 India Report) the number of live births comes to 148,040. This gives a birth rate of 43 per mille on the 1911 population. As, however, during the decade the number of marriages in the early ages has decreased, the fecundity rate also must have gone down. The birth rate can, therefore, be safely put at 35. For a country where the increase from census to census is 15 to 17, the birth rate of 35 and the death rate of 20 may be considered normal."

5. In regard to houses and house-room, it is pointed out that the disposition of houses in the taluks of Shencottah, Tovala and Agastheeswaram and in certain parts of the towns is in streets, while in the other taluks and rural areas, the houses are situated in isolated compounds and lie scattered over the whole area without order or arrangement. The total number of occupied houses returned is 761,827, showing an excess of 98,674 or 14·9 per cent. over the figure for 1911. On an average there are 100 houses per square mile, against 87 in the previous census. The average number of inmates in a house has increased from 5·2 in the last census to 5·3 in the present one. In towns it has risen from 5·4 in 1911 to 5·6 at the present census, and in rural areas from 5·1 to 5·2.

6. In Chapter II, dealing with 'the population of cities, towns and villages', Mr. Krishnamurti Iyer points out the difficulty in distinguishing between urban and rural areas in Travancore. The average area of a pakuthi—the present unit of Land Revenue Administration—is 17·5 sq. miles, while that of a *kara*—the unit for the census enumeration purpose—is 1·93 sq. miles. The Government have already recognised the inconveniences pointed out by Mr. Krishnamurti Iyer in retaining these unwieldy pakuthies and the question of a general splitting up of these will engage their attention at the next settlement.

7. In paragraph 38, Mr. Krishnamurti Iyer observes as follows in regard to variation in population :—

"The variation in population is most marked in the towns and villages of 2,000 to 5,000 inhabitants. The villages of 500 inhabitants and below have decreased in number as well as in population, by 10·5 and 7·9 per cent. respectively. Though the villages and towns of 500 to 1,000 inhabitants have increased in number by 2·3 per cent, they have fallen in population by 0·1 per cent. There is an increase in the number as well as in the population of the villages and towns of 1,000 to 2,000 inhabitants, to the extent of 7·6 and 7·7 per cent. respectively, while those of 2,000 to 5,000 inhabitants have increased in number by 30·1 per cent. and in population by 33·5 per cent. The highest increase both in number and population is observed in the villages and towns of between 5,000 and 10,000 inhabitants, the increase in number being 77·3 per cent. while that in population, 96·1 per cent. The villages and towns of between 10,000 and 20,000 inhabitants have gone up in number by 50 per cent, and in population by 38·4 per cent., while those of 20,000 to 50,000 inhabitants have increased by 50 per cent in number and by 61·1 per cent in population. The number of towns of over 50,000 inhabitants remains the same as in 1911 *viz*., one, but the population has grown by 12·7 per cent.

8. Out of the total population of 40,06,062 in the State, 4,04,654 live in towns and the rest in rural areas. The percentage of urban population has increased from 6 in the last census to 10·1 in the present one, and the increase is due to the increase in the number of the towns from 11 to 38. In regard to the five major towns, Trivandrum, Nagercoil, Alleppey Quilon and Kottayam, the variation in the population is particularised in the subjoined statement.

| Major Municipal Towns. | Population-percentage of increase from 1911. | Occupied houses-percentage of increase from 1911. | Average No. of persons in a house. | Average No. of females per 1,000 males. | Number of persons in each main religion per 1,000 living. | | | Numoer of females in each main religion per 1,000 males of that religion. | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Hindus. | Musalmans. | Christians. | Hindus. | Mussalmans. | Christians. |
| Trivandrum | 14·5 | 13·5 | 6·1 | 949 | 794 | 75 | 131 | 949 | 861 | 1,003 |
| Nagercoil | 15·1 | 13·5 | 4·9 | 1,025 | 746 | 95 | 159 | 1,008 | 1,054 | 1,087 |
| Alleppey | 24·9 | 13·1 | 5·6 | 898 | 462 | 264 | 272 | 890 | 948 | 865 |
| Quilon | 33·4 | 31·3 | 6·1 | 924 | 522 | 190 | 287 | 935 | 880 | 934 |
| Kottayam | 24·4 | 18·4 | 6·0 | 921 | 480 | 46 | 473 | 910 | 743 | 931 |

9. In Chapter III dealing with 'birth place', are given figures of emigration and immigration. The total number of persons born in places outside Travancore was 73,591 or 1·8 per cent of the entire population against 61,165 and 1·7 in 1911. Deducting the old survivors, the number of fresh immigrants is put down at 24,659. In regard to emigration, the total number of Travancoreans enumerated outside the State in India is 22,251. This figure does not of course represent the total extent of emigration. It is however clear that emigration and immigration have so far played very little part in the life of the country which continues to be pre-eminently an agricultural more than a commercial or industrial one.

10. Chapter IV deals with 'religion'. The entire population of the State is returned under eight religions as indicated below :—

| *Religion.* | *Population.* | *Per 1,000.* |
|---|---|---|
| Hindu | 2,549,664 | 640 |
| Mussalman | 270,478 | 68 |
| Christian | 1,172,934 | 293 |
| Animist | 12,637 | 3 |
| Jew | 274 | ... |
| Jain | 33 | ... |
| Budhist | 36 | ... |
| Zorastrian | 6 | ... |

Of these, however, only the first three are the most important, namely, the Hindu, the Christian and the Mahomedan. The Hindus form the majority and constitute two-thirds of the population, while the Christians represent a little more than one fourth and Mussalmans about one-fifteenth of the population enumerated. From 1881 to 1921, the Hindus have, Mr. Krishnamurti Aiyar points out, risen by 45·9 per cent, the Mussalmans by 84·1 per cent and the Christians by 135·3 per cent. In a 10,000 of all religions, the Hindus have fallen from 7,312 in 1881, to 6,396 in 1921 or by 924, while the Christians and the Mahomedans have risen from 2,078 and 612 to 2,928 and 675 or by 850 and 63 respectively. The increase of 11·7 per cent found among the Hindus in this Census is found to be lower than their rise in the last census by 0·4 and than that in the general population by 5·1. This phenomenon is explained as follows by Mr. Krishnamurti Aiyar :—

"In the absence of unusual mortality and emigration among them, this low rate of increase must be attributed to a fall in their birth-rate. As, among females, the ages between 15 and 19 when about 49 per cent of the children are born, are considered to be most fertile, a high birth rate depends chiefly upon the number of married women of younger ages. A comparison of the figures for 1911 and 1921 shows that, among the Hindus, the number of married females in the age-groups 10 to 14 and 15 to 19 has fallen from 59 and 517 for 1,000 females of each age group in 1911 to 47 and 437, respectively, in 1921. This is due, among other causes, to the operation of the Nair Regulation passed at the commencement of the decade and the advance of education among females in general which have the effect of postponing marriages to later ages and of limiting their number".

11. In regard to the large increase in the number of Christians and Mahomedans in the State, *viz.*, 29·8 and 19·4 per cent respectively, Mr. Krishnamurti Aiyar has not offered any explanation. The increase has been steady during the past three decades and this was attributed by the Census Commissioner of 1911, to the operation of natural causes and also to the propagandist activity of proselytisation. These continue to hold good even today. The total number of converts to Christianity during the past decade is estimated by Mr. Krishnamurti Aiyar at 50,000.

12. Chapter V deals with the question of 'Age' generally. After an interesting discussion on the unreliability of all age statistics, Mr. Krishnamurti Aiyar observes as follows in regard to age periods by religion and sex.—

"While, for all religions and the Hindus, the proportion for children under 5, in both the sexes, is 6·6. and 6·5 per cent respectively, for the Mussalmans and the Christians, the corresponding ratios are 7 per cent for males, and 6·9 per cent for females. In the next age period 5-10, as compared with the ratios for all religions, the proportions for the Hindus go down, and those for the Mussalmans and the Christians rise up. The inference that could be drawn from this is either that the rate of mortality among children is lower among the Mussalmans and the Christians than among the Hindus, or that the fecundity rate for the Hindus is lower than that for other religionists. The facts collected and discussed elsewhere seem to give support to the latter inference. In the age period 10-15, while, among males, the proportion for the Hindus is equal to that for all religions, among both the sexes, the ratio for all religions, goes below that for the Christians and the Musalmans. In the next age period 15-20, so far as females are concerned, the Hindus show the highest proportion and the Musalmans, the lowest; and, as regards males, the Christians show the largest ratio and the Hindus the smallest. From the age period 15—20 to the very end, the Hindu females have the highest proportion, their ratio being even higher than that for all religions. Between the ages of 20 and 25, the period of collegiate education, the male proportion for the Hindus and the Christians is lower than that for the Mussalmans. This may be due, among other causes, to the fact that the Hindus and the Christians resort more than the Mussalmans to higher education which by the strain it produces, causes in some cases even premature death. In the effective age period 25-45, the Hindu males have the highest proportion and the Mussalman and the Christian males follow in order. In the age period 45-60 also, the Hindu males maintain their high proportion while the Mussalman and the Christian males exchange their places. In the ages 60 and above, the Mussalmans show the highest ratio of males and the Hindus that of females"

13. In regard to the mean age for each main religion Mr. Krishnamurti Aiyar states as follows:—

Mean age of religion in 1921.

| Religions. | Males. | Females. |
|---|---|---|
| Hindu | 24·5 | 24·3 |
| Malayalee | 24·4 | 24·3 |
| Non-Malayalee | 24·9 | 24·5 |
| Mussalman | 23·6 | 22·5 |
| Christian | 23·5 | 22·9 |

"From the statement given in the margin, it will be seen that, among the several religionists, the Hindus have the highest mean age. This must be attributed either to a high mortality among their children or to a low birthrate. As the proportion of children under 10 is highest among the Hindus, the factor of high mortality can be eliminated from the causes for the high mean age. It has been noticed before that the advancement of education among females and the passing of the Nair Regulation at the commencement of the decade have postponed the ages of marriages among the Hindus, the majority of whom are Malayalees, and limited their number and that, as a consequence, the birth rate has gone down. This must evidently be the cause for the highest mean age of the Hindus. If the two classes of the Hindus, the Malayalees and the non-Malayalees, are taken separately, it will be seen that the mean age is higher among the latter than among the former. As the birth-rate of the Malayalees is lower than that of the non-Malayalees, the higher mean age of the latter cannot be due to a low birth rate. An increased mortality of children observed to be obtaining among them must be the cause for their high mean age."

14. On a careful scrutiny of the statistics showing the number of married women in the age period of 15-40 per 100 females of all ages and the number of children under 10 per 100 married women of the age group 15-40 in each religion, for the last 3 censuses, Mr. Krishnamurti Aiyar observes as follows:

"The most noteworthy feature observed is that the proportion of the married females in the reproductive age has been going down from census to census and that the fall is shared by all the religions. Another point worthy of note is that while the proportion of married females has been diminishing, the ratio of children under 10 for every 100 married women has been increasing. Naturally one would expect that in proportion to the fall in the number of marriages, the number of children will also come down. The apparent contradiction observed in the ratios can be explained by the fact that the mortality of children has been declining."

15. Chapter VI deals with the question of sex and the sex proportions disclosed by the Census. In the general preponderance of males over females, Travancore is of a piece with the rest of India. Among the Hindus, the proportion of females per 1,000 males is 984, among Mahomedans 926 and among Christians 953. Mr. Krishnamurti Aiyar then proceeds to enumerate the various factors contributing towards the lowering of the proportion of females in the population of India, *viz.*, (a) Infanticide, (b) neglect of female children, (c) early marriage, (d) high birth rate and the primitive methods of midwifery, (e) hard treatment accorded to women and (f) hard work done by women, and points out that these factors do not operate

to any great extent in Travancore. The cause for the decrease is attributed to the circumstance that the mortality of males which is generally more than that of females has been declining. One peculiarity is noticed, *viz.*, that the proportion of females is more between 15 and 30 the period of child birth, than in other periods and this feature has been common in all the four censuses.

16. In an Appendix to Chapter VI Mr. Krishnamurti Aiyar has instituted a special and interesting enquiry into the size and sex conditions of families in Travancore. The object of the enquiry is said to be four fold. The first is to find out the effect of the Nair Regulation and of education among females on the sex and size of families and on the fecundity of women. The second is to ascertain the proportion of female to male children, in the first born. The third is to determine the proportion of females to males in births subsequent to the first. And the last is the consideration of the factors which determine or cause the sex. Information for the purpose has been collected in respect of 37,641 families and the statistics furnished will, it is hoped, provoke further scientific enquiry and investigation into this subject.

17. In Chapter VII, Mr. Krishnamurti Aiyar discusses the question of marriage and civil condition. Of the 4,006,062 persons enumerated, 2,126,575 are returned as unmarried, 1,569,896 as married and 309,591 as widowed. Among the unmarried, there are 812 females to every 1,000 males, and, among the married, there are 994 wives to every 1,000 husbands. The aggregate number of husbands exceeds the total number of wives by 4,960. The number of widows is 2,38,001 against a total of 71,590 widowers, giving a proportion of 3,325 widows to every 1,000 widowers.

18. In regard to the marital condition in Travancore, Mr. Krishnamurti Aiyar makes the following observations :—

"Though Travancore has a large proportion of its population engaged in agriculture, its marital condition differs considerably from that of the rest of India and tends more and more to conform with that obtaining in the United States of America. Among males, in this State, the number of the unmarried aged 15 and over is 304 per 1,000, which is nearer to 387 in America and 403 in England than to 184 in India. Similarly, among females, the number of the unmarried over 15 years of age, is four times as much as in India, while it is less than twice the nmber in America and thrice in England. The number of bachelors in the age group 15–20, 912, is closer to 983 in America and 998 in England than to 672 in India, while the number of maidens under the same age group stands at 163 in India as against 501 in Travancore, 879 in America and 988 in England. At the other end of life for every 38 old bachelors in India, there are 53 in Travancore, 62 in America, and 80 in England. The proportion of old women in Travancore who prefer to end their lives in single blessedness, is seven times that in India, one and a half times that in America and one-third less than that in England."

The reason for this is mainly the progress of education especially among females. The proportion of widows in Travancore is 12 against 17 per cent in India. This is especially due to the absence of early marriages and the spread of education. The proportion of the married persons below 15 years of age has been declining from census to census. The ratio of the males has decreased from 139 in 1901 to 86 in 1921, while that of females, from 560 in 1901 to 484 in 1921. In the reproductive ages of females also, there has been a continuous fall from 772 in 1901 to 730 in 1921. In urban areas, the proportion of the married males and females per 1,000 of each sex, is 385 and 397 respectively, while in rural areas, the corresponding figures are 449 and 397, and the low proportion of married males in urban areas is stated to be the result of their having a large number of schools with students who are mostly bachelors.

19. Chapter VIII deals with the state of 'education'. Mr. Krishnamurti Aiyar prefaces his remarks on the subject of education by the observation that while the practice in the previous census to calculate the proportion of literates on the total population was incorrect and misleading, children under 5 years of age have been excluded in the present census for purposes of the said computation. This is an improvement but does not yet give us a correct estimate of the actual percentage of literacy. To attain the lowest standard of literacy, *i. e.*, to write a letter and to read one, it is necessary, as Mr. Krishnamurti Aiyar points out, that the children should complete their primary education and that therefore children under ten years of age should be excluded instead of those under 5 alone. According to the present census, excluding children under 5 years of age, 279 for every 1,000 are literate. Among men, two in every five, and among women, two in every twelve, are able to read and write, while in 1911 only one in every four men and one in every 20 women were literate. In other words for every twelve literate males, there are five females who have acquired the standard. The subjoined statement shows that in the literacy of both the sexes put together and in the education of males, Travancore takes the second place among the British Provinces including Burma and the Indian States while in female education it occupies the first place :—

| Province or State. | Number per 1,000 who are literate excluding persons under five. | | |
|---|---|---|---|
| | Persons. | Male. | Female |
| Travancore ... ... | 279 | 380 | 171 |
| Burma ... ... | 317 | 510 | 112 |
| Cochin ... ... | 214 | 317 | 115 |
| Baroda ... ... | 146 | 240 | 44 |
| Coorg ... ... | 144 | ... | ... |
| Delhi ... ... | 122 | ... | ... |
| Ajmere-Merwara ... ... | 113 | 185 | 26 |
| Bengal ... ... | 104 | 188 | 21 |
| Other States and Provinces ... | Below 100 | ... | ... |

20. A comparison of the statistics of Travancore for 1901 to 1921, shows how remarkable has been the progress of literacy in the State. The proportion of literate persons has risen from 142 per mille in 1901 to 279 in 1921 or by 96 per cent. and the ratio of literate males has increased by 54 per cent. and that of literate females by 380 per cent. Notwithstanding the comparative pre-eminence of Travancore in point of literacy, it has to be admitted that the percentage of literacy is still low and a very great deal of ground remains yet to be covered. Taking the different communities by religion, it is found that the Christians come well a head of all the other religionists with a percentage of 35·3, the Hindus come next, with a percentage of 26 and the Mahomedans come at the bottom of the scale with a percentage of 14·8. Taking female literacy alone, the percentages amongst the Christians, the Hindus, and the Mahomedans are 26·5, 14·6, and 5 respectively. In addition to the spread of general literacy during the decade, the advance during the decade in literacy in English is still more marked ; whereas in 1911, 15 males and 2 females per 1,000 of each sex, returned themselves as literate in English, the numbers for the 1921 Census are 25 and 6. In dealing with the subject of education, it is only in the fitness of things that a retrospect is taken to see how far the backward classes have availed themselves of the facilities afforded to them by Government in the matter of education and how far they too have contributed to the phenomenal progress achieved by the State during the last decade in point of general literacy. The figures furnished by Mr. Krishnamurti Iyer on the subject are gratifying. As against a proportion of 14, 18, and 28 per mille in 1911, the present ratio of the Kuravas, the Pulayas and the Parayas stands at 35, 40 and 109 respectively.

21. Chapter IX deals with 'language'. The total number of languages spoken by the persons enumerated in the State is 28, while the number of languages recorded at the last census was 34. This variation between the two censuses is not explained, and the languages that have disappeared during the decade and how that was brought about are not indicated at all by Mr. Krishnamurthi Iyer in his present report. Malayalam is the language of the State and the mother tongue of about 84 per cent. of the population. The percentage of the Malayalam speaking people is largest in the Kottayam Division, where it is a little over 97 : it is 94 in Quilon, 56 in Trivandrum, and 24 in Devicolam. Next to Malayalam, Tamil is largely spoken in the State and as many as 16 per cent. of the people converse in this language. The highest percentage of the Tamil speaking people is in Devicolam, *viz.*, 71 ; this percentage falls to 42 in Trivandrum, 4 in Quilon and 1 in Kottayam.

22. Chapter X deals with 'infirmities' especially, insanity, deaf-mutism, blindness, leprosy and elephantiasis. The appended statement shows the number of persons afflicted with each of the 5 infirmities in the last four censuses :—

| | 1921. | 1911. | 1901. | 1891. |
|---|---|---|---|---|
| Insane ... | 1,271 | 628 | 503 | 394 |
| Deaf Mutes ... | 2,169 | 993 | 809 | 745 |
| Blind ... | 1,680 | 1,217 | 1,043 | 1,017 |
| Lepers ... | 2,058 | 1,115 | 1,414 | 968 |
| Elephantiasis ... | 11,637 | 4,217 | 5,924 | Not taken. |

23. Chapter XII deals with 'occupation and industries'. After briefly describing the difficulties and chances of errors attendant upon the collection of statistics under this subject, Mr. Krishnamurti Iyer proceeds in Part I of the chapter to classify occupations under four main heads, *viz.* :—

(A) Agriculture in all its forms
(B) Industry and Commerce
(C) Service and profession, and
(D) Domestic service and general labour.

The percentage of persons supported by these classes was 56, 27, 4 and 13 respectively in 1911, while the corresponding figures in 1921 are 54, 29, 5 and 12. The percentage of actual workers has gone down from 41 in 1911 to 37 in this census, raising the percentage of dependents from 59 to 63. Mr. Krishnamurthi Iyer attributes this chiefly to the phenomenal increase in the school-going population which has risen from 1,59,913 in 1911 to 4,27,723 in 1921 or by 167 per cent. Taking the main classes of occupations, the percentage of actual workers engaged in each class which was 48, 32, 3 and 17 in 1911 stands at 45, 35, 5 and 15 respectively at present. The fall in A is obviously due to the fact that people are leaving agriculture in favour of industrial occupations.

24. In Part II of the Chapter, dealing with the subject of industrial occupations Mr. Krishnamurthi Iyer points out that in the census of 1911, the enquiry with regard to the Factory industries of the State was confined to establishments employing 20 or more persons, while in the present census, the extent and scope of the enquiry were extended by the inclusion of all establishments employing 10 or more persons and the collection of information relating to the direction and superior staff, the power employed, the number of looms at work in textile establishments, and the inferior staff of workmen skilled and unskilled. The number of factories returned is 327 including 10 Government institutions, and the number of persons employed in them was 33,829 (22,983 males and 10,846 females).

25. Textiles and connected industries have the largest number of establishments, 126, but they employ only 9,306 persons, while growing of special products has the largest number of employes namely 17,317. Glass and Earthenware industries come next with 36 establishments and 3,357 operatives, followed by Industries connected with chemical products numbering 19 and giving work for 1,204 persons. Industries of luxury amounting to 12 and engaging 813 persons and Food industries aggregating 7 and giving means of subsistence for 237 workmen. Construction of means of transport and communication and Production and transmission of physical forces come at the bottom represented by one in each industry employing 49 and 63 persons respectively preceded by wood, etc., industries numbering 4 and giving work for 330 labourers and 6 Metal industries run by 1,153 persons (males 956 and females 197). The total number of skilled labourers employed in all the institutions was 14,721 (9,514 males and 5,207 females), of whom 65 per cent. are Travancoreans. Of a total of 327 industries, mechanical power is used only in 113.

26. There are six appendices to the last chapter and these may now be briefly considered. Appendix I deals with non-factory or cottage industries, the term 'Industry' being employed to denote "productive occupation, agricultural or non-agricultural". Appendix II deals with the "Cattle Census". Compared with the figures of the last census, a decrease of 7 per cent. is observed in the total number of cattle. The number of heads of cattle available for agricultural operations was 341,700 in 1921, against 356,482 in 1911, showing a decrease of 4 per cent. This number is hardly sufficient to meet the agricultural requirements of the State. There has also been a fall in the number of cows, she-buffaloes and sheep to the extent of 37 per cent. The deterioration of cattle in the State is due to the want of natural fodder and the indifference on the part of the people in the maintenance and breeding of cattle and cultivation of fodder crops. The extensive cultivation of tapioca for purposes of food even in preference to paddy also accounts for the fall in the number of cattle, as ploughing by cattle is not necessary for tapioca cultivation. Government however trust that as a result of the efforts of the Agricultural Department, the number and quality of the cattle will show an appreciable improvement during the current decade.

27. Appendix III deals with the 'labour census'. The data for the figures furnished in the Appendix relate exclusively to the estates and factories. The conclusions drawn therefrom cannot therefore claim universal application, but the phenomenon of a growing demand for labour and of increased wages is common to the whole State.

28. Appendix IV dealing with internal trade and markets shows how the number of markets has steadily increased throughout the State and how these markets play an important part in the economic distribution of the several products throughout the State. The economic condition of the people forms the subject of enquiry in the last appendix. Mr. Krishnamurti Iyer here emphasises the need for an economic survey of the State and for a process of intensive cultivation being carried on by scientific manuring and by the introduction of machinery in agricultural operations. He also pleads for effective steps being taken against the further fragmentation of holdings and for developing in the meanwhile greater co-operation and organisation amongst the land-holding classes. All these are matters that constantly engage the attention of Government.

29. In conclusion, His Highness' Government have much pleasure in recording their appreciation of the care and ability with which the Commissioner Mr. Krishnamurthi Iyer has performed his task. His report is, as already stated, a highly interesting and suggestive document.

(By order) R. KRISHNA PILLAI,
*Chief Secretary to Government.*

To

Mr. Murari S. Krishnamurthi Iyer.
All Heads of Departments.
The Gazette.
The Press Room.

Huzur Cutcherry,

Trivandrum 28 May 1924.

Copy forwarded to Mr. Murari S. Krishnamurthi Iyer,
Census Commissioner.

K.R. Krishnamani

For Chief Secretary to Government.

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