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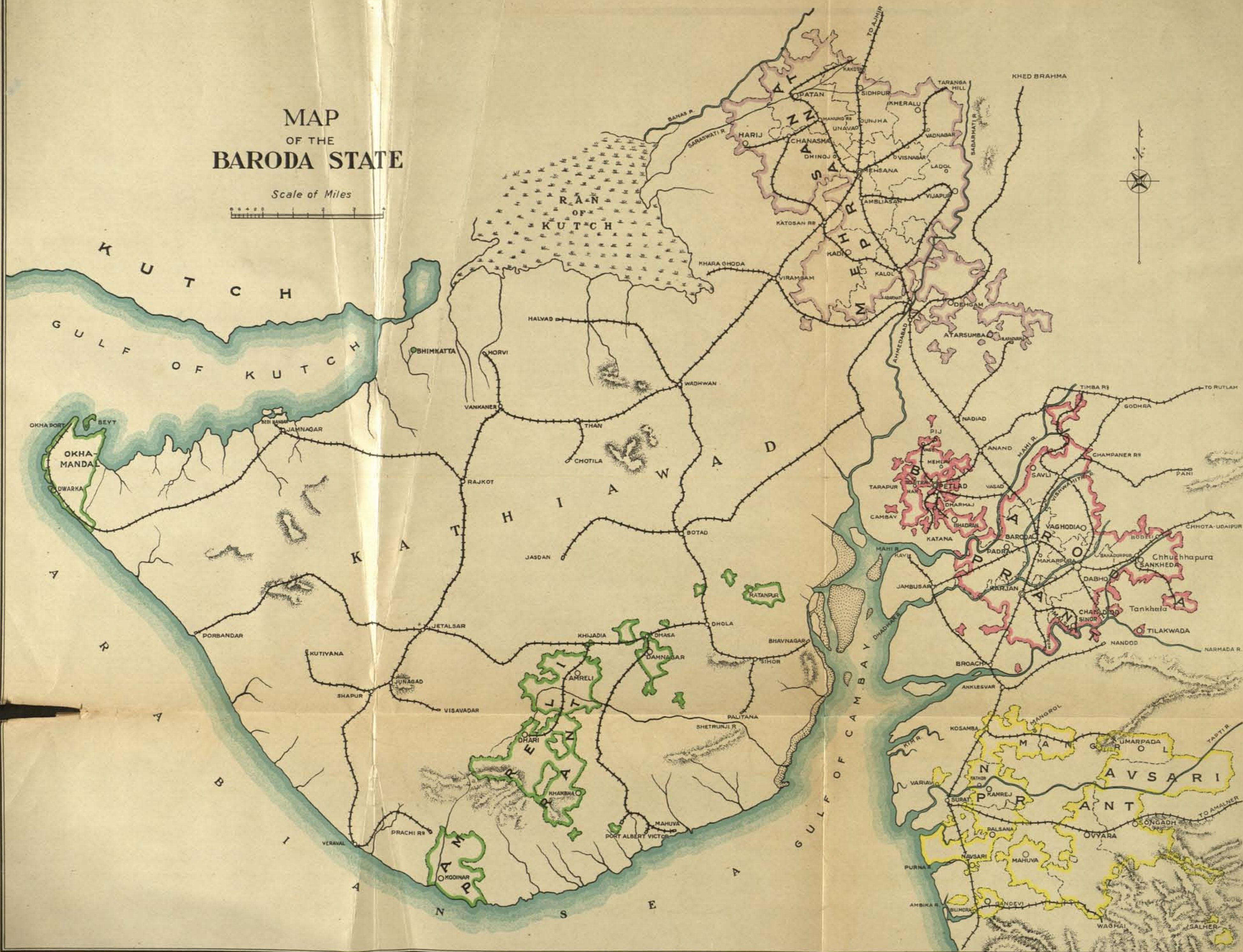
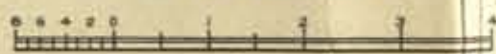
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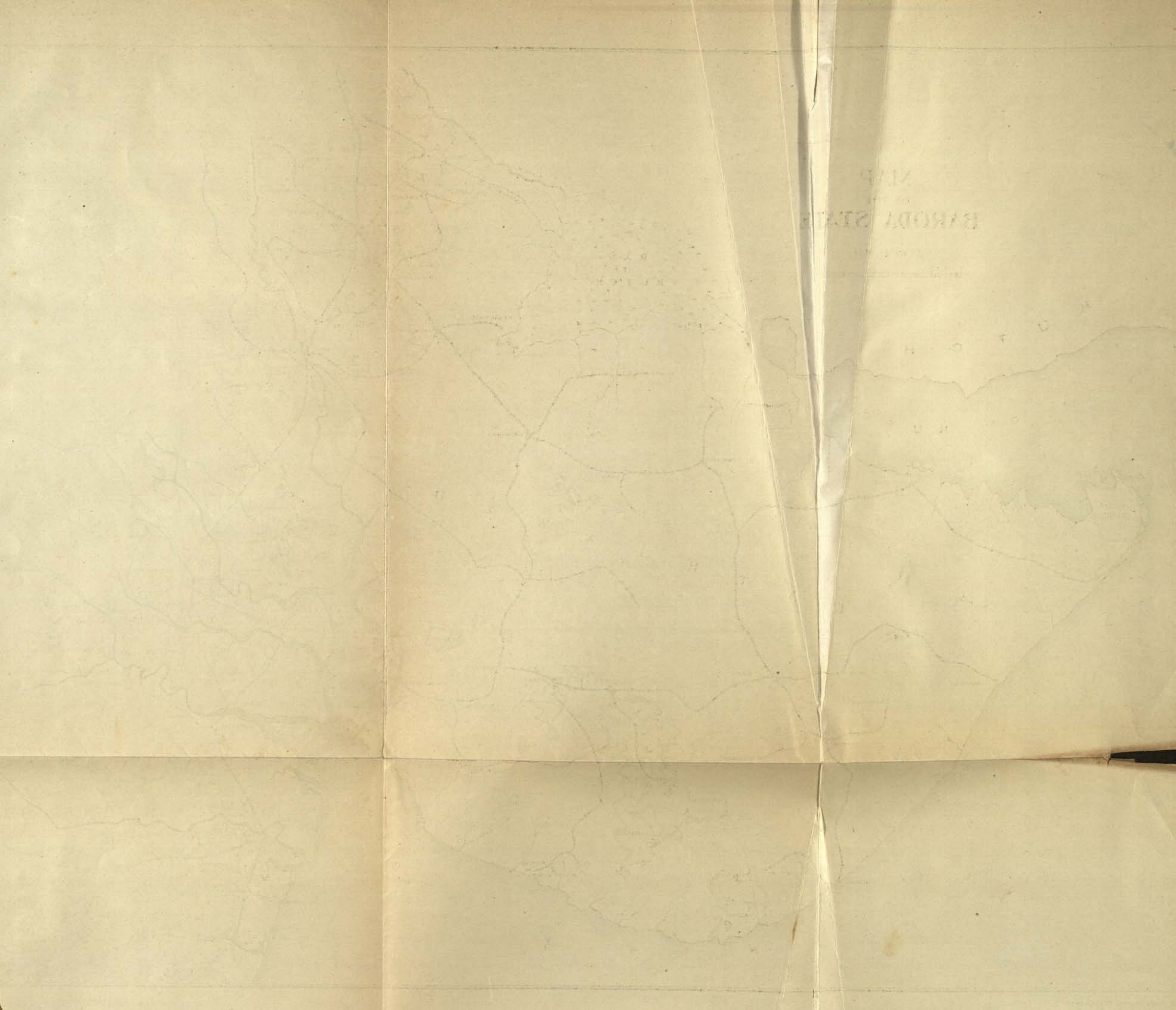
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MAP OF THE BARODA STATE

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Census of India, 1931

VOLUME XIX

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BARODA

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PART I—REPORT

By

SATYA V. MUKERJEA

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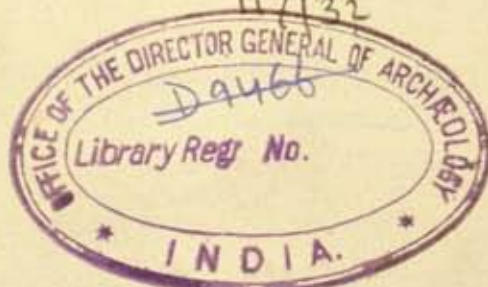
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PART I - REPORT

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INTRODUCTION

1. Introductory—This Report embodies the results of the seventh census of this State. The first regular census of the modern type was taken in Baroda on the 21st February 1872. It was not however part of the general Indian Census. The preliminaries were undertaken independently by the State authorities and the materials were in part tabulated here and completed in Bombay, but no separate Report was written. 1881 was the first occasion when a census was taken synchronously with the rest of India, on a uniform general plan conformed to by all the British provinces and principal Indian states co-operating under the Census Commissioner for India. The Baroda Census Report for 1881 was the first of its kind issued by this State. The Report on the Baroda Census of 1891 was issued in 1894 as Volume XXIV of the all-India series. Since then the Census Reports of this State have regularly formed part of the Indian Census Volumes, issued under the general editorship of the Census Commissioner for India, and conforming in all material respects—arrangements of chapters, forms of tables, etc., to other Reports of the series. This Report is therefore the sixth issued by the State. It forms Volume XIX of the all-India series. The different parts of the Baroda Census series are detailed in the margin. An abridged report—entitled “Some Results of the Census”,—was issued as soon as the Tables were compiled, in order to enable local officers and others to have a first view of the results. The Gujarati Summary is being prepared by Mr. Gokaldas M. Shah, Principal of the Male Training College, who has done this work with great credit since 1911.

Name	Part of Volume XIX
Census Report	Part I
Some Results of the Census	“ I-A
Imperial and State Tables Volume	“ II
Administrative Volume	“ III
Gujarati Summary Volume .. .. .	..
Village Tables Volume (also in Gujarati).	..

2. Process of Census Taking described: (a) *Preliminary Operations*—The Administrative Volume gives a very full and detailed account of the various stages of the operations from start to finish. This volume is intended for the use of future Census Commissioners of the State and other officers entrusted with the details of the work. This Report, on the other hand, is primarily intended for the general reader. But there may be some of this category whom the minutiae of census taking do not appeal. Assuming that these pages do find their way to such an individual, he may want to know how the thing is done. The census was taken on the 26th February 1931. But the preparations began about ten months previously. The State Census Office was opened on the 1st May 1930. The first requisite was the drafting of a Census Act on the lines of the British Indian legislation. Next, the district organisation was mobilised. The Subas, Naib Subas and Vahivatdars became *ex-officio* district census officers, sub-divisional census officers and charge superintendents respectively for their jurisdictions. The Municipal Commissioner was similarly appointed City census officer. The Executive Officer, Baroda Cantonment, was *ex-officio* census officer for the civil and military areas within his charge. The heads of the municipal executive in the various towns similarly became charge superintendents for their municipal areas under the general superintendence of the mahal charge superintendent. After these appointments were made, the next step was the fixing of the names of villages, the preparation of a general village register in each mahal, and of census maps determining the jurisdictions of subordinate inspecting officers under the charge superintendents. This was finished by about the beginning of July. Immediately thereafter, a provisional list of blocks and circles was made. The unit of census enumeration was the block of 60 to 100 houses. Normally one block was in charge of an enumerator, ten to fifteen of these blocks formed a

circle. Each circle was under a supervisor. Three or four circles were comprised in a charge.

(b) *House Numbering*—The next important stage was reached in the last week of October when the houses were numbered, a corrected list of blocks and circles was prepared, with the estimate of the enumerating staff required for the actual count of the inhabitants. Hitherto the ordinary revenue and police establishments in the mahals, with the municipal staff in towns had sufficed for these preliminary stages, but now a larger number of workers was required for the actual count. This necessitated a preliminary period of intensive training. The central organisation did this in three stages. First the superior census staff throughout the State was trained in the general details of all the processes of census taking. Secondly the subordinate police and revenue staff were given a detailed and intensive training at all mahal headquarters in the work of house numbering. Thirdly when the whole staff was appointed in December 1930, a general course of training in the details of enumeration was given as to how the work was to be set about, how the questionnaire was to be filled in, and so on. The house numbering was finished by about the third week of November. Actually 815,381 houses were numbered. The majority of municipalities were persuaded to have permanent house numbers. Some idea of the magnitude of the census army can be had when it is stated that we employed 106 charge superintendents, 1,255 supervisors and 9,409 enumerators for the general census. The intensive training of this huge organisation was no light task. Along with training classes, the Central office sent out leaflets, instruction books and circulars by tens of thousands. The district census staff followed up the work of the Central organisation by holding meetings. Occasionally their zeal had to be curbed, as they were giving wrong instructions. As the bulk of enumerators were school teachers, the periodical conferences organised by the Education department were very helpful in this regard. The taking of the

Name of Census staff	No. of prizes	Amount of each prize in rupees	Total amount sanctioned in rupees
<i>Charge Superintendents</i>			
(i) First prize	6	30	180
(ii) Second prize	9	15	135
Municipal staff	3	10	30
Mahal office clerks	9	10	90
Supervisors	31	10	310
<i>Enumerators</i>			
(i) First prize	30	8	240
(ii) Second prize	553	5	2,765
Sex Enquiry workers (women only)	57	8, 6, 4	250

census was always included as an item in their programmes, and the teachers showed keen interest in this regard. Zeal for census work was stimulated by Government of the State announcing cash prizes amounting to Rs. 4,000 distributed as in the margin amongst the census workers up to the charge superintendents. But this prize amount was only meant to rouse healthy rivalry and was never intended as an adequate recompense. Considering that the whole work was entirely honorary and irksome, being in addition to their ordinary duties, it was remarkable that these humble low-paid clerks, talatis and teachers trooped up to the call of duty with such loyalty and devotion. The Baroda State ought to congratulate itself in managing its seven censuses without a talatis' or clerks' strike.

(c) *The Actual Count*—The actual census of the people was taken in two stages. The first was the preliminary record spread over, in villages from the 15th January to 10th February, and in towns from the 25th January to the 10th February. The second stage was the final count on the census day itself. A revision of the preliminary record was done in the morning of the 26th February; thereafter between the hours of seven in the evening and the mid-night of that day, the final count was taken in which those absent or dead since the first count were scored out and those who had come or were born since were added to the record. During the whole period, the central and district census staff were continually on the move, giving final touches to the training of the staff, inspecting the record already made, and gathering materials for the Report. In addition to the usual district agency, the Census department decided on this occasion to entertain a special staff of nine census inspectors who were sent to almost all the villages. The City and Baroda mahal were given to the most experienced of these inspectors.

3. Distinctiveness of the Baroda Census of 1931—In most matters up to the enumeration stage, the all-India procedure was conformed to here, but when the final stage of actual counting was reached, this State struck out a departure on this occasion from the general pattern. Hitherto it was the practice to record census details in enumeration schedules, which were later collected in the Abstraction office in which the particulars of each individual person were copied out in slips, which were later sorted and compiled into Tables. On this occasion, the Baroda Census decided, with the approval of the Census Commissioner for India to do away with the slip-copying system altogether and to record census particulars of an individual direct on to books of slips, which could later be cut out, sorted and compiled. The slip or card was $7\frac{1}{4}$ " by $3\frac{1}{2}$ " in size as per specimen enclosed. The books were of standard sizes, three slips to a page, and so many pages to blocks of different sizes. A ream of paper of the size of 22" by 29" would produce 11,520 such cards. As it was convenient to have sex differentiation from the very beginning, it was decided that information regarding males should be recorded on white slips, and that for females on buff-coloured ones. It is sincerely hoped that feminists will forgive this colour distinction. But the difference in colour was of very great practical use in keeping the slips from being mixed up and the danger of omission of record of sex was entirely eliminated. The books were of a handy size so that they were less cumbrous to handle than long sheets of enumeration schedules, which used to get crumpled and the writing on which was often defaced and made illegible by the time they reached the slip-copying stage. Secondly the system was to be recommended because it eliminated the errors due to abstraction which were inevitable in large offices of hastily trained clerks working on the piece-wage system, who had little interest in the business. Lastly the introduction of the new system meant a large saving in the cost of establishment, which, considering the high cost of the Baroda Census, was a vital consideration. Of course the system needed constant supervision and very rigorous watch over the mahal agency; the business of transmission and return of slips and their subsequent handling in the Abstraction office, had to be transacted exactly on the basis of treasure, controlled by an elaborate series of call books, distribution registers, and receipt counterfoils which are fully described in the Administrative Volume. But the method justified itself; there was no loss of slips, each one being numbered, tallied and accounted for, after the census was over, in the Abstraction office. The Census Commissioner for

CARD FOR MALES		1
1 Serial No.....	of person	
2 Mahal.....	Village.....	
3 Circle.....	Block No..... House No.....	
4 Name.....		
5 Religion (with sect).....		
6 Married.....	Unmarried..... or Widowed.....	
7 Age (in years only).....		
8 Caste, tribe or race } (with sub-caste)		
9 Whether earner.....	working dependent..... or total dependent.....	
10 Principal occupation of earner.....		
11 Subsidiary occupation of earner; or } occupation of working dependent		
12 Industry in which } employed (if any)		
13 Birth District.....		
14 Mother tongue.....		
15 Other languages } ordinarily used		
16 Whether literate or not.....	If literate whether in Hindi..... or Urdu.....	
16 (a) If not literate, whether able to read only.....		
17 Whether literate in } English or not		
18 Whether insane.....	totally blind..... deaf-mute..... or leper.....	

India, on inspection of the Baroda Census Office on the 3rd July, 1931, was pleased to declare that

"the Bulletin Individuals system has worked extremely well particularly as combined with the offer of rewards for the return of the best books of slips. Sex was dealt with by having male and female printed on different colours on alternate pages involving perhaps a slight waste, so slight as to be negligible as compared to the saving in the trouble of sorting. No other symbols were used. The same system of differentiating sex by colour is carried out in sorting tickets with great advantage. This might perfectly well have been done for India as a whole as the waste on tickets would probably be no greater than that under present conditions. The total saving involved by the abolition of slip-copying obtained by this process works out at almost 50 per cent of the cost of abstraction in Baroda, though I do not think that this would be the case elsewhere. It also involves the elimination of one source of error and the danger from loss of slips is obviated by the treatment of slips as if they were government treasure issued only on receipts and a receipt given for each book on its return."

4. New Enquiries—Apart from this feature, the Baroda Census carried on additional enquiries along with the general census, some of which were first instituted in 1921, and the rest were new. In common with the rest of India an Unemployment census was taken, but as shown in the Chapter on Occupation, not much success was attained in this matter. There is some consolation in the thought however that in other parts of India, this enquiry similarly did not come up to expectations. On the other hand the special enquiry into the size and sex constitution of families achieved a much greater measure of success than the pioneer enquiry in 1921. On the present occasion, we were happily able to secure more popular support to the idea than before; it was possible also to engage a much larger number of women workers from the Education and Medical departments for this purpose. The enquiry was spread over seven months from December 1930 to July 1931. Altogether 3,573 workers were actually employed including 429 women. Besides this, the census of livestock, the classification of homesteads according to standards of house room, the size of the normal household, the special tenement enquiry in the City of Baroda, the collection of statistics and other materials regarding the practice of divorce amongst the people, a special Life Table for the State population and a food survey of the principal castes were among the additional matters in which the census organisation was utilised. In addition, additional tables were compiled, some by a special sort like the occupation of literates in English, the age-groups of immigrants, the civil condition of the infirm, non-working dependency by caste and age, literacy by scripts, the distribution of the population by annual ages, and the record of sects. Altogether 39 special tables (not counting parts of tables, and the special statistics regarding divorce and the food survey) were compiled for the State Census. We have therefore at hand a volume of statistical material unsurpassed by any other census unit in India.

5. Co-operation from all concerned—That it was possible to collect such a mass of material was due to the co-operation of all concerned. Unlike British Gujrat and certain other parts of British India, the census of His Highness's dominions was unattended by any political turmoils. On the contrary, one of its happiest features was the ready goodwill with which people everywhere offered assistance to the census army of supervisors, sex enquiry workers and enumerators and the leaders co-operated by agreeing to work on census committees and volunteering as enumerators or workers on sex enquiry. The municipal staff in the different towns worked throughout under the superintendence of non-official charge superintendents and carried out the various items of the census with great efficiency and zeal. There was vigorous competition between the different charge superintendents to be first with their charge totals. By the afternoon of the 27th all the charge totals—including the remotest ones—were received, and the provisional results were telegraphed to the Census Commissioner for India, 17½ hours after the midnight hour of the census day, thereby beating all previous records in the State for promptitude. For this result, the Baroda Census is indebted to all concerned. Without the co-operation and goodwill of all departments of the State and of the people, nothing can be done. There was hardly any hitch. The usual routine crop of difficulties of course had to be countered. Certain departments were

induced by their clerks who dreaded to be drafted in as enumerators, to declare that the census time was their busiest season and that they could not spare any men on that account. Here the Government came to the aid of the Census by setting their face sternly against these pretexts. But we had other difficulties of an amusing kind, the *amour propre* of certain Head Masters had to be mollified, as they thought that to be called supervisors was derogatory! So the term "assistant charge superintendent" was invented to meet this perplexing problem. Certain English-educated school mistresses, suffering from a well-known complex, declared that they would not undertake the sex enquiry as the items in its questionnaire were not decent! Here sternness combined with good humour solved the problem. In this and in all other difficulties, the Commissioner of Education remained a staunch ally. The collection of industrial statistics and other economic data would not have been possible without the help of the Commerce, Revenue and Agricultural departments. The materials regarding caste, religion, divorce, dietary, etc., were largely gathered through the help of census committees and honorary correspondents too numerous to mention.

6. Abstraction and Compilation—The abstraction of these materials into tabular statements was at once taken in hand immediately after the census. The enumeration books were collected with all speed, scrutinised and recounted per block for the Register A from which details per village were prepared. They were thereafter cut up into slips, which were heaped in bags and boxes according to mahal and religion. Sex differentiation was continued throughout, the sorting staff for females being kept apart from males with different coloured sorting tickets and separate boxes for their slips. The final totals of the population were declared on the 24th March, *i.e.* only 26 days after the census, and differed from the provisional by only 83, so that the margin of difference was only .0034 per cent. But the margin of error was even lower than this small figure. Part of the difference was due to the fact that the final count results of the remote outpost of Salher had not arrived when the Songadh Mahal Charge Superintendent wired his results and he therefore only reckoned in the figure of the preliminary count for his charge totals. If this figure is deducted, we get the real margin of error which is only 35 or .00143 per cent, which means a remarkably high degree of accuracy unknown hitherto in the records of the Baroda Census. Regular sorting of tables was begun soon after the declaration of the final population figure and it continued till the 27th June when it was completed. Compilation had been already taken in hand. By the 7th October, 1931, the compilation of Imperial Tables was completed. With a view to secure reduction in expenses, the Government of India decided to drop a few of the Imperial Tables, but we decided in this state to retain all but one of the dropped ones, as this could be done along with other tables without any extra expense. The abridged report called "Some Results" was ready in print by the beginning of December. The Imperial and State Tables Volume was ready in print on the 26th December. The Census Commissioner for India when he received the copies of "Some Results" and the Tables Volume, was good enough to congratulate the Baroda Census on despatch in publishing: "You have been extraordinarily quick in getting your abridged report out and I congratulate you on being the first to get the Volumes of Tables printed and published."

7. The Report—The writing of the Report was taken in hand as soon as the Tables were ready. The abridged report was taken as the basis for amplification, but I have not hesitated to make changes, wherever I thought on a fuller analysis of the figures, that an alteration was necessary; I am thankful to say however that these changes were confined to details and did not affect materially the conclusions reached in the earlier publication. In the writing of the Report I have been moved mainly by two considerations. In the first place I have always kept before me the ideal of the previous Census Reports of the State which was to attempt at fullness of treatment. But some of the previous Reports erred on the side of excess in this respect. The Dalal Report of 1901 for instance was a ponderous tome of nearly 650 pages, so that if each line was stretched on the top of another together they would reach an altitude of 11,700 feet or more than twice the height

of the fortified peak of Salher! Rao Bahadur Govindbhai's production of 1911 and my own previous effort of 1921, although not reaching this fearful eminence, were still of tremendous dimensions. On the present occasion, I have attempted the utmost economy in space in the discussion of statistical material, although in volume, the data collected have exceeded the record of previous censuses in the State. I have been able to do this in order to make room for appendices dealing with caste, divorce, food survey and other matters which I was specially ordered to include. Secondly, I have tried to humanise the document with pictures and topics of more descriptive interest. The diagrams, although fewer than in 1921, have been planned on a more generous scale. I leave the result to the judgment of the reader. My experience has been that a Census Report, although intended for the general benefit of students and officers, is rarely read. Officers and publicists like to get a complimentary copy—for it is the thing to do so,—look at its opening pages and then relegate it to their shelves, resorting to it most occasionally as an inducement to sleep, when all the “drowsy syrups” of the doctors have failed. What destiny is reserved for these humble pages, their author will be the last person to know.

8. Acknowledgments—This is the second Report I am submitting on the Baroda Census. While I am deeply sensible of the honour His Highness's Government have done me by asking me to conduct the census for the second time in succession, I realise the difficulty of writing a second Report on the same subject. The methods of statistical analysis are getting standardised everywhere; the Indian Census in particular has stereotyped its subject-matter so much that it is not possible to go through the various Provincial Reports without being struck by the sameness of treatment. There can be little scope for originality and one would imagine that the average reader is thankful for that fact. What is new from year to year in the Indian Census is the change and the wondrous variety in social phenomena, through the infinite inter-relations of which the attempt to discover the process of ever-present laws is the most fascinating of all forms of human research. Such newness that my present Report can claim, is based on the value and the variety of these social experiences. In the general plan and methods of statistical analysis, I have therefore drawn largely from my own Report of 1921, but my borrowings from other sources have lain heavily on my conscience. I have tried to acknowledge them as far as possible. My own personal indebtedness to Dr. Hutton, the Census Commissioner for India, is great. He was always prompt and courteous in his disposal of questions and whenever I sought assistance on points of intricate detail, I found his great experience on points of Indian sociology an unfailing guide. Moreover his calling of the Census Conference in January 1931 was a wise departure from precedent which I trust will be followed in future censuses. It helped to clarify many points of difficulty and to bring about a greater uniformity in the treatment of certain subjects than ever before. The Government of the State are entitled to my special obligations. The essential requisites of a successful census, as pointed out often before, are finance, guidance and co-operation. The budget allotments were ample for my requirements, and I was given the most ample latitude and the widest powers of finance and discipline. I must take this opportunity of recording my gratitude for this token of unstinted confidence with which the Government have honoured me. For the rest, my indebtedness to the departments I have already referred to. My own staff was all that I could wish for. Messrs. Maganlal and Jhaverbhai again assisted me with their signal services. In my last Report of 1921, I referred in high appreciation of their work. Mr. Maganlal after completing the work of compilation joined his judicial duties on the 6th October 1931. Mr. Jhaverbhai is to continue until the Report is ready in print and the census office is closed. He has discharged his very heavy duties to my complete satisfaction. He has prepared the appendix on the cattle census and has also helped me specially in getting up materials for the appendix on divorce. Prof. Mukherji, of the Baroda College, has contributed Part II of Chapter IV in which he discusses by an actuarial analysis of the age-returns the Life Table which he has prepared for the State population. I am sure that his contribution will enhance the value of my Report. Dr. Fredoon P. Antia, M.Com., Ph.D. (LOND.), F.S.S., a young probationer recently appointed to the State, collaborated with

Mr. F. S. Kale, B.A. of the Khangi department in preparing the appendix on the food survey. Of the rest I need not speak, not because I am not sensible of their good work, but because certain confidential proposals about special promotions to the deserving staff are on the way to Government and will be more useful to these workers than any empty praise here. The Baroda State Press do not specialise in English printing but when I decided to entrust the Tables Volume to them, they rose to the occasion. The Times of India Press is well known for the excellence of its finish and execution. My abridged Report is a testimony to the high quality of their work. I am sure the reader will agree that this volume also is a credit to their enterprise.

9. Cost of the Census—A final word as to cost of the Census. A few details may not be uninteresting, although the final accounts are not yet made up. In 1921, the total expenditure was Rs. 1,18,107. But this did not include the cost of printing at the State Press of forms, schedules, slips, and of the Village Tables Volume which was then charged to the general budget of the Raj. On the present occasion, all these items are separately charged to the census budget. This meant that a sum of Rs. 7,591 on account of these heads should be deducted from the 1931 estimate of cost. On the other hand, the outstanding bills and the estimated cost of this Report itself have to be added. When this is done, the total expenditure, on the same basis as in 1921, will be about Rs. 1,06,800. There is thus a saving of over Rs. 11,300. The cost per mille of the population in the latest census is less by Rs. 11-13-0 than in the previous census. The pre-war level of economies, which Mr. Govindbhai was able to effect in 1911 is out of question to-day. The cost of printing and paper is now nearly double and clerical labour now demands twice the wages of 20 years ago.

Census of			Cost per 1,000 of the population in Rupees
1901	..	..	64.0
1911	..	..	28.5
1921	..	..	55.5
1931	..	..	43.7

SATYA VRATA MUKERJEA,

B.A. (OXON.), F.S.S. (LOND.),

BARODA, 16th March 1932.

Census Commissioner, Baroda State.

REPORT

ON THE

CENSUS OF BARODA

1931

CHAPTER I

DISTRIBUTION AND MOVEMENT OF POPULATION

§ 1. THE AREA DEALT WITH

1. Position of the State—It has been well said that the Indian States are so interwoven with British India, and with one another, that their destinies are inseparably bound. Of no other State can this be said with greater truth than the dominions of His Highness the Maharaja Gaekwar. Of all the larger Indian States, Baroda is perhaps the most dispersed. Its districts are scattered all over Gujarat, to which Natural Division it wholly belongs. Gujarat is one of the historic areas of India, but it has two well-marked portions: the Kathiawad and the Mainland. The Mainland of Gujarat, like ancient Gaul, is divided into three parts: North, Central and Southern. Each of these parts contains a district of Baroda State separated from the rest by British districts and other States: while the Kathiawad portions of Baroda forming the administrative units of Amreli and Okhamandal are a scattered archipelago of the Gaekwar's rule, set in a sea of other jurisdictions.

2. Natural Divisions—These administrative divisions form the basis of the absolute figures given in the Imperial and State Tables, the City of Baroda being considered a separate unit by itself. In the Imperial Tables, the *prants* or districts are the unit, while the State Tables usually give the figures by talukas. But in the Report itself, it is considered more convenient to depart from this arrangement and readjust the main statistics in proportionate figures by units of natural geography. These units are determined by the homogeneity of their natural features, climate, rainfall, etc., and of the composition of their populations. But it is best to adopt within the State a scheme of natural divisions that does the least violence to administrative boundaries. In this State, we have been able to do this as our districts are distinct by themselves and happen to belong to the different portions of Gujarat in which they are situated; we have therefore adopted the nomenclature of North, Central and South Gujarat to correspond to Mehsana, Baroda and Navsari *prants* respectively, while the figures of Amreli and Okhamandal have been combined for the purposes of this Report and shown under the name of "Kathiawad." These four are the main natural divisions. For a more detailed

study of figures in certain matters, it is necessary however to attempt a further classification into thirteen natural sub-divisions. This was done in 1921, and the Report of that year contains a detailed description of each of these natural areas in justification of the scheme adopted, to which the reader is referred.* Here it will be necessary only to give a brief summary with the general remark that the scheme does no violence to present taluka boundaries, although in strict truth this would have been in some cases necessary. These natural sub-divisions therefore are merely combinations into thirteen groups of the different talukas. In this Report whenever we shall refer to these thirteen sub-divisions, we shall call them *natural areas* in contradistinction to the bigger groups which we shall call *natural divisions*. In naming them we have generally followed popular usage and historic designations.

(i) *North Gujarat*—It is a fairly compact district about 120 miles in length and 80 in breadth; but its compactness is broken towards the south-east where the Sabarmati divides Dehgam and Atarsumba from the other talukas of the district. These two talukas are very much riddled with other territory. The country here is wild and picturesque and cut up by ravines. This is the Trans-Sabarmati area. The rest of Mehsana *prant* has two well-marked divisions: East Kadi containing the more fertile and well-wooded talukas of Kheralu, Vijapur, Kalol, Sidhpur, Mehsana and Visnagar; and West Kadi consisting of the drier and more barren country of the Patanvada, in which are comprised Patan, Harij, Chanasma and Kadi talukas. Of course the western villages of Mehsana and Kalol although grouped for convenience under East Kadi, partake of the features of West Kadi and should have been included under it. East and West Kadi together form a sloping plain uninterrupted by any hills. In the east, the *rayan*, *mahuda* and the mango abound. In the north-west, the dry winds from the Rann clog the soil with sand, and clumps of *limda* and tamarind are the only trees worth mentioning.

(ii) *Central Gujarat*—It has a more diversified aspect and its rich soil of both black and red varieties makes it one of the most fertile spots in India. It has four clearly marked and historic divisions: Charotar to the north-west is marked off from the rest by the Mahi river and contains the populous and fertile talukas of Bhadrak and Petlad; here is the soil famous for growing all kinds of crops, but specialising in its one luxury crop—the tobacco—which it grows with great success. Next there is Vakal in the centre, well-wooded and drained by the Dhadhar and its tributaries, but with a composite soil in which the sand and lime are intermixed; it consists of Baroda and Padra mahals. Kahnām, to the south, with its rich black soil, bleak and treeless, but producing some of the finest cotton in India, is formed of Dabhoi, Sinor and Karjan talukas with the Narmada as its southern boundary. Finally there is the Chorashi to the north and south-east, into which the Kahnām drives as it were a wedge between Vaghodia and Sankheda talukas. This area is formed of Savli, Vaghodia and Sankheda talukas and Tilakwada *peta*. The two last named have many undulating uplands and scattered eminences interspersed by low forests and ravines. Vaghodia and Savli have expanses of grass lands alternating with *jheels* with broad sheets of water that are overgrown with weeds and teeming with game.

(iii) *South Gujarat*—Here we have an area only separated from the Kahnām part of the Central division by the narrow band of Rajpipla territory. This division is almost cut into two halves by the British district of Surat, but has three well-marked natural areas. The western talukas of Kamrej, Palsana, Navsari and Gandevi are flourishing and prosperous, with a soil of exceeding fertility in which the best varieties of cotton and sugarcane are grown. These form the Rasti area. The rivers Tapti, Ambika and Purna drain it from east to west. On the east are the talukas of Songadh and Vyara, with their fever-haunted forests and undeveloped populations. Together, these are called the Rani or the Jungle

* Baroda Census Report, 1921, pages 9-18.

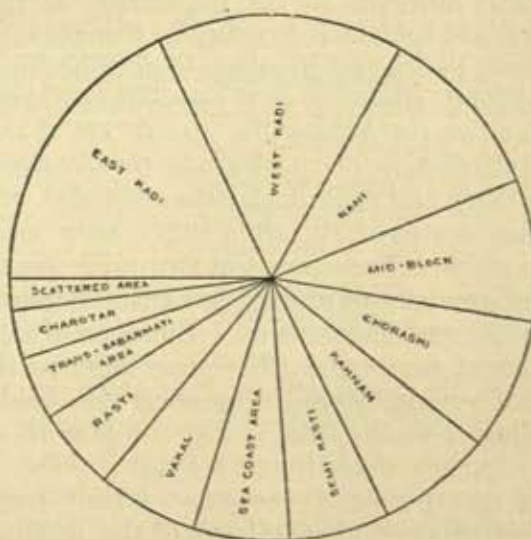
area. Midway between these two extremes are the half developed talukas of Mangrol and Mahuva which we have called Semi-Rasti. The eastern portion of Mangrol includes Umarpada forests, while Mahuva to the south-east contains an undeveloped belt where agriculture is thriftless and the climate is unhealthy. These talukas combine therefore the features of the Rasti and Rani areas.

(iv) *Kathiawad*—Towards the west, the Gaekwar's territory in Kathiawad consists of (i) the Middle Block, a fairly compact area formed of the adjacent talukas of Amreli, Dhari and Khambha; (ii) Scattered areas consisting of the talukas of Damnagar, Ratanpur and Bhimkatta (which is only an isolated village near the gulf of Cutch completely surrounded by Nawanagar State); and (iii) the Sea Coast Areas comprising Kodinar and Okhamandal. The Middle Block is fertile and well cultivated towards the north and west, but in the south, where it touches the Gir, the country rises into a hard and desolated plateau, round which forests and hills abound. Kodinar is isolated, though towards the sea coast it possesses fertile soils and abundant water facilities. Okhamandal is bleak and bare, famous only so far for its temple places as the earthly seat of Sri Krishna, where even the stunted trees are bowed low by the subservient winds in obeisance to Dwarka's lord. The lazy Karadia and the care-free and ignorant Wagher form the typical population in the Sea Coast area with small colonies of trading communities in the towns and large villages, and groups of Bhadelas and other sailors near the sea.

3. The Area of the State—The total area of the State is 8,164 square miles. The margin gives the details of area for the Natural Divisions in the State. The corrected areas of the different talukas are shown in State Table I, while Imperial Table I gives the area of each *prant* or division and the City of Baroda. The marginal table shows that North Gujarat is the largest division, as Kathiawad is the smallest. South Gujarat is smaller than the Central. The largest of the thirteen natural areas is East Kadi, which forms about half of Mehsana *prant*. Next come West Kadi and Rani in size. The Scattered areas in Kathiawad are the smallest natural unit in the State. Chorashi is the largest natural area in Central Gujarat. The Middle Block is rather more than half of the Kathiawad possessions of His Highness. A diagram is given here in the margin which shows the different natural areas in order of size.

NATURAL DIVISION	Area in square miles	Proportion to total area
<i>Central Gujarat</i>	1,933	24
(i) Charotar	269	3
(ii) Vakil	454	6
(iii) Kahanam	578	7
(iv) Chorashi	632	8
<i>Kathiawad</i>	1,352	17
(i) Middle Block	697	9
(ii) Scattered Areas	173	2
(iii) Sea Coast Areas	482	6
<i>North Gujarat</i>	3,068	37
(i) East Kadi	1,501	18
(ii) West Kadi	1,229	15
(iii) Trans-Sabarmati	338	4
<i>South Gujarat</i>	1,811	22
(i) Rasti	418	5
(ii) Semi-Rasti	490	6
(iii) Rani	903	11
The State	8,164	100

DIAGRAM SHOWING AREA BY NATURAL SUB-DIVISION



4. The Area dealt with—It is necessary to explain what the area given above represents. It does not include the area of first and second class States in Kathiawad and Gujarat which enjoy almost complete sovereign powers, although they pay tribute to the Gaekwar under the Walker Settlement of 1820 through the British political authorities. These number 16 in all with an area of 17,974 square miles. Nor does the area include the numerous petty states and chiefships with less than second class powers in Gujarat and Kathiawad, which though similarly paying tribute are under the political jurisdiction of the British Government. These number about 196 (70 in Kathiawad, 56 in Mahikantha, 14 in Palanpur Agency and 56 in Rewakantha) with an approximate area of 4,943 square miles (exclusive of little chiefships which have not yet been surveyed). Lastly the area does not include 183 villages, which are (i) either co-shared by Baroda with other States, or (ii) are fully within the jurisdiction of other States, but paying some kind of share of revenue or such like to this State, or (iii) those about whose ownership or control the matter is pending issue with the British Government. This last class of villages has an estimated area of 366 square miles. A total of 23,283 square miles is thus excluded and this Report is concerned only with the censused area of 8,164 square miles under the direct administration of His Highness's Government. A list is appended at the end of the Village Tables Volume, which seeks to reconcile the census list of inhabited villages with the revenue list and will be of use to Revenue authorities.

5. Changes in Area—The question of changes in area from census to census in this State has become a matter of woeful statistical caprice. In 1872, when the first of the censuses was taken, the area given out was only 4,399 square miles. But ten years later the area doubled itself effortlessly to 8,570 square miles, although spatially it remained the same! In 1891, the area diminished to 8,226, and in 1901, shrank still further to 8,099. In 1911 it rose again to 8,182. In 1921, the figure shown was 8,127, so that in the present census, only an increase 37 square miles has to be explained. Since 1872 it may be said that the area of the State has in reality remained practically unchanged. In 1872, the villages of Chandod and Deesa were censused by us but in later years, these were dropped from the State total. Similarly after 1881, Manekwada, Prabhas and Prachi ceased to be censused by this State, and their totals were not reckoned in the population of Amreli *prant*. Since 1891, there has been no change at all in the area of the State, that would necessitate adjustments of population. In 1921 indeed, it was recorded that the fortress of Wadi Salher (2 square miles) was formally retroceded by the British Government to this State, but this meant no change in the census arrangements as Salher had been always censused by us and its area considered part of the State. The boundary decision in 1914 in respect of the Pashu islets added a square mile to the State area. Beyond this variation (which made no difference however to the population as these islets are uninhabited), the area of the State remained practically the same for the last 40 years till 1921. Since that year, Padra and Bhadrans talukas have gained 7 square miles through alluvium, but without effecting any population changes. The villages of the Thakore of Lal Mandwa (in Atarsumba mahal) are always part of the State, within the sovereign jurisdiction of the Baroda Government. They have been always censused by the State and their population included within the State total; but these villages were not surveyed till after 1921; their area has now been ascertained to be 18 square miles. These are the two main causes of the variations since 1921. The figure of area shown in the last Census Report was what was supplied by the Survey and Settlement department. But soon after the Report was out in 1922, the same department gave out 8,135 square miles as the corrected area and, as if to impart an air of verisimilitude to an otherwise bald and unconvincing narrative, insisted on adding .2 to the total! For the present occasion, we were not content to rely on the Survey department's figures alone, but obtained the latest figures from mahals incorporating the most recent corrections in measurements of survey numbers which from the basis of the *puravani fesal patra* (supplementary land registers). Not to be outdone by the Survey people, we give the following comparative table of changes in area since 1921 with a meticulous exactitude for which we hope to be forgiven:—

SUBSIDIARY TABLE I
CHANGES IN AREA SINCE 1921

NAME OF DIVISION	Area given in Census Report of 1921	Survey Figures of 1922	Corrected area as shown in 1931	Gain (+) or Loss (—) since 1921	Reasons for Change
1	2	3	4	5	6
Baroda City	13	11	10.93	—2.07	In 1921, in the City area was included 2 square miles which should have been more correctly shown in the Baroda mahal area.
Baroda Prant (exclud- ing City).	1,909	1,912	1921.6	+12.6	Baroda mahal gains by 2 square miles from the City. Padra and Bhadrans owe an increase of 7 square miles through alluvium. The remaining increase of 3.6 square miles is due to corrections in measurements. Inter-taluka exchanges of villages, as between Savli and Baroda, Dabhoi and Vaghodia, Sinor and Tilakwada account for changes in the areas of these talukas since 1921.
Mehsana Prant ..	3,046	3,050	3068.3	+22.3	The 1921 figure contained a mistake of 4 square miles in the Patan area, which was corrected in 1922. Both the 1921 and 1922 estimates omitted the area of the villages of the Lal Mandwa Thakore, which were not till recently surveyed. These villages have an area of over 18 square miles.
Navsari Prant ..	1,807	1,810.6	1810.98	+3.98	Songadh taluka reports an increase of 5 square miles through corrections of measurements and Mahuva area is now less by a square mile due to the same cause.
Amreli Prant ..	1,077	1,077.4	1076.9	— 0.1	These variations are too slight to require explanation.
Okhamandal ..	275	275.2	275.2	+ 0.2	

6. Size of Administrative Divisions—Having got a correct idea of the area of the divisions, let us compare the average area with that obtaining in other States and Provinces. The average for the Baroda State divisions is arrived at by including the City in the area of Baroda *prant*. The whole State average is much lower than what it would be if only the three mainland districts are reckoned in. The Okhamandal division is a special unit, but it is little more than the size of a taluka, and it therefore brings the average down for the whole State. Under recent orders passed after the census was taken, this district is now reduced more or less to its old status as a *mahal*, and in many respects, such as police, judicial and educational matters, Okhamandal is now brought under Amreli district; but as the Report refers to conditions existing before the census date, the Tables have been compiled with Okha as a separate administrative unit. If Okha and Amreli are considered as one unit, the average area of divisions in the State rises to 2,041 from 1,633. These averages can be compared as in the margin with the average area of a district in some typical British provinces and Indian States. The British Gujarat district, as well as the district in Bengal and United Provinces, are small sized and about the same as in our State. The Travancore districts are even smaller, as those in Gwalior are somewhat larger, than our *prants*. Madras and Hyderabad districts have the largest size.

Province or State	Average area of a district in square miles
Bombay Presidency ..	4,745
British Gujarat	2,029
Bengal	2,744
Bihar and Orissa	3,959
United Provinces	2,214
Madras	5,472
Mysore State	3,682
Gwalior State	2,397
Hyderabad State	5,169
Travancore State	1,906
Baroda.	
(a) Whole State	1,633
(b) Mainland Divisions only.	2,271

It is to be noted finally that the averages calculated for most of the British Provinces and States are from their Census Reports of 1921, as the final figures of area and population have so far come from only a few Provinces and States.

§ 2. AREA AND POPULATION

7. Reference to Statistics—With these preliminary considerations regarding natural divisions and the area dealt with by the Census, which serve as the setting for our population figures, we will now proceed to unfold the general results of the Census taken on the 26th February 1931. In this chapter, which is of administrative interest, we shall deal first with the distribution of the population and in that connection refer briefly to the factors that influence density, and then proceed to study the variations in the population from decade to decade and the causes that have governed these changes. In that connection the various causes will be assessed and measured, the interrelation of the many factors that affect the general movement of the population will be traced, and finally possibilities of future expansion will also be indicated, for which purpose vital statistics, returns of size of holdings, broad age-returns, migration figures and other matters specifically dealt with in other chapters will be cursorily reviewed. The specific question of houses and house room will also be touched in conclusion. State Table I gives the general details of population by division and taluka. Imperial Table II gives the variation of population in each division during the last fifty years. State Table III gives similar details for each taluka since 1891, the population of each being adjusted on its present area. Variations in density by mahals are also given in State Table III. State Table IV gives the total area in bighas (1,089 bighas to a square mile) of mahals and of village sites within mahals. The data for Birthplace, Age, etc., are also dealt with from Imperial Tables VI, VII, etc. State Table XII gives details regarding the results of the special enquiry into the classification of homesteads which are embodied in Appendix II at the end of this chapter.

8. Population as returned by the Census—(i) *General Results*—The Census of 1931 disclosed a population of 2,443,007 persons (1,257,817 males and 1,185,190 females) within the State. The following Table shows the distribution of area and population in the different administrative divisions of the State :—

DIVISION	Area in square miles	POPULATION			Variation since 1921 (Increase)	
		Total	Male	Female	Persons	Per cent
Baroda State	8,164	2,443,007	1,257,817	1,185,190	316,485	14.9
Baroda City with Camp	11	112,860	62,744	50,116	18,148	19.2
Amreli Division	1,077	173,948	88,806	85,142	21,363	14.0
Baroda Division	1,922	711,481	374,884	336,597	98,681	16.1
Mehsana Division	3,068	1,010,007	512,421	497,586	109,429	12.1
Navsari Division	1,811	404,377	203,168	201,209	64,005	18.8
Okhamandal	275	30,334	15,794	14,540	4,859	19.1

As the above table indicates, the increase has been fairly uniform throughout the State : only Mehsana (formerly known as Kadi *prant*) showing an increase of 12 per cent and Amreli with 14 per cent being lower than the State average. The City shows the largest proportionate increase. In the succeeding paragraphs the figures will be discussed more conveniently by natural divisions, or by natural areas wherever a more detailed analysis is desirable. The figures relating to the City will however be considered separately, whenever it is deemed necessary that they should be so isolated.

(ii) *Non-synchronous Areas*—As explained in previous census reports, the population returned in the census is meant to be the *de facto* population actually found within the limits of the State on the census date. There is of course the preliminary record, as the Introduction has explained, spread over a month, in which the normal residents as well as temporary visitors who are expected to stay

on till after the census day are noted. But the final record taken synchronously has to record the changes that have happened between the time of the preliminary enumeration and the census day, making due adjustments for departures and arrivals, births and deaths. A synchronous census therefore, if properly taken, represents only the *de facto* population, while the preliminary record more nearly corresponds to the *de jure* or normally resident population. But the census in this State as in every other place, cannot afford to be synchronous at all places. Forest regions and sub-montane tracts make it dangerous for the census staff to do a night enumeration. To meet their difficulties in such places, a day census is provided on the census date, so that it is just possible for a person who has been counted within the forest tracts to be enumerated again in the synchronous area. But these duplications are avoided by an elaborate system of enumeration passes. Again these areas are so situated that there is little or no probability of such confusion. There is very little movement: the villages themselves are sparsely populated and remote from one another.

In the margin are given details regarding these non-synchronous areas. Only one-seventh of the total area, one-sixth of the total number of villages, and hardly six per cent of the total population were affected by this difference in procedure of counting—so little was the disturbance that the accuracy of the enumeration was not affected in any way. Of greater moment are the disturbances which have been noted in the Administrative Volume (Census of India Volume XIX, Part III, para 74) within the synchronous areas to which a brief reference will be made in the next paragraph.

NON-SYNCHRONOUS AREAS			
Area dealt with	Square miles	Villages	Population
Songadh rural area ..	580.52	217	43,526
Vyara rural area ..	315.23	150	63,834
Vankal and Umarpada			
Tappas of Mangrol ..	195.60	74	17,439
Anaval Tappa of Mahuva ..	35.43	11	8,715
Amroli Tappa of Tilakwada mahar ..	27.44	30	7,305
<i>Total Non-Synchronous Area</i>	1,154.22	482	140,819

9. Accuracy of the Enumeration—The census date is usually selected on a day which has adequate moonlight for a night enumeration. On the other hand full moon days are avoided, because many Hindus are apt to be out of their houses on that day for bathing in sacred rivers and such other objects. Further, festival days and days of markets and fairs are also avoided for similar reasons. The 26th February was selected as a suitable date from these points of view. Normally there was nothing to disturb a correct enumeration; within the limits of the State, as pointed out in the Introduction, there was nothing to disturb the harmony of the operations. In a few places however—where we least expected untoward events—disturbing factors appeared which had to be promptly dealt with. A *hat* (market day) in a Mahuva village promised to give trouble, but the Vahivatdar's prompt measures postponed the day till after the census. In a Dehgam village, the local Vankars were on merry-making bent, and if their resolutions were carried out, thousands of their caste would have flocked to this village and its changed figures would have made material alterations in Imperial Table III. Here also the Vahivatdar with great tact postponed the evil day. But in the town of Sidhpur and another village in the taluka of that name, hungry Brahmans flocking for a feast of *ladus* (sweet balls) could not be denied. Here tact did not supervene nor promptitude prevail. The town received an unearned increment of over two hundred and the village grew in size undeservedly. I am not sure whether the additional persons enumerated in these two places were not doubly counted. With these exceptions, the census throughout was conducted with great care and zeal by the local authorities, and in point of accuracy of record, it can compare favourably with its predecessors.

10. Political Immigration—But apart from these avoidable disturbances, we had the unearned gift in this census of thousands of British Indian residents, who migrated temporarily to our villages on account of the civil disobedience movement conducted by the Congress against the Government in British Gujarat.

The general question of migration and details regarding it will have to be deferred till the third chapter, but the special incidence of political immigration must be mentioned here while we are on the question of the accuracy of the enumeration. Normally when the census is conducted under favourable auspices, without any disturbances such as festivals or disease or other causes, a *de facto* count does not differ much from a *de jure* count. The number of temporary arrivals tend to balance the figures of those who have gone out temporarily and on the whole a fairly accurate view of the normally resident population is obtained. But in this census, this was not to be. This State is so interlaced with British Gujarat, that any movement originating in British Gujarat is bound to have its reactions in this State. About September, 1930, the civil disobedience movement in British India took the form of wholesale emigration of farmers and their families from British Gujarat to neighbouring villages in this State. This migration assumed great importance from the exaggerated estimates made even in official quarters of its strength. But its numbers varied. It reached its height about December, but there were fluctuations from time to time. People kept going and coming; the movement waned in some parts and threatened to revive in others. The estimates of local officers therefore varied in accordance with these changes. Strict instructions were issued from the State Census Office to prepare an exact count of these people. They were usually of three kinds, namely:—(1) those that squatted on *sim* lands and formed separate hamlets of their own, (2) those that found room on vacant plots in village sites and lastly (3) those that were entertained as guests or tenants of local residents in houses within the limits of our towns and villages. There is reason to believe that the figures now prepared are a very fair estimate of the strength of these immigrants, based on actual enumeration. The tension was considerably relieved about the census date. Most of them returned to their homes early in March as a result of the Delhi Settlement between the Congress and the Government of India. There are hardly any left now. These *hijratīs*, as the immigrants called themselves, in most cases were eager to be counted by us and have their details recorded in this State. The slips concerning them in the enumeration books were specially marked off from the rest and the British Gujarat village from which they came was noted against each individual. Very elaborate tables showing their strength in each village and their distribution by sex, birth place and caste have been prepared. Exact figures showing the names of villages from which the immigrants had come have been also compiled. These have been supplied on request to the Bombay Provincial Superintendent. We give here two statements summarising the main results so far as they concern us. The Table showing the names of British Gujarat villages which were the native places of these *hijratīs* is not published here as it is too long and has no interest for the general reader. But a summary will be given in the next paragraph. The main results are contained in the following Table:—

SUBSIDIARY TABLE II
POLITICAL IMMIGRANTS BY BIRTHPLACE

NAME OF TALUKA	Born outside Baroda State but enumerated in Baroda State			Born inside Baroda State and enumerated in Baroda State			TOTAL		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8	9	10
Baroda State	25,093	14,101	10,992	1,662	323	1,339	26,755	14,424	12,331
<i>Baroda Division</i>	14,686	8,732	5,954	923	98	825	15,609	8,830	6,779
Bhadran	4,760	2,757	2,003	272	48	224	5,032	2,805	2,227
Padra	1,361	764	597	6	..	6	1,367	764	603
Petlad	8,380	5,119	3,261	645	50	595	9,025	5,169	3,856
<i>Vaghodia</i>	185	92	93	..	..	..	185	92	93
<i>Mehsana Division</i>	927	473	454	31	9	22	958	482	476
Dehgam	58	31	27	..	..	..	58	31	27
Kalol	869	442	427	31	9	22	900	451	449
<i>Navsari Division</i>	9,480	4,896	4,584	708	216	492	10,188	5,112	5,076
Kamrej	1,350	659	691	84	21	63	1,434	680	754
Mahuva	3,723	1,923	1,800	300	89	211	4,023	2,012	2,011
Mangrol	37	19	18	8	3	5	45	22	23
Navsari	1,116	564	552	66	24	42	1,182	588	594
Palsana	1,367	724	643	118	45	73	1,485	769	716
Vyara	1,887	1,007	880	132	34	98	2,019	1,041	978

11. Statistics regarding Hijratists—The total number of immigrants due to this special cause is, as shown in the above table, 26,755 persons (14,424 males and 12,331 females). The movement was limited to only 12 talukas in the State—4 in Baroda, 6 in Navsari and 2 in Mehsana *prants*. They came from 244 villages in British districts and affected the population figures of 171 villages in this State. The marginal table sets out the main figures at a glance. Mehsana was but slightly affected, and that only in its south-east corner; Kathiawad and the City remained unperturbed; and only Petlad, Bhadrans and Padra mahals in Baroda *prant* and Mahuva, Kamrej, Palsana, Navsari and Vyara mahals in Navsari were places where the movement was concentrated. These figures ought really to be deducted from the census variations in Baroda, Mehsana and Navsari *prants*, and the true increase in the decade (in absolute figures) comes to 83,072, 108,471 and 53,817 or 13.5, 12.0 and 15.8 per cent respectively. It is important to note, however, in this connection that of these 26,755 *hijratists*, we can claim 1,662 as being born in this State and therefore part of the natural population of Baroda. The chief castes recorded amongst these people are detailed in the next Table given below. The chief part in this movement was evidently taken by the various sections of the Patidar community, particularly the intelligent and politically conscious Lewas, who form the aristocracy of Gujarat agriculture. The second place is taken by the forest tribes, particularly of Bardoli taluka where they came under the influence of Mahatma Gandhi's teachings and acted according to the behests of his lieutenant, Mr. Vallabhbhai Patel.

NAME OF DISTRICT	No. of Hijratists	No. of State villages affected	No. of British villages from which they came
Total ..	26,755	171	244
Baroda	15,609	48	52
Mehsana	958	5	5
Navsari	10,188	118	187

SUBSIDIARY TABLE III
POLITICAL IMMIGRANTS BY CASTE

NAME OF CASTE	NUMBER OF HIJRATIS											
	BARODA STATE			BARODA DIVISION			NAVSARI DIVISION			MEHSANA DIVISION		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8	9	10	11	12	13
Baria	645	370	275	645	370	275	..	..	..	..	..	..
Brahman	660	357	303	219	121	98	430	231	199	11	5	6
Forest Tribes ..	1,464	806	658	81	37	44	1,383	769	614	..	..	..
Koli	997	499	498	..	..	..	541	273	268	456	226	230
Lewa Patidar ..	17,284	9,576	7,708	13,248	7,457	5,791	3,727	1,960	1,767	309	159	150
Matia Patidar ..	2,920	1,269	1,651	..	..	..	2,920	1,269	1,651	..	..	..
Uda Patidar ..	395	198	197	..	..	..	395	198	197	..	..	..
Rajput	802	522	370	793	468	325	99	54	45	..	..	..
Vania	194	110	84	33	18	15	153	89	64	8	3	5
Rest of Hindus ..	1,263	689	574	555	335	220	534	265	269	174	89	85
Muslims	41	28	13	35	24	11	6	4	2	..	..	..

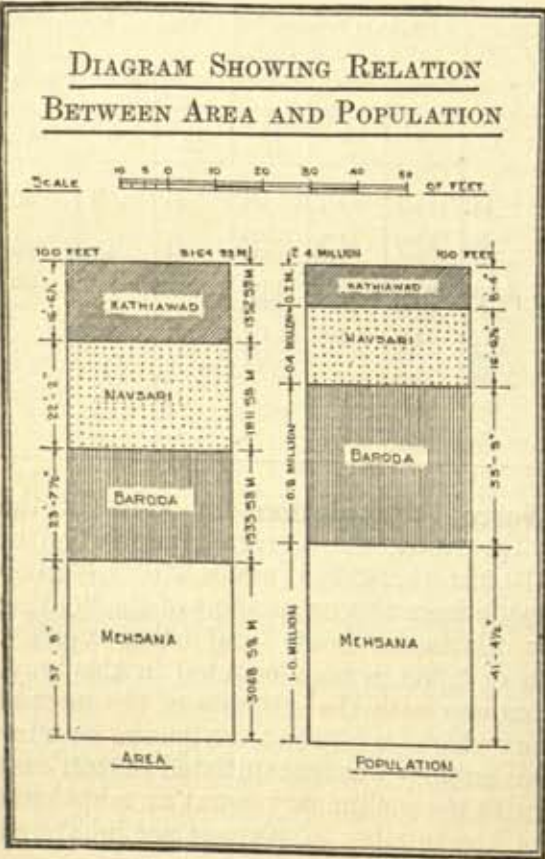
12. Corrected Population and Normal Population—In view of the transient nature of the immigration just described, the corrected population of the State is reduced from 2,443,007 to 2,416,252 (1,243,393 males and 1,172,859 females). A further deduction has to be made from this on account of the floating population counted in trains, on railway platforms, boats and other vessels. Imperial Table III gives in a Note details of 3,539 persons counted in this way. Thus we get 2,412,713. This we may compare with the estimate of the normal population from the size of households about which we conducted a special enquiry at the time of the preliminary record. This enquiry was first initiated in 1921 and was continued in this census also. Along with the preliminary count an additional record was made on the house list itself, of the number of persons per inhabited

“house,” which in this census, as in the last, was defined to be the residence of a commensal family. Care was taken in this enquiry to exclude from the calculation, all casual visitors and servants. Inmates of asylums, hospitals and jails, and the residents of *dharmashalas*, hotels and other places of temporary residence were excluded from the calculation, so that an idea could be had not only of the normal population, but also of the normal size of the household. The instructions were not precisely followed: members of the family temporarily away were liable to be excluded and temporary visitors were inadvertently included. Lastly in spite of instructions in certain places, *hijrat*is were included in this reckoning. Under the circumstances, the following results can be accepted as only roughly true:—

SUBSIDIARY TABLE IV
COMPARISON OF NORMAL WITH DE FACTO POPULATION

NATURAL DIVISION	DE FACTO POPULATION		Normally Resident Population	Normal Population per 1,000 of census population
	As at census	As corrected above		
1	2	3	4	5
Baroda State	2,443,007	2,412,713	2,404,847	984
The City	112,860	111,740	111,934	992
Central Gujarat excluding City ..	711,481	695,183	695,715	978
Kathiawad	204,282	204,030	203,477	996
North Gujarat	1,010,007	1,007,915	1,002,275	992
South Gujarat	404,377	393,845	391,446	968

From the above table it would appear that the corrected estimate shown in column 3 makes the closest approach to the normal population. In Central and South Gujarat, the presence of the *hijrat*i factor accounts for the comparatively large divergence in those divisions between the normal and the counted population. In 1921, the estimated normal population was only 965 per mille of the census figure, thus pointing generally to the return of a larger number of Baroda-born persons to their native homes during the decade than normal. This point will be dealt with later in Chapter III.



13. Comparison between Area and Population—We will now go back to the table given below para 8 and see how the population is distributed in the four natural divisions. North Gujarat has 38 per cent of the area and 41 per cent of the population. Central Gujarat with the capital city is next in size with 24 per cent of the area and 34 per cent of the population. On the other hand South Gujarat occupying a little more than a fifth of the area has less than a sixth of the population. Kathiawad shows even a greater disproportion being a sixth of the area with less than one-twelfth of the population. A diagram given in the margin illustrates graphically this relation between area and population in each of the natural divisions.

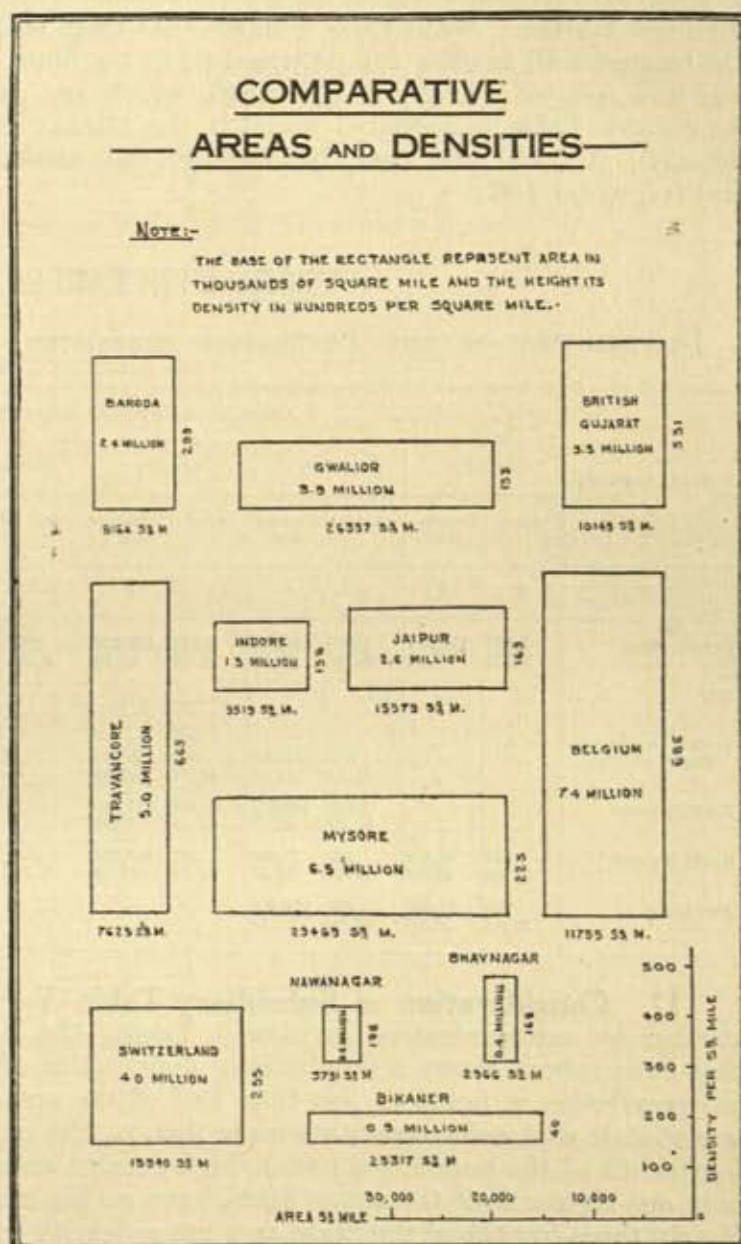
§ 3. DENSITY

14. Comparative Densities—From the area and population we are able to find that there are 299 persons to the square mile. If the *hijrat*is and floating population are excluded, the density is reduced to 295 to the square mile. This density figure is of course based on the hypothesis of a uniform distribution of persons over the total area dealt with. Its utility lies in the fact that it affords comparison with other countries. For that purpose we shall take the latest density figures available of the countries and states concerned. Most of the states and provinces selected are from India. A few countries from the outside have been also shown, which are of a size comparable with our State. For these the figures of area and population as given in the latest issue of the Statesman's Year Book have been adopted. As to Indian States and Provinces, the final figures of area and population of only Travancore, Cochin, Mysore, and of a few other States and Provinces have so far been supplied to us. The British Gujarat density figure is based on the 1921 area and the provisional figures of the census of 1931. On this basis the marginal table is prepared. A diagram is also attached to this paragraph in illustration by means of rectangles. From these data we see that the density in this State is less than half per square mile of that in Belgium or Travancore. British Gujarat is slightly more populated, but on the other hand Baroda has 76 more to the square mile than Mysore and more than double of what Gwalior or Indore is able to maintain, nearly thrice that of Nawanagar and over seven times more than in Bikaner.

15. Distribution of Population in Natural Areas

The general figure of 299, as the density for the whole State, is merely the arithmetical expression of a uniformity in the spread of population that does not exist in reality. The City, for instance, supports 10,260 persons to the square mile. Songadh has only 78.5. This wide range in densities at once shows that the population is most unequally distributed. Central Gujarat has

Name of Country	Area in square miles	Density per square mile
Belgium	11,755	686
Travancore	7,625	669
British Gujarat ..	10,145	331
Baroda	8,164	299
Switzerland	15,940	255
Mysore	29,469	223
Jaipur	15,579	169
Bhavnagar	2,966	168
Indore	9,519	138
Gwalior	26,367	133
Nawanagar	3,791	108
Bikaner	23,317	40



426 to the square mile, North 329 followed by the Southern division with 223 and Kathiawad with 151. Taking the thirteen natural areas in order of density, we see as in the margin, Charotar to be the most densely populated area. But the census figure of density here includes 13,140 *hijratīs*. Even without these, however, the density still remains at 699. Vakal includes the City, but has few other large towns. Without the City its density is only 403. The North Gujarat range of densities is fairly even being from 250 to 400. The Kathiawad areas have a still more uniform scale of densities, but these are generally low, between 140 and 155. South Gujarat however shows the greatest contrasts in density, as it does in natural conditions. A map is attached facing this paragraph to illustrate the varying densities in the different natural areas.

Natural Area	Area in square miles	Density per square mile
Charotar	269	748
Vakal	454	642
Rasti	418	451
East Kadi	1,501	396
Kahnam	578	296
West Kadi	1,229	268
Chorashi	632	254
Trans-Sabarmati ..	338	252
Semi-Rasti	490	202
Sea Coast	482	154
Middle Block	682	152
Scattered Areas ..	173	142
Rani	903	129

16. Distribution of the Population classified according to Density— We will now attempt a more detailed analysis of the spread of population in the different talukas. State Table I shows that there are, excluding the City and the Cantonment, 40 talukas and peta mahals in the State (including the island of Beyt and the isolated village of Bhimkatta which are peta mahals). The following Subsidiary Table is prepared dividing the talukas into six classes according to density: (i) 750 and over, (ii) 600-750, (iii) 450-600, (iv) 300-450, (v) 150-300 and (vi) under 150 :—

SUBSIDIARY TABLE V

DISTRIBUTION OF THE POPULATION CLASSIFIED ACCORDING TO DENSITY

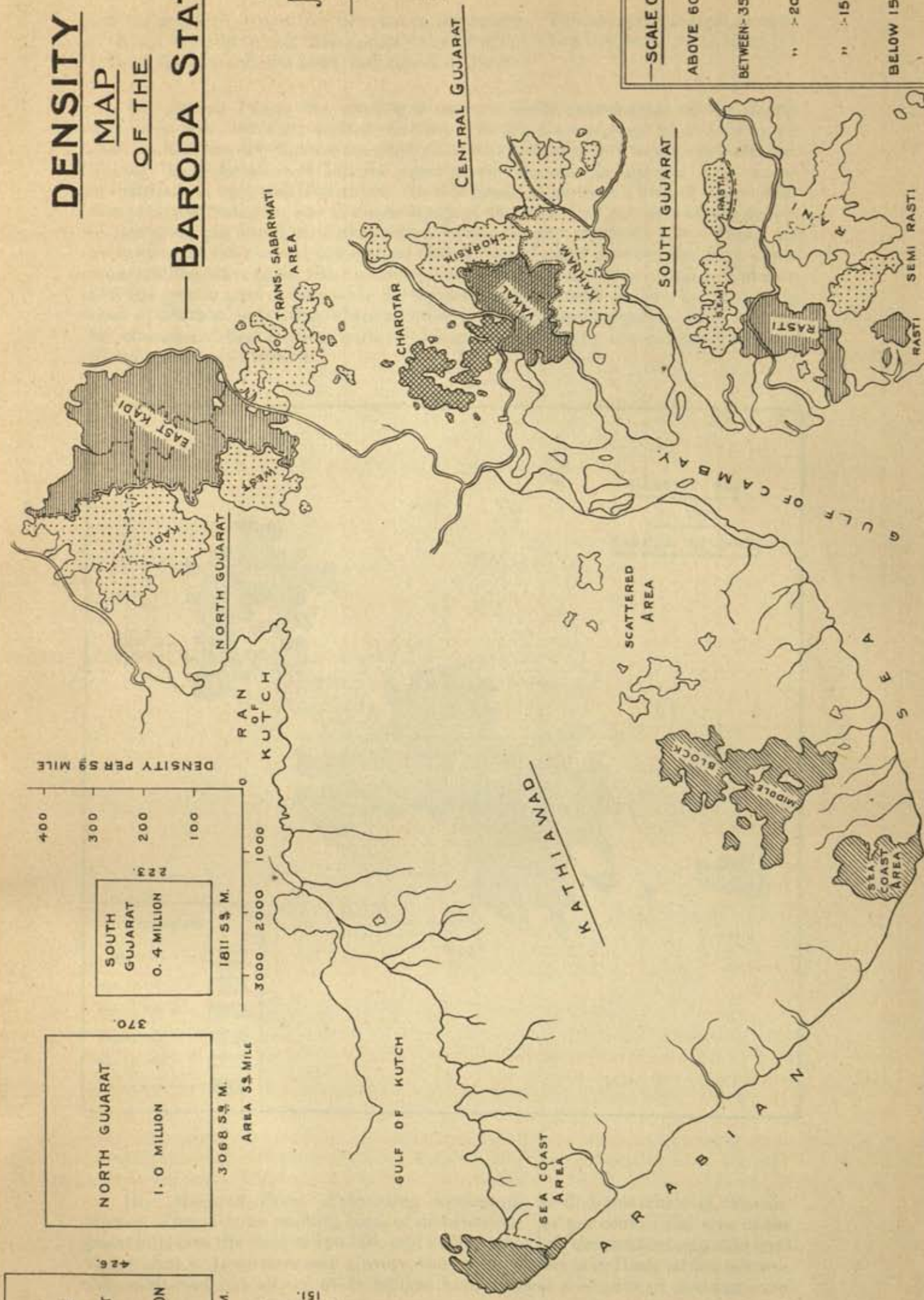
NATURAL DIVISION	TALUKAS WITH A POPULATION PER SQUARE MILE											
	Under 150		150-300		300-450		450-600		600-750		750 and over	
	Area	Population	Area	Population	Area	Population	Area	Population	Area	Population	Area	Population
1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State ..	1,697 20.79	174,494 7.14	2,893 35.44	698,175 28.58	3,119 38.20	1,142,233 46.75	125 1.53	70,406 2.88	86 1.05	52,649 2.16	244 2.99	305,050 12.49
City .. ..	..	..	..	..	..	..	..	..	..	..	11 100	112,860 100
Central Gujarat exclusive of City ..	..	..	831 43.24	212,290 29.84	822 42.77	297,997 41.88	..	..	86 4.47	52,649 7.40	183 9.52	148,545 20.88
North Gujarat ..	..	..	1,162 37.87	292,511 28.96	1,906 62.13	717,496 71.04	..	..	..	..	..	..
South Gujarat ..	929 51.30	96,400 23.84	320 17.67	71,046 17.57	391 21.59	126,740 31.34	125 6.90	70,406 17.41	..	..	46 2.54	39,785 9.84
Kathiawad ..	768 56.80	78,094 38.23	580 42.90	122,328 59.88	..	..	..	..	..	..	4 .30	3,860 1.89

17. Consideration of Subsidiary Table V—The above table can be best studied by administrative divisions. Taking the State generally, we observe that even now it shows a very uneven distribution of population. Two-thirds of the population is found in less than half of the area. Talukas belonging to the lowest class of density constitute more than a fifth of the area but have only one-fourteenth of the population; while high density areas (450 and above)—forming only one-sixteenth of the whole State, have no less than a fifth of the population. Nearly three-fourths of the State area has a density range of 150 to 450; this area is rather equally divided in extent into two density classes, an upper limit of 300-450 to which an area of 3,119 square miles belongs and a lower limit of 150-300 in which are classed talukas with an area of 2,893 square miles (more than a third of the State). It is in this last-named class that, *prima-facie*, density conditions hold

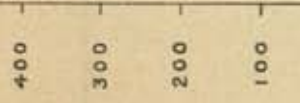
DENSITY

MAP OF THE

BARODA STATE



DENSITY PER SQ MILE



SOUTH GUJARAT
0.4 MILLION

NORTH GUJARAT
1.0 MILLION

CENTRAL GUJARAT
0.8 MILLION

1811 S. M.

3068 S. M.

1933 S. M.

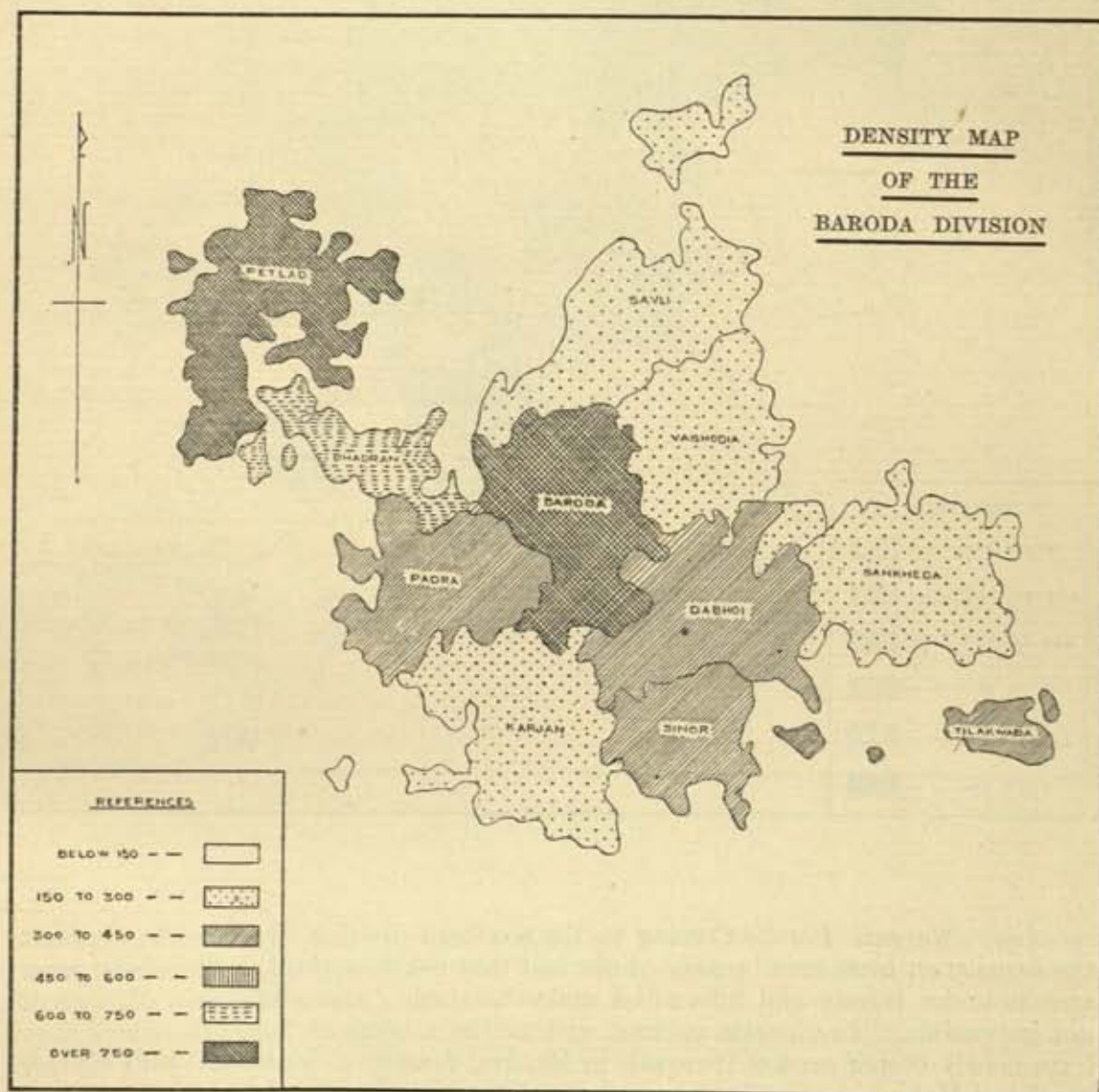
AREA 5 S. MILE

KATHIAWAD
0.2 MILLION

1352 S. M.

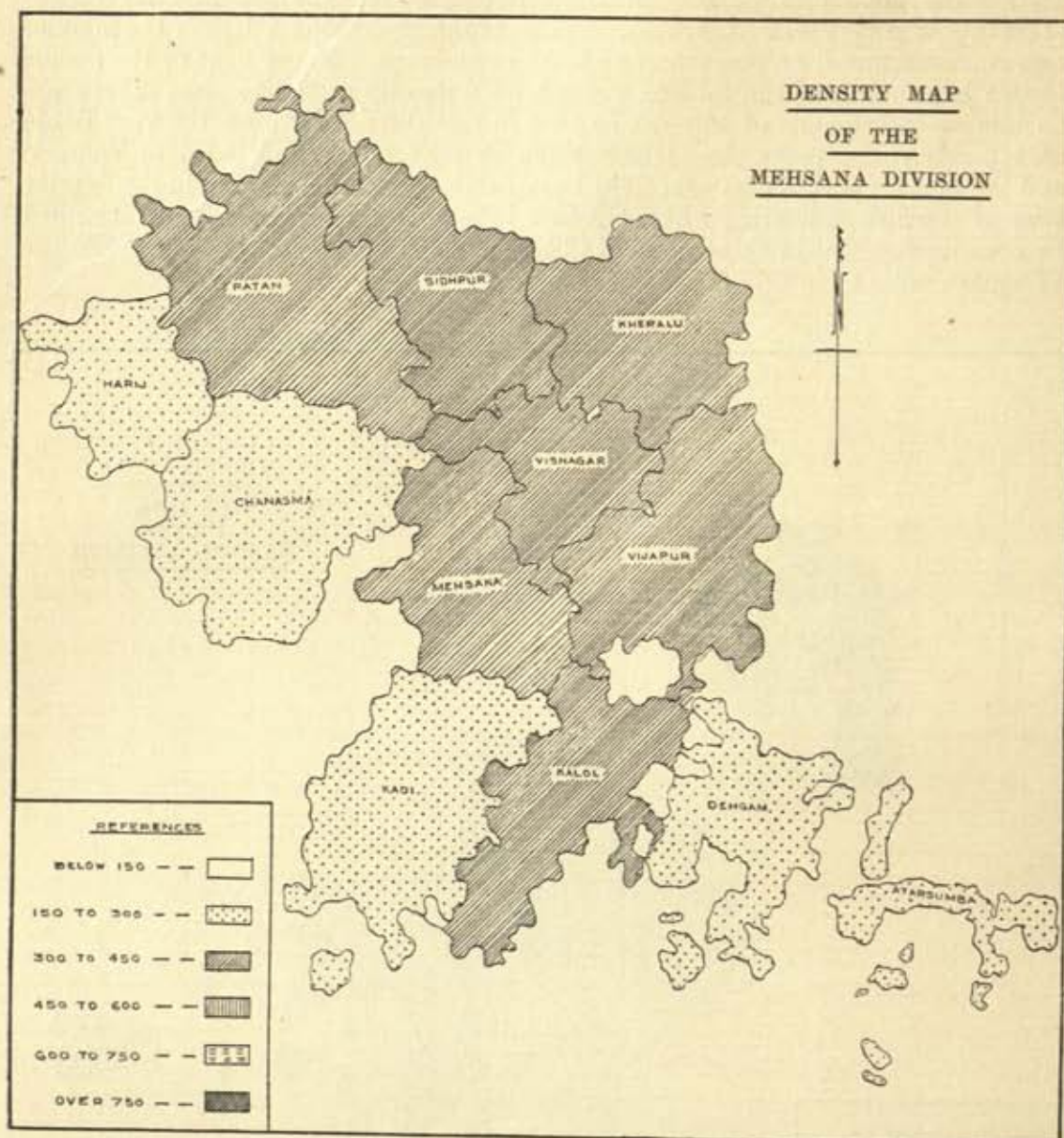
out the greatest prospect of advance in the future. The areas of greatest density (750 and over) have only 244 square miles of which 15 square miles go to form the City of Baroda and the town and island of Beyt.

(i) *Baroda Prant*—We shall now make a closer examination of the figures and begin with the metropolitan division. In the discussion of what follows we shall exclude the City figures, the analysis of which must be left to the next chapter. Taking the population of Baroda *prant* proper, we see the general unevenness of distribution very well illustrated. In this *prant*, more than a fifth of the population is concentrated on less than one-tenth of the area. 42 per cent of the people of this *prant* are found in talukas which have a density of 300 to 450. There are no talukas in the class of 450-600, so that in this district between the very dense areas and the other parts, there is some room for expansion. Nearly half of Kahanam and the greater part of Chorashi—831 square miles in extent—belong to the density class of 150-300, indicating where advance in population is possible; but it must be remembered that in those parts of Chorashi which have a low density, there are 12 square miles of forests.



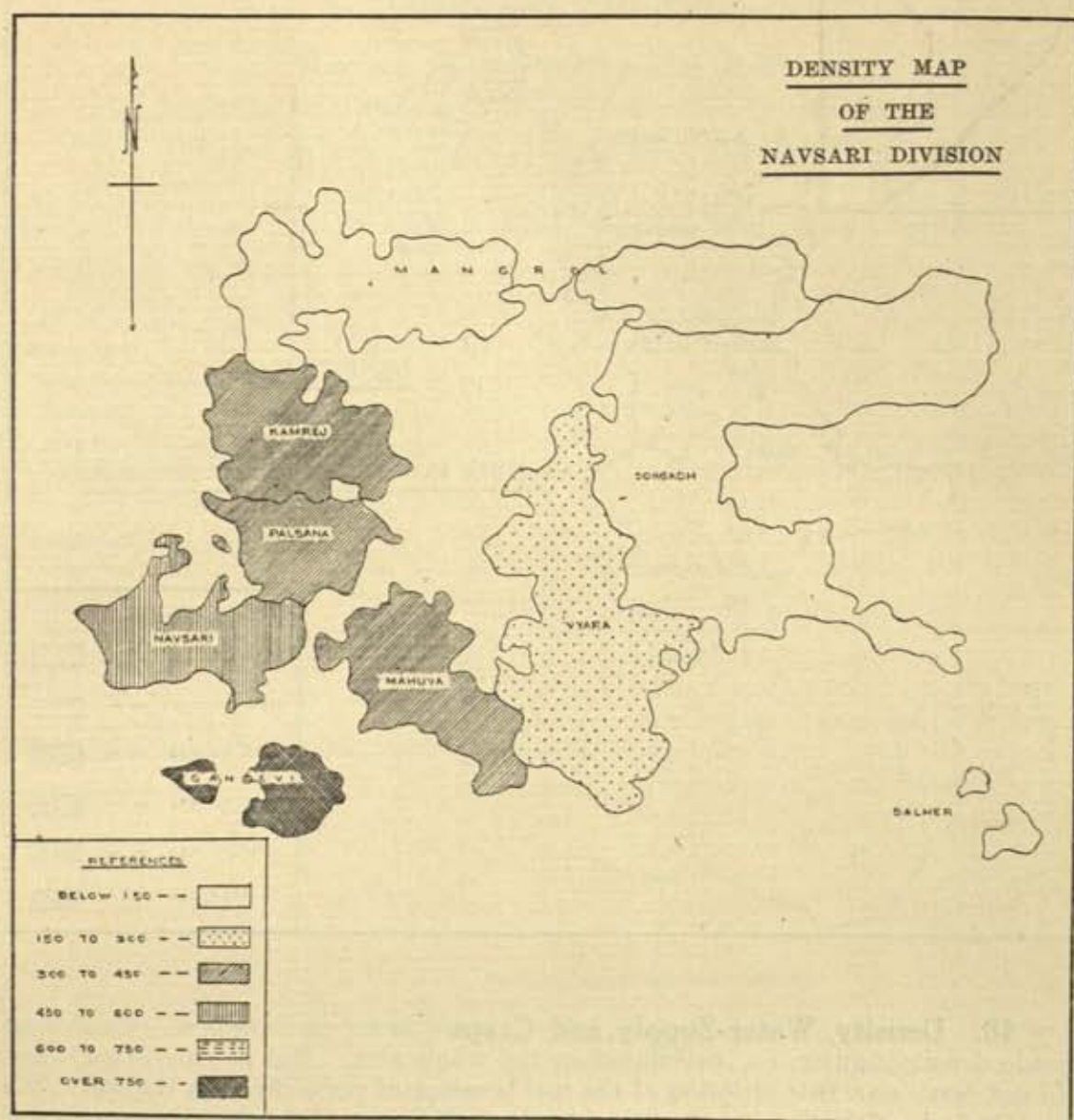
(ii) *Mehsana Prant*—Proceeding northwards we find the whole of this district on a much more uniform basis of distribution. 38 per cent of the area of the *prant* falls into the class of 150-300, and 62 per cent (*i.e.*, the remainder) in the next higher class. As we have seen already, the lowest density is in Harij taluka towards the north-west but all the other talukas have at least a density of 246 and over.

The highest density area is in the centre and east—Sidhpur, Visnagar and Vijapur talukas having over 400 to the square mile. The broken country across the Sabar-mati cannot support a very crowded population as is evidenced by Dehgam (254) and Atarsumba (246). It is in this part that the five square miles of reserved forests are found.

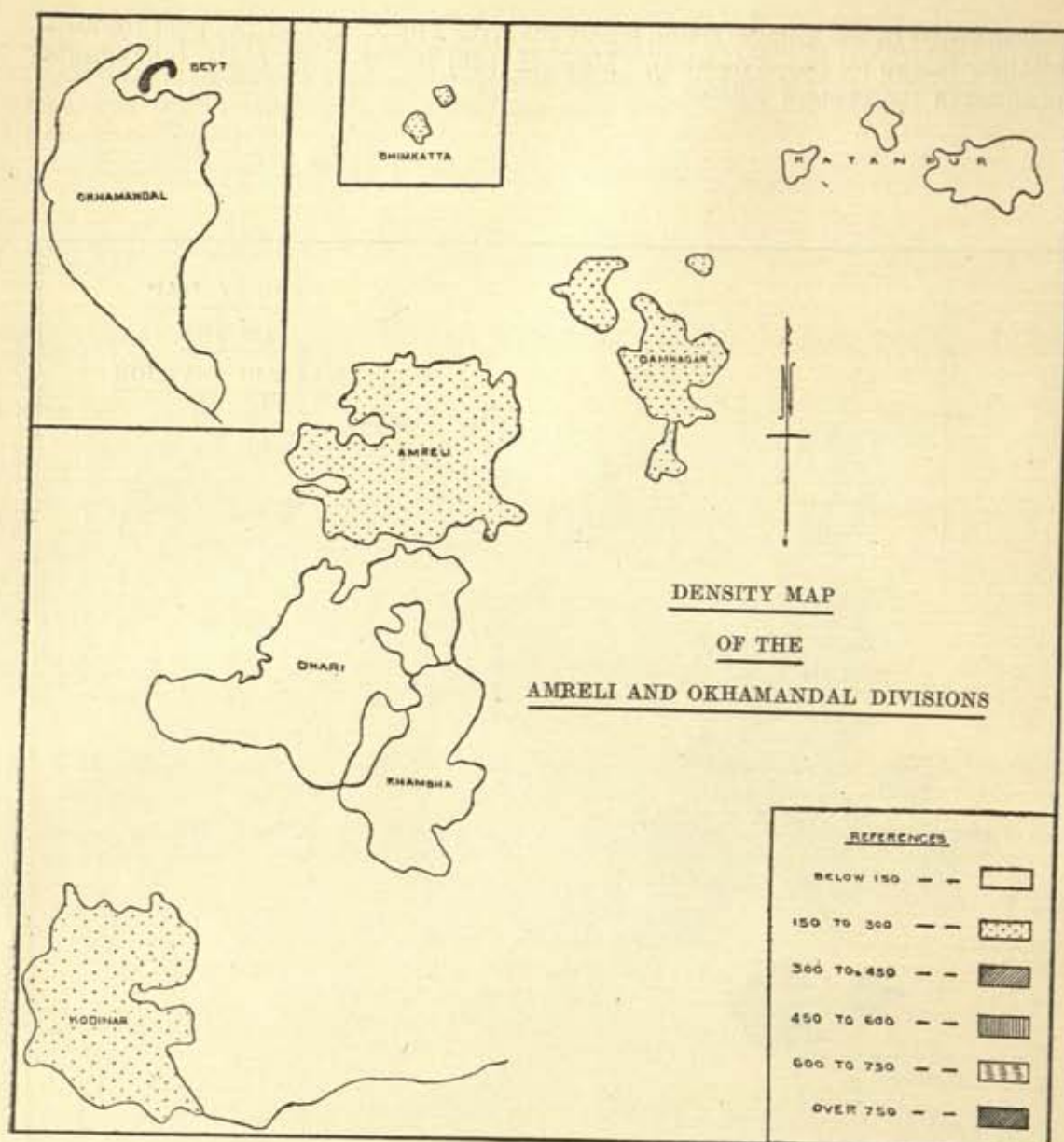


(iii) *Navsari Prant*—Coming to the southern division, we have to discount the density on total area because of the fact that nearly a third of the whole *prant* area is under forests and hills which make habitation and settlement difficult if not impossible. The forests are met with in the talukas of Songadh (where they form nearly 60 per cent of its area), in Mangrol (nearly a third), in Vyara (28 per cent) and Mahuva (only 10 square miles). Thus the whole of Rani and Semi-Rasti areas are affected by the existence of these forests. Bearing this in mind, we can easily understand that more than half the area of the district can only support a density of less than 150 per square mile. The Rasti talukas—about one-sixteenth of the whole extent of the *prant* support a density of 450 and over. Vyara is recent date owing to the opening of the Tapti Valley Railway. The most populous villages are round about there between the Tapti and the Purna. Mahuva alone of the Semi-Rasti talukas has a high density (335) but there the population is

concentrated in the villages round about the river Purna, and on the west towards Jalalpur taluka (of Surat district). Mangrol (146) has the bulk of its inhabitants localised in the western villages.



(iv) *Amreli and Okhamandal*—Here we meet with talukas which have never supported a dense population. The soil is shallow, the rainfall is precarious, agriculture is profitless, and though climate is healthy, the people are thriftless and ignorant. The highest density therefore in this district is (with the exception of Beyt which is a town and island) in Amreli (230) and Kodinar (211). Bhimkatta again we need not count, but the rest of the *prant* does not have more than 167 to the square mile. Here the factor of forests comes in again. Amreli district has 70 square miles of forest mostly in Dhari and Khambha talukas. The Okha "forests", however, are mere clumps of low *char* trees, the preservation of which does not greatly affect human habitation. The conditions here militating against population are the hard rude soil, the propinquity of the sea which turns whole areas into salt and the race composition of its present inhabitants. In spite of these, however, the density in the Gaekwar's Kathiawad compares favourably with other neighbouring Indian States in that area, such as Bhavnagar (168), Nawanagar (108), Junagadh (163), etc.



18. Density, Water-Supply and Crops—So far we have been considering crude density figures, *i.e.*, calculated on the whole area. But so calculated, they do not serve as a true criterion of the real pressure of population on the soil. We have to find out the density on cultivable area (which in a predominantly agricultural State like Baroda does give a more correct indication whether a particular area favours the growth of population or not); we have also to exclude the item of forests from the total area, and find out the proportion of net cultivated area to the arable land available.

NATURAL DIVISION	Culti- vable Area	Density on Culti- vable Area	Density on Rural Area	Density on Area exclud- ing Forests	Propor- tion of Net culti- vated area to arable Area
Baroda State ..	6,461	378	236	327	80.2
Central Gujarat..	1,635	504	306	429	87.4
Kathiawad ..	1,085	188	126	165	69.01
North Gujarat ..	2,667	377	272	330	83.93
South Gujarat ..	1,074	377	190	321	71.2

Thus we get at the marginal table. Out of a total arable area of 6,461 square miles, over four-fifths are under tillage. Excluding forests, the density rises to 327. Kathiawad would seem to offer the greatest scope for population, but it has never so far supported a high density. The extent of cultivable area in that division, as shown in the Revenue departmental reports, includes large tracts of sandy and salt-ridden soil, which are only on the margin of cultivation. That is why the net cultivated area shows a comparatively low ratio. The exclusion

of forests raises the density figure in South Gujarat to a near approach to that calculated on cultivable area, showing how the pressure there of population on means of subsistence has become well-nigh critical. From these general considerations we can now study the following detailed Subsidiary Table giving the main factors of density in the different natural areas :—

SUBSIDIARY TABLE VI
DENSITY, WATER-SUPPLY AND CROPS

NATURAL DIVISION	Mean Density per square mile	Mean Density per square mile of cultivable area	Percentage to total area of		Percentage to culti- vated area		Percentage of area which is irrigated to gross cultivated area	Normal Rainfall	
			Cultivable area	Net culti- vated area	Net culti- vated	Double cropped			
1	2	3	4	5	6	7	8	9	
Baroda State	299	378	79.15	63.50	80.22	1.90	4.03	32.09	
<i>Central Gujarat including City</i> ..	426	504	84.67	74.12	87.44	.48	2.15	35.39	
Charotar	748	827	90.29	84.79	93.91	1.89	12.22	30.28	
Chorashi	254	313	81.20	73.01	89.92	.38	.02	38.29	
Kahnam	296	340	87.07	70.39	80.85	..	.13	36.56	
Vakal	642	487	83.10	72.04	86.70	.34	.48	32.97	
<i>Kathiawad</i>	151	188	80.25	55.38	69.01	.80	2.94	18.75	
Middle Block	152	188	80.47	59.65	74.13	.24	3.38	18.23	
Scattered Area	142	157	90.81	62.83	69.19	..	3.92	18.62	
Sea Coast Area	154	202	76.15	46.54	61.12	2.01	1.68	19.57	
<i>North Gujarat</i>	329	377	86.93	72.96	83.93	2.89	6.69	26.21	
East Kadi	396	455	87.22	76.24	87.41	4.92	10.79	26.05	
Trans-Sabarmati Area	252	296	85.31	71.96	84.35	2.50	.81	33.83	
West Kadi	268	308	86.96	69.24	79.56	.52	2.62	24.21	
<i>South Gujarat</i>	223	377	59.28	42.21	71.20	3.05	.50	48.48	
Rani	129	297	43.51	30.84	70.90	4.65	.18	53.65	
Rast	451	533	84.68	61.58	72.72	1.64	1.79	46.22	
Semi-Rasti	202	304	66.67	46.62	69.92	2.65	.30	40.83	
NATURAL DIVISION	Percentage of gross cultivated area under								
	Wheat	Rice	Bajri	Juwar	Other pulses	Oil seeds	Cotton	Tobacco	Other crops
1	10	11	12	13	14	15	16	17	18
Baroda State	2.36	6.24	19.91	17.39	10.62	7.46	25.18	1.32	9.52
<i>Central Gujarat including City</i> ..	.40	15.40	8.17	8.52	6.19	2.15	49.84	4.03	14.30
Charotar .. .. .	.29	8.57	19.86	10.56	10.28	3.60	5.07	17.31	24.46
Chorashi .. .. .	.23	17.60	5.09	7.09	4.40	1.73	50.49	1.46	11.91
Kahnam .. .. .	.22	18.09	1.70	10.23	3.58	.55	54.25	.25	11.13
Vakal ... .. .	.93	13.83	12.15	7.01	9.05	3.65	26.09	2.88	14.41
<i>Kathiawad</i>	2.05	.23	39.54	21.59	4.35	15.19	24.07	.02	2.05
Middle Block	2.66	.15	28.73	19.97	6.59	15.31	24.48	.01	2.10
Scattered Area	3.63	.21	10.46	34.90	2.97	16.13	30.68	.01	1.01
Sea Coast Area .. .. .	.20	.38	43.19	17.99	.96	14.55	20.23	.05	2.45
<i>North Gujarat</i>	4.39	.59	39.54	21.63	14.45	9.71	11.93	.50	7.20
East Kadi	6.03	.40	32.41	29.66	16.28	19.17	6.67	.72	6.66
Trans-Sabarmati Area .. .. .	.80	2.11	39.34	13.10	17.07	4.35	11.27	.25	11.71
West Kadi	2.88	.42	25.32	25.63	11.10	10.64	17.12	.25	6.63
<i>South Gujarat</i> .. .. .	.57	11.90	.64	16.92	13.37	3.11	39.23	.09	14.77
Rani .. .. .	.66	15.85	..	13.85	25.52	2.56	19.65	.05	21.86
Rasti .. .. .	.40	8.84	.09	19.70	5.42	4.71	47.07	.20	13.57
Semi-Rasti .. .. .	.64	10.35	.03	17.70	6.99	2.94	55.03	.04	7.18

The above table has been prepared on the following basis. "Cultivable area" includes all lands which, even though on the very margin of cultivation, or otherwise unsuitable for tillage at profit, the Revenue department may hope some day to turn to occupation. It includes also threshing floors, well-runs and grass lands. This explains why even though 80 per cent of the total area of Kathiawad is considered fit for cultivation, nearly one-third of the so-called cultivable land remains occupied. In the Scattered areas, no less than 91 per cent of the area is shown as cultivable, but only 70 per cent of it is under the plough. As to crops, cotton claims 25 per cent, but the most highly "cottonised" tracts are Kahn timer (54 per cent), Semi-Rasti (55), Rasti (47), Chorashi (50.5), Vakal (36), and the Kathiawad Scattered areas (31). Rice has only 6 per cent, but Kahn timer, Chorashi and Rani (Vyara taluka) show the largest incidence. Wheat is even less grown (only 2 per cent) but it is mostly to be found in East Kadi. Tobacco is a luxury crop which has become almost a speciality of Charotar (where it occupies 17 per cent of the gross sown area). Oil seeds are similarly confined to Kathiawad and North Gujarat. *Bajri* is grown extensively in North Gujarat and Kathiawad, but its extent in Central Gujarat is small and it is hardly known in South Gujarat. *Juwar* is grown everywhere, but it is less extensive in Central Gujarat than elsewhere. The irrigated area is most conspicuous in Charotar and East Kadi, but on the whole it forms only 4 per cent of the total area.

19. Factors of Density—The above table gives us a series of correlations which are important to remember. We have only space for a few.

(a) *Rainfall and Density*—First let us take rainfall and density. Wherever good rainfall is properly distributed and seasonal it fills the wells and rivers and fertilises the soil. Fertility is chiefly dependent on a good water-supply. Broadly speaking it follows that rainfall favours fertility which in its turn favours density. Ordinarily therefore there should be a close correspondence between density (on

NATURAL AREA	Order according to density on cultivable area	Order according to rainfall
Charotar	1	8
Rasti	2	2
Vakal	3	7
East Kadi	4	9
Kahn timer	5	5
Chorashi	6	4
West Kadi	7	10
Semi-Rasti	8	3
Rani	9	1
Trans-Sabarmati ..	10	6
Sea Coast	11	11
Middle Block	12	13
Scattered Area ..	13	12

heavy rainfall may be a blessing in Harij but brings only disaster in Kahn timer."

(b) *Agricultural Water-supply and Density*—But rainfall does enter into the question as an essential factor of agricultural water supply. A good monsoon, it is obvious, is always of value ultimately, as it fills the wells and ensures an abundant supply of fodder for cattle, whatever may be its varying effect on the yield of crops. But the incidence of agricultural water-supply can be got at from the

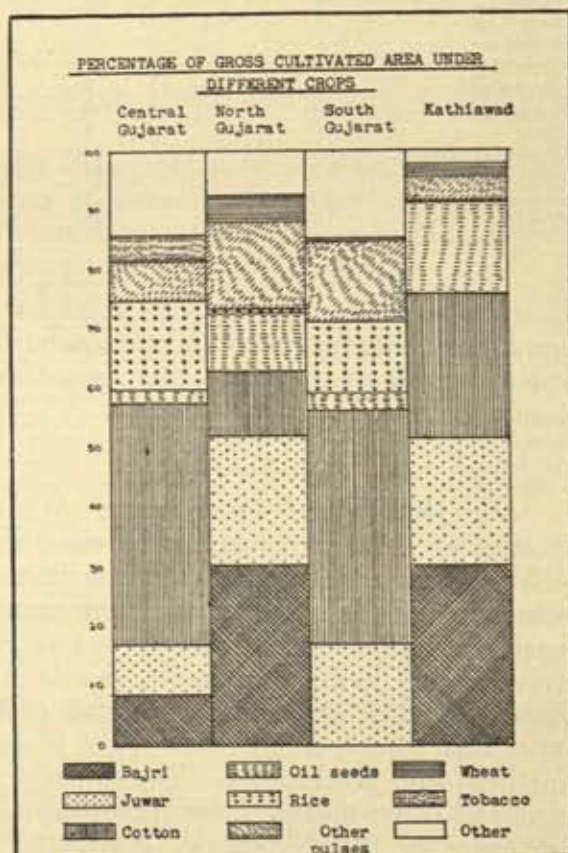
provision of wells found in the different areas, the extent of the irrigated area and the proportion to the gross sown area of crops that are mainly dependent on rainfall. *Bajri*, *juwar*, rice, wheat and other food grains are the typical food crops that depend on well distributed rainfall. To the proportions of area sown by these crops must be added the irrigated area. But the yield of the different crops differs according to the fertility, the amount of labour, skill and capital employed and various other factors combined with agricultural water-supply. Therefore the proportion of crops has to be weighted in each area according to its approximate yield. Food grains in Rani and Kathiawad are vastly inferior to the Charotar and Rasti variety. Something has to be taken therefore as a standard. Taking Charotar food crops as standard (100), we can consider the Rasti crop as 120, that in Vakal and Kahnām can be evaluated at 80, East Kadi and Chorashi at 60, West Kadi and Semi-Rasti at 50, Trans-Sabarmati and Kathiawad Middle Block at 40 and Rani, Sea Coast and Scattered areas at 30.

We thus arrive at the marginal table, wherein we find a much closer correspondence. The weights above adopted are suggested in view of the quantity and quality of yield from these crops in the different areas. The divergences that occur (in Chorashi, Trans-Sabarmati and Middle Block) are explained by the climate, facilities of communications and the race composition of their population.

NATURAL AREA	Order according to cultivable area	Proportion of watered area to gross sown area	Weights allowed	Corrected proportion of watered area	Order according to column 5
1	2	3	4	5	6
Charotar ..	1	49.7	100	50.0	1
Rasti ..	2	34.4	120	41.3	3
Vakal ..	3	43.0	80	34.4	4
East Kadi ..	4	75.8	60	45.5	2
Kahnām ..	5	33.8	80	27.04	7
Chorashi ..	6	34.4	60	20.6	10
West Kadi ..	7	65.4	50	32.7	5
Semi-Rasti ..	8	35.6	60	21.4	9
Rani ..	9	55.4	30	16.6	12
Trans-Sabarmati	10	72.4	40	30.5	6
Sea Coast ..	11	62.8	30	18.8	11
Mid-Block ..	12	58.2	40	23.3	8
Scattered Area ..	13	52.2	30	15.7	13

(c) *Luxury Crops and Density*—

But the closest correspondence is found when we combine the factor of agricultural water-supply with the incidence of luxury crops in the different natural areas. We take luxury crops to be those which yield a high value in return—wheat and rice among the food grains, and cotton, oil-seeds and tobacco among the rest, may be cited as examples of luxury crops. Wheat depends mainly on irrigation, rice would require a heavy rainfall, while cotton will flourish even with a moderate amount of precipitation and besides, does not require much high paid labour; tobacco on the other hand requires both costly labour and an abundant water supply; but all of these give a high economic return to the producer. Cotton however requires weighting similar to that adopted in respect of watered area crops, for it varies in quality: the Kahnām and Rasti varieties grown on black soil of high fertility and remarkable depth are much superior to the quality grown in Kathiawad



and North Gujarat. In other respects too, the areas require weighting. Thus

NATURAL AREA	Proportion of luxury crops	Weights	Corrected proportions	Order according to column 4
1	2	3	4	5
Charotar	34.9	120	41.9	3
Rasti	61.2	120	73.4	1
Vakal	57.4	75	43.1	2
East Kadi	24.0	75	18.0	7
Kahnam	73.4	100	73.4	1
Chorashi	71.5	50	35.8	4
West Kadi	30.7	50	15.3	9
Semi-Rasti	68.4	50	34.2	5
Rani	39.0	50	19.5	6
Trans-Sabarmati ..	18.9	50	9.5	12
Sea Coast	35.5	30	10.7	11
Middle Block	42.7	40	17.1	8
Scattered Area ..	50.6	30	15.2	10

growing also a good quality of cotton. West Kadi, Trans-Sabarmati, Chorashi, Rani and Semi-Rasti grow large quantities of cotton, which if not very

NATURAL AREA	Order according to density on cultivable area	Order according to extent of watered area	Order according to extent of luxury crops	Sum of columns 3 and 4	Final order according to columns 3 and 4 combined
1	2	3	4	5	6
Charotar	1	1	3	4	1
Rasti	2	3	1	4	
Vakal	3	4	2	6	
East Kadi	4	2	7	9	2
Kahnam	5	7	1	8	3
Chorashi	6	10	4	14	5
West Kadi	7	5	9	14	
Semi-Rasti	8	9	5	14	
Rani	9	12	6	18	7
Trans-Sabarmati ..	10	6	12	18	
Sea Coast	11	11	11	22	
Middle Block	12	8	8	16	6
Scattered Areas ..	13	13	10	23	9

good is at least highly profitable and the soil there, where it is grown, is excellently suited for the purpose. These might be given 50 marks therefore. The Middle Block—the most fertile portion of Kathiawad—grows a short stapled variety of cotton extensively and has possibilities of wheat which it has so far neglected. It should be given 40, the remaining two Kathiawad areas being credited with 30 only. The result is shown in the first of the two marginal tables attached. We can combine the two factors of agricultural water supply and luxury crops and find as in the second marginal table a final order which corresponds to the order according to density on cultivable area very closely indeed.

(d) *Density and Environment*—We will now attempt briefly following the practice of 1921 a correlation between these agricultural data, and other factors such as climate, natural drainage, facilities of communications, etc., which together form what may be called the environment for each division. Here a detailed consideration per natural area is not called for. We shall only take the natural divisions. In point of climate, Kathiawad stands first, then North Gujarat, Central Gujarat and South Gujarat. In regard to natural drainage a very important consideration—the order of importance would be Central, Southern, Northern and Kathiawad. The order of fertility follows the same. As to railways and other means of communications, taking mileage per square mile of area, the order is thus:—Central, Northern, Kathiawad and South Gujarat. In economic condition, the Central is the most prosperous, South, North and Kathiawad following each other. In regard to luxury crops and agricultural water supply, we can total up the respective orders found in the natural areas

comprised in each of the natural divisions. Thus in Central Gujarat, Charotar is number one in agricultural water supply and luxury crops combined. Vakil is second. Kachchh is similarly third and Chorashi fifth. The sum in respect of luxury crops and watered area in Central Gujarat therefore is $1+2+3+5$ or 11. The average is 3. Calculating in this way for the other divisions we find the order of the divisions for these other factors combined. The order according to density on cultivable area is obtainable from column 3 of Subsidiary Table VI given above. We thus get the following Table wherein the final order given in column 10 agrees with column 2:—

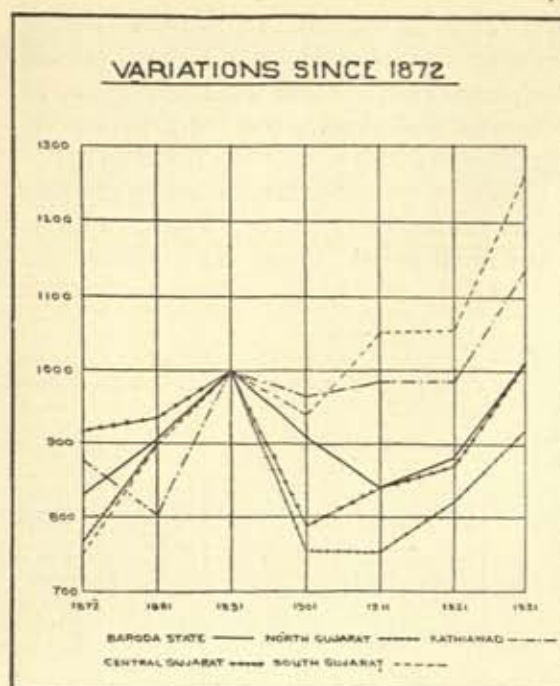
NATURAL DIVISION	ORDER ACCORDING TO								
	Density	Luxury crops and watered area combined	Climate	Fertility	Natural drainage	Rail-way facilities, etc.	Economic condition	Sum of columns 3-8	Order according to environment (cols. 3-8)
1	2	3	4	5	6	7	8	9	10
Central Gujarat	1	1	3	1	1	1	1	8	1
South Gujarat	2	2	4	2	2	4	2	16	2
North Gujarat	2	3	2	3	3	2	3	16	2
Kathiawad	3	4	1	4	4	3	4	20	3

This Table only serves to prove the thesis that density is governed largely by environment which is merely the sum of factors that condition the growth of population.

§ 4. VARIATION IN THE LAST FIFTY YEARS

20. Census Variations since 1881—We will now consider the second aspect of the general census returns—the movement of population. “Movement” is the general term applied to the variations in the population from decade to decade. These variations are caused in one of two ways: first by the excess or deficiency amongst births and deaths and secondly by migration. The first is called the natural variation and the second is the balance of migration. In this section we shall consider the general effect of the conjoint influence of these two causes. Fifty years have now elapsed since the second census of this State was taken in 1881. In 1872, the first regular census of the modern type was taken in Baroda, but it was not synchronous with the rest of India. In 1881, the first synchronous census was taken in the State, and the figures then compiled are the earliest comparable for demographical purposes. In 1872 the population returned was 1,997,598. There was an increase of 21.9 per cent in 1891 within

Variation in Population in Census area of 1921				
Census Year	Population	Increase or decrease		Variation with 1872 as 1,000
		Actual	Percent	
1872 ..	1,997,598	..	..	1,000
1881 ..	2,182,158	+184,560	+ 9.24	1,092
1891 ..	2,415,396	+233,238	+10.69	1,219
1901 ..	1,952,692	—462,704	—19.15	978
1911 ..	2,032,798	+ 80,106	+ 4.1	1,028
1921 ..	2,126,522	+ 93,724	+ 4.6	1,065
1931 ..	2,443,007	+316,485	+ 14.9	1,223



19 years. But ten years after that, there was a decline of 19.2 per cent. Thus the 1901 figures were actually below those of 1872 by 2.2 per cent. The real decrease was even more, as we have to take into account the fact that the census of 1872 was not accurate and that the omissions in that census were not less than 50,000*. The real rate of decrease in 1901 was therefore nearly 5 per cent of the corrected figure for 1872. The 1881 census was more accurate, but even then, an error of 24,000 omissions was estimated. From 1891 we begin to have censuses of normal accuracy. The accompanying diagram has been prepared with 1891 figures as 1,000, the preceding and succeeding censuses being proportioned to the population of 1891.

As the diagram shows, the variations in the State do not by any means correspond to the variations in the different

DIVISION	Variation with population of 1891 as 1,000					
	1881	1891	1901	1911	1921	1931
Central Gujarat ..	932	1,000	788	841	866	1,009
North Gujarat ..	900	1,000	759	757	820	919
South Gujarat ..	900	1,000	941	1,050	1,066	1,266
Kathiawad ..	803	1,000	963	989	988	1,134
State ..	903	1,000	808	841	886	1,011

divisions. The State on the whole shows only a slight increase of 1.1 per cent on the figures of 1891. South Gujarat however records the greatest advance in these last 40 years, having grown by 26.6 per cent. Kathiawad has increased by 13.4 per cent.

But Central Gujarat has only advanced by about 1 per cent, while North Gujarat is still 8 per cent behind. If the *hijrat*is are excluded from the census total, Central Gujarat would actually show a decline of 1 per cent since 1891 and the increase in South Gujarat is reduced to 23.4 per cent. The State population of 1931 (without the *hijrat*is) becomes 2,416,252 or only 856 more than what the census showed 40 years ago.

21. Conditions influencing the Movement of Population—1881-1921—

(a) 1881-1891—Writing in 1891, the Census Superintendent stated that in the preceding decade "there was no famine, there were no unusual epidemics, migration strictly speaking was quite insignificant and the enumeration was fairly accurate". In the 1921 Report an attempt was made to study from the figures the rate of natural increase and the volume of migration for all the decades since 1881.

DECADE	Balance of migration (absolute figures)	Rate per mille of natural variation per annum
	+ = in favour — = against	
1881-1891 ..	+ 8,242	+8.75
1891-1900 ..	—84,055	—1.69
1901-1910 ..	+ 8,775	+3.7
1911-1920 ..	+22,408	+3.4

These are collected in the margin for ready reference. The volume of migration is estimated by taking two sets of migrants at each end of the decade from which the progressive rate of variation per unit migrant is calculated for each year as well as for ten years. Then the number of deaths amongst the migrants is calculated by assuming a rate of mortality suitable for this class of people. This figure (*i.e.* the number of deaths amongst migrants in the decade) is deducted from the total figure

* Baroda Census Report, 1921, page 32.

of migrants at the beginning of the decade and the difference between the remainder and the migrants at the end of the decade is the number of migrants during the ten years. The above process is repeated with immigrants and emigrants separately and the difference between the two results gives the *balance* of migration in the decade. This balance is deducted from, (or added to if the balance is against) the census increase, so that the remainder (or sum as the case may be) is the natural increase due to the excess of births over deaths.* In the Census Report of 1921, the rate of natural increase found for 1881-1891, which was 8.75 per mille per annum, was taken as the normal rate. This only operated however during the *normal* decade of 1881-1891. The next decade was wholly abnormal as we know. But the decade 1881-1890 was not entirely free from trouble. 1880, the year just preceding the first Regular Census, was one of high mortality in Central Gujarat. In 1885, rainfall was deficient everywhere except in South Gujarat. In 1888, this deficiency was repeated and this time South Gujarat which is usually lucky was not spared. But on the whole the period was a happy one and deaths ruled low.

(b) 1891-1911—The census of 1891 is as we have seen, statistically important as it marked, until the latest census, the peak of the population curve. Up to 1898 the conditions continued fairly normal, although premonitions of the subsequent calamities were seen in 1894 and 1896, when rainfall was seriously in defect. In 1891, Central and North Gujarat had suffered from deficient rainfall, but generally people had forgotten about famines in Gujarat. In 1898, scarcity conditions were in evidence in all the four districts. But 1899 and 1900 left unforgettable marks on the population through famine and disease. The registered number of deaths which had hitherto averaged at 42,000 annually suddenly rose to 131,261 in 1900, and the mortality curve continued steep throughout 1901, and even in 1902-04. 1907 was also a bad year from the public health point of view. Agricultural prospects seemed to have been blighted after the severe shock of famine and one lean year followed another in gloomy succession. The recorded deaths from plague and cholera alone during 1901-11 was nearly 103,000.

(c) 1911-1921—This decade was dealt with in detail in the last Census Report. It was on the whole a most unpropitious one. It opened inauspiciously with a frost. Famine conditions ensued, and in Charotar, Chorashi and West Kadi, induced a little movement of population. Serious loss of life amongst the cattle also resulted from the difficulties about fodder. Timely rains in 1912 saved the situation. Agricultural conditions continued to be fairly satisfactory until the monsoon of 1915 when again the shadow of famine crossed the land. The rains held off for three months out of the four, and the deficit in fodder raised the price of grass to five times its normal. Late rains however in October removed the fears of a dire famine. The next year, 1916, was fair, but 1917 saw excessive rains in the three Mainland divisions. The *kharif* was ruined. To add to the troubles plague reappeared in a virulent form, and throughout these years since 1915 the Great War dominated the economic situation. The three years that followed were a dark period of famine and disease. The crops entirely failed in 1918. Influenza followed in the wake of plague, and together these two calamities carried off, it has been estimated, nearly 114,000 lives. I wrote about the famine in the 1921 Report:—

“The cumulative effect of these afflictions as disclosed in the recent census may not look as serious as that of the great famine of 1899-1900, but that this was so was more on account of the greater preparedness of the people, stiffened by a series of misfortunes to bear these sacrifices, their greater foresight and resourcefulness, in a word, to a more organised economic environment, than to anything else. In fact I am inclined to think that in its widespread intensity the distress of 1918 was almost as bad as 1900. That this disastrous year did not have the effect that afflictions of similar magnitude have had on population in previous years shows how scarcity conditions—and even famine—have ceased to have their demological importance of earlier days. The improvement in the means of communications and in the level of general intelligence and of

* The formula is $ax \left\{ \frac{R^{10}}{R} - 1 \right\}$ where a is the assumed rate of mortality and x is the number of migrants at the beginning of the decade.

foresight has led to this that famines have ceased to kill people. They may affect vitality to the extent of causing a little shrinkage in birth-rate and affecting the age-distribution of the people; but they do little else."

In 1919, the monsoon conditions were fairly normal but the rainfall was uneven and the late rains in November spoiled the standing and harvested *kharif* crops. Frost again in January, 1920, began that year unpropitiously and the unfavourable monsoon that followed deepened the people's distress. The rainfall was in serious defect throughout the State, although it fell in sufficient quantities to raise a moderate crop. The prices of foodstuffs which rose to an unbearable height in 1918 still continued high; the shrinkage of labour caused by the epidemics however raised the wage-level of agricultural labourers.

§ 5. THE PAST DECENNIO

22. Conditions of the Last Decade: Seasonal Variations—We now come to the last decade with which we are most concerned. It is necessary to consider first the seasonal conditions, as they affect vitally the movement of an agricultural population. In many respects, the crop conditions and the seasonal rainfall in the last decade offered a relatively happier contrast to those governing the two decades immediately preceding the period under consideration. The decade however opened unfavourably. It is curious that all the decades we have so far considered began with some foreboding of evil.

23. Agricultural and Seasonal Conditions from Year to Year—The following account summarised from State Administration Reports gives a succinct review of the seasons and crop returns from year to year.

1920—The rainfall conditions were far from satisfactory. The season commenced quite in time and continued to hold out promise of a very successful season upto the end of August, although the intensity of the season regarding quantity was below normal. The practical cessation of the monsoon after August coupled with the small quantity already received, changed the character of the season from one of hopefulness to that of depression. Central Gujarat was perhaps the worst-hit from this sudden collapse of the monsoon, resulting in many cases of rainfall below even 50 per cent of the previous ten years' average. The Northern division somehow managed to have quite a fair rainfall, but the few September showers received in the other parts of the State did not reach here. The results of such a season were bound to be of a depressing character. The pulses and *rabi* maturing crops suffered a serious set-back; for obvious reasons it was not a year suitable for rice conditions; with regard to cotton it turned out to be doubly disappointing. The season was not propitious for a good outturn and the market was even less favourable. The *kharif* crops except paddy gave a fair account of themselves and to this is to be attributed the remarkable staying power shown by the agriculturists. It was a season of general water scarcity and of a pinch in fodder supply. It was a matter of some relief that there was no further harassment of the crop beyond a little trouble from rats in Mangrol, and a slight touch of frost in Mehsana and Harij.

1921—The rainfall conditions were quite satisfactory. The monsoon commenced after an anxious period of waiting and suspense. The rains continued for about two months but abruptly disappeared in the middle of September. As the rains however were intensive the rainfall in many cases was over fifty per cent more than the average of the last decade and the season proved to be a wet one and quite congenial to the crops. But the appearance of *katras* (insect pests) in some parts of the Northern district where the pulse crops were specially damaged was reported; while ants and bolls worms in cotton took their usual toll. There was smut in *bajri*, but it was not of a serious nature.

1922—The rainfall conditions during the year were below average, more so in Kathiawad than in other parts, although it was in defect almost everywhere. The monsoon set in rather late by about two weeks in the northern parts, but once started kept a fairly good pace except in August, to the deficient rains in which month the low total is mainly due. But

for the reinforced current in September the situation might have been serious. As it was, September brought in copious rains almost in all parts especially in the third week and while this to a certain extent damaged standing crops of *bajri* by levelling them down, it helped the reaping of a decent harvest of late crops like cotton and pulses and the *rabi* season generally. On the whole, the season may be considered satisfactory for the three Mainland divisions and defective and uneven for Kathiawad. No serious insect pest causing damage of a wholesale character appeared. Among diseases, rust in wheat in Northern division did considerable damage.

1923—The seasonal conditions of the year again became distinctly unsatisfactory. The monsoon commenced late nearly everywhere by three weeks, but the point to be noted is that it did so even in the Southern district, where such an occurrence is very unusual. This deficiency was however made up later in that district. In the Central district, the rainfall averaged fifty per cent until a brisk storm towards the third week of September raised this average. Although this storm did considerable damage to crops already mature, it made a decent harvest of the later maturing crops possible. In the Northern district, the condition was still worse, the rainfall received having been even below fifty per cent of the average for many talukas. It was the well irrigation and prices of cotton that made the situation there bearable. In Kathiawad, the distribution of rain reached its height of vagary, adjacent villages having different crop conditions. The dominating feature of the season was the shortage of water supply in wells and tanks even for drinking purposes.

1924—This year the monsoon was fortunately satisfactory on the whole. It commenced rather early by a week particularly for North Gujarat and Kathiawad, but kept an excellent pace specially for the Southern division. The intensity of the wave, however, had considerably diminished so far as the Central district was concerned. In Kathiawad the season commenced extremely well, but there was too long a gap between the next wave reaching this part; conditions improved in the later part of August with the setting in of a strong monsoon current; similar waves having followed in the second and fourth week of September, the whole outlook of the season changed from almost a failure to a slightly sub-normal one. Okhamandal, however, remained sub-normal throughout. The late September rains in Central Gujarat did considerable damage to mature standing crops, but improved the prospects of the cold weather crops considerably. The season thus closed with an excellent harvest for South Gujarat and a fair one for all the rest of the territory.

1925—The season commenced with a pre-monsoon storm accompanied by rain running over Kathiawad and part of North Gujarat. In Kathiawad where scarcity of water was being acutely felt, the rain storm was naturally welcome. The disturbance, however, occasioned delay in the establishment of the regular monsoon to such an extent as to cause real anxiety with regard to the character of the whole season until the Arabian current established itself in right earnest during the last days of June and extended in the interior in the first part of July, when a greater part of the Central district received enough rains to start agricultural operations. Sowing commenced early in North Gujarat and Kathiawad, where however a setback was recorded in Kodinar which received phenomenal rains in July. Heavy rain followed generally particularly in South Gujarat, during the whole of August and early September. Sowing was hindered in consequence, and the last September rains damaged *bajri* in Kathiawad and North Gujarat. Wet monsoon conditions set in although the wells and waterways were full. In black soil these conditions showed themselves in a pronounced manner. In South Gujarat the low prices of cotton hit the producers the most. A record depression in this respect was reached before the season commenced in the next year.

1926—The distinguishing features of the monsoon of 1926 were the pre-monsoon activity and the lateness of the regular current. Once started, however, it kept a good length, the last rains being received in the latter part of September 1927. These showers were particularly heavy in North Gujarat and Kathiawad where they caused some damage to standing crops, though they benefited the *rabi* harvest. August and September proved very wet months and interfered with sowings and the growth of semi-*rabi* crops in North Gujarat and of cotton in parts of South Gujarat. The season on the whole, was a wet one, giving an increase of from 40 to 60 per cent over the average in Central Gujarat, North Gujarat and Kathiawad and from 15 to 20 per cent in South Gujarat. A rainfall of over 90 inches in Kodinar and 20 inches in Okha are points worth recording concerning the season of 1926-27. These happenings were followed by successive waves of frost in North and Central Gujarat, which affected the *rabi* crops, cotton and castor in particular, and the periodical visits of the migratory locust in parts of North Gujarat and some part of Kathiawad added to the difficulties of the agriculturists. On the whole, however, the loss on account of the locust was not heavy. Speaking generally,

the season was an extremely good one for South Gujarat, especially for rice, good for Baroda and fair for North Gujarat and Kathiawad. The abundant rainfall helped to raise the water level in parts of the State like Kathiawad and North Gujarat which had had a succession of years of more or less inadequate rainfall.

1927—The season of 1927 will long be remembered in Gujarat. The unprecedented heavy rainfall in Gujarat from Itola to Ahmedabad which later extended as far north as Mount Abu, resulted in heavy floods which caused enormous damage. It commenced earlier than usual by about two weeks and it continued wet when from 24th July to 28th July 1927 occurred the cyclonic disturbance in the course of which rainfall varying from 20 to 60 inches was registered over the affected area, Vaghodia (in Central Gujarat) receiving the highest, its total standing at the close of the season at 113 inches. The weather continued persistently wet in North Gujarat and damage was caused in portions of the district by continuous rainfall. Agriculturally these flood conditions had varying effects on the soil. The *gorat* sections suffered more than the black soil, parts of which hoped to have an abundant harvest. In the Northern district the parts contiguous to Ahmedabad like Dehgam, Kadi, Kalol and other talukas suffered more than others. But while this was the case in North and Central Gujarat, South Gujarat and Kathiawad, felt the want of rain, especially for the rice crop in the South Gujarat. The late September rains however saved the situation every where. The floods did considerable damage to the first sowings. The actual loss of life due to this cause was only 15 in North Gujarat and 52 in Central. But the damage to property and loss of cattle was stupendous. The number of houses which collapsed or were damaged in Central Gujarat including the City was 43,822 or 28 per cent of the inhabited houses according to the Census of 1921. In the Northern district the number destroyed or partially damaged was 45,163 or 22 per cent of inhabited houses; (according to the 1921 figures). With regard to this *prant*, it is however to be noted that the proportion of entirely damaged or fallen houses was smaller than either in the City or Central Gujarat. Apart from the damage from floods the season was one of the worst for losses caused to the wheat crop by rust. They were particularly heavy in Kathiawad and quite serious in North Gujarat.

1928—As the unprecedented floods were the dominant feature of the season of 1927-28, so the cold spell of January 1929 causing severe frost and damage to crops was the outstanding feature of the season of 1928-29. The season started early but failed to maintain its strength in the earlier part. At one time serious anxiety was occasioned regarding crop prospects in Kathiawad but the late August rains relieved the tension. Rains in September were also useful for rice and the *rabi* harvest in general, although as usual, it affected adversely the standing crops which were almost mature. The post-monsoon storms in October and November were bad on the whole for crops specially for cotton in Kathiawad as they blew the ripe crop down on the soil. A very good *rabi* harvest was anticipated when the cold of 30th and 31st January 1929, caused great damage to the *rabi* crops. On the whole the *kharif* harvest was excellent for South and Central Gujarat and fair for Kathiawad and North Gujarat. Cotton and wheat however suffered and the resulting damage hit the farmers hard, so that nowhere could the season be said to have been good. Fortunately there was no serious insect pest or plant disease. Agriculture relief in the shape of remissions and suspensions of revenue and *tagavi* loans had to be given to the extent of 23 lacs.

1929—The year began, as we have related, with calamity of the frost but the actual monsoon commenced in the middle of June. The total rainfall for the season was 32 to 59 inches. The distribution however was very unequal; most of the rain fell between the second fortnight of June and the first fortnight of July. In August the rain was confined to the first and last weeks. No rain fell in September. This absence affected also the crop yield in the North Gujarat, South Gujarat and Kathiawad to a greater extent than in the Central district. The *kharif* crops at some places in Kathiawad required to be irrigated. Some parts of the State also suffered severely from swarms of locusts. Remissions and suspensions had again to be given to the tune of 8 lacs of rupees.

1930—The season of 1930 was hardly better: the rainfall was not well distributed, and some parts of the State again suffered from attacks of locusts. July gave the largest precipitation with a long break in August. An unusually heavy storm in October damaged the tobacco and cotton crops in Central Gujarat. Kathiawad had rather a heavy downpour at first but a long break in August compelled farmers, wherever they could, to irrigate their *kharif*. In North Gujarat, the rains although begun early were in serious defect and crops were affected adversely. Towards the end of the decade, in the few months previous to the census date, a combination of world factors forced on the agriculturists a sudden and even calamitous fall in prices, particularly in *juwar*, *tuver* (pulse) and rice.

24. Variations of the Seasons—The above record can be summarised in the following way. If we take the seasons from the point of view of the combined influence of yield and value of crops, the nature and distribution of rainfall and the presence or the otherwise of disturbing factors, we can give marks to each by natural divisions, on the marginally noted scale, which is fairly comprehensive. A table has been prepared with the help of the Director of Agriculture (Mr. C. V. Sane) showing year by year the fluctuations of the seasons and their economic reactions on the different districts :—

(a) Excellent	..	9	Marks
(b) Very good	..	8	"
(c) Good	..	7	"
(d) Satisfactory	..	6	"
(e) Fair	..	5	"
(f) Sub-normal	..	4	"
(g) Bad	..	3	"
(h) Very bad	..	1	Mark

SUBSIDIARY TABLE VII
FLUCTUATIONS OF THE SEASONS

YEAR	Central Gujarat	North Gujarat	South Gujarat	Kathiawad
1	2	3	4	5
1921	4	5	5	5
1922	7	7	7	6
1923	5	5	7	4
1924	5	3	7	3
1925	5	5	9	5
1926	5	4	5	3
1927	7	5	8	5
1928	7	6	8	6
1929	7	5	7	4
1930	7	5	7	4
TOTAL ..	59	50	70	45
Average ..	5.9	5	7	4.5

The average of the decade shows that conditions were nearly "satisfactory" in Central Gujarat, "fair" in Northern, "good" in South Gujarat and between "Sub-normal" and "Fair" in Kathiawad.

25. Rainfall, Prices and Births—We can now correlate the deviations of rainfall (from the decennial average) with the similar deviations from the normal prices current of different food stuffs (taken collectively and averaged) and from the decennial mean of recorded births in each year in each of the four divisions. The following Tables must be studied :—

SUBSIDIARY TABLE VIII
DEVIATIONS FROM THE DECENNIAL AVERAGE OF RAINFALL
(CONSIDERED AS 100)

MONSOON SEASON OF YEAR	Central Gujarat	North Gujarat	South Gujarat	Kathiawad
1	2	3	4	5
1920	65	78	77	118
1921	126	128	134	124
1922	80	99	118	76
1923	53	58	88	56
1924	71	80	109	75
1925	82	52	73	67
1926	123	160	131	217
1927	210	196	91	97
1928	111	86	81	93
1929	80	68	98	77
Decennial Average (Index) ..	100	100	100	100
Decennial Average (Absolute Figures)	(34.81)	(26.53)	(50.28)	(18.44)
	Inches	Inches	Inches	Inches

SUBSIDIARY TABLE IX

DEVIATIONS FROM THE DECENNIAL AVERAGE OF RECORDED BIRTHS
(AS 100)

YEAR	Central Gujarat	North Gujarat	South Gujarat	Kathiawad
1	2	3	4	5
From 1921 March	99	91	97	100
" 1922 "	94	91	91	90
" 1923 "	103	103	86	97
" 1924 "	102	100	104	94
" 1925 "	98	99	103	96
" 1926 "	96	99	101	98
" 1927 "	103	95	104	100
" 1928 "	91	92	104	104
" 1929 "	102	110	103	109
" 1930 "	113	119	108	112
Decennial Average (Index)	100	100	100	100
Decennial Average (Absolute Figures)	(20,456) Births	(21,304) Births	(10,420) Births	(6,074) Births

SUBSIDIARY TABLE X

DEVIATIONS FROM THE DECENNIAL AVERAGE OF PRICES CURRENT OF PRINCIPAL
FOOD STUFFS (COLLECTIVELY TAKEN AS 100)

YEAR ENDING JULY	Central Gujarat	North Gujarat	South Gujarat	Kathiawad
1	2	3	4	5
1921	74	74	69	95
1922	91	67	77	77
1923	116	93	110	91
1924	103	102	94	102
1925	107	114	99	102
1926	91	90	110	93
1927	96	114	110	100
1928	110	125	119	123
1929	99	111	97	105
1930	114	111	114	111
Decennial Average (Index)	100	100	100	100
Decennial Average (Absolute Figures)	(41.3) In annas per maund	(39.8) In annas per maund	(36.2) In annas per maund	(42.1) In annas per maund

26. Subsidiary Tables VIII—X considered—From these data we are able to plot the accompanying diagram. It is to be noted that the curve of deviations of annual recorded births in each division is plotted forward, a six months, *i.e.*, halfway between the annual verticals of the other two curves. This

**PERCENTAGE DEVIATIONS OF RAINFALL, PRICES
CURRENT AND ANNUAL RECORDED BIRTHS
FROM THEIR MEANS IN THE DECADE**

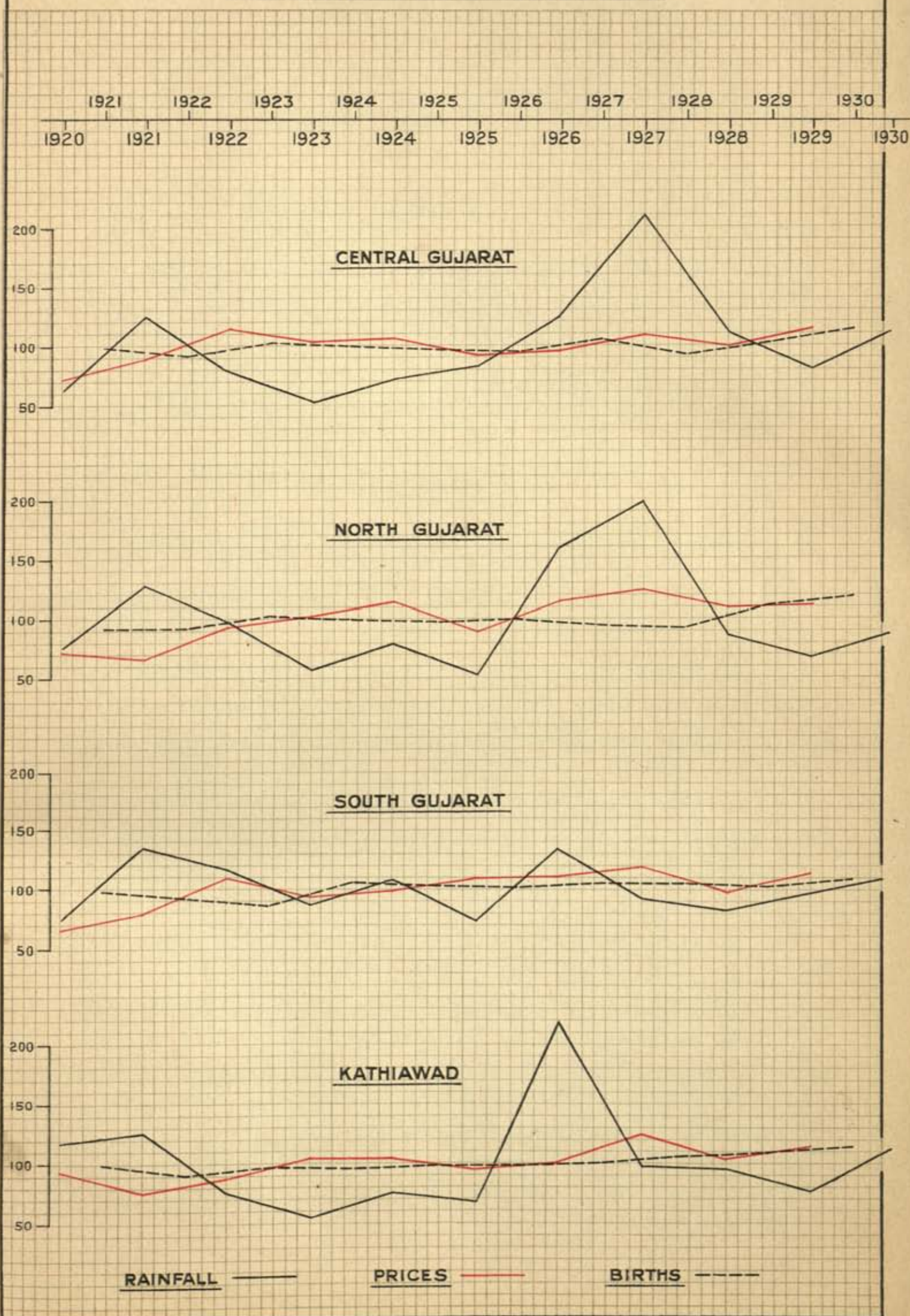
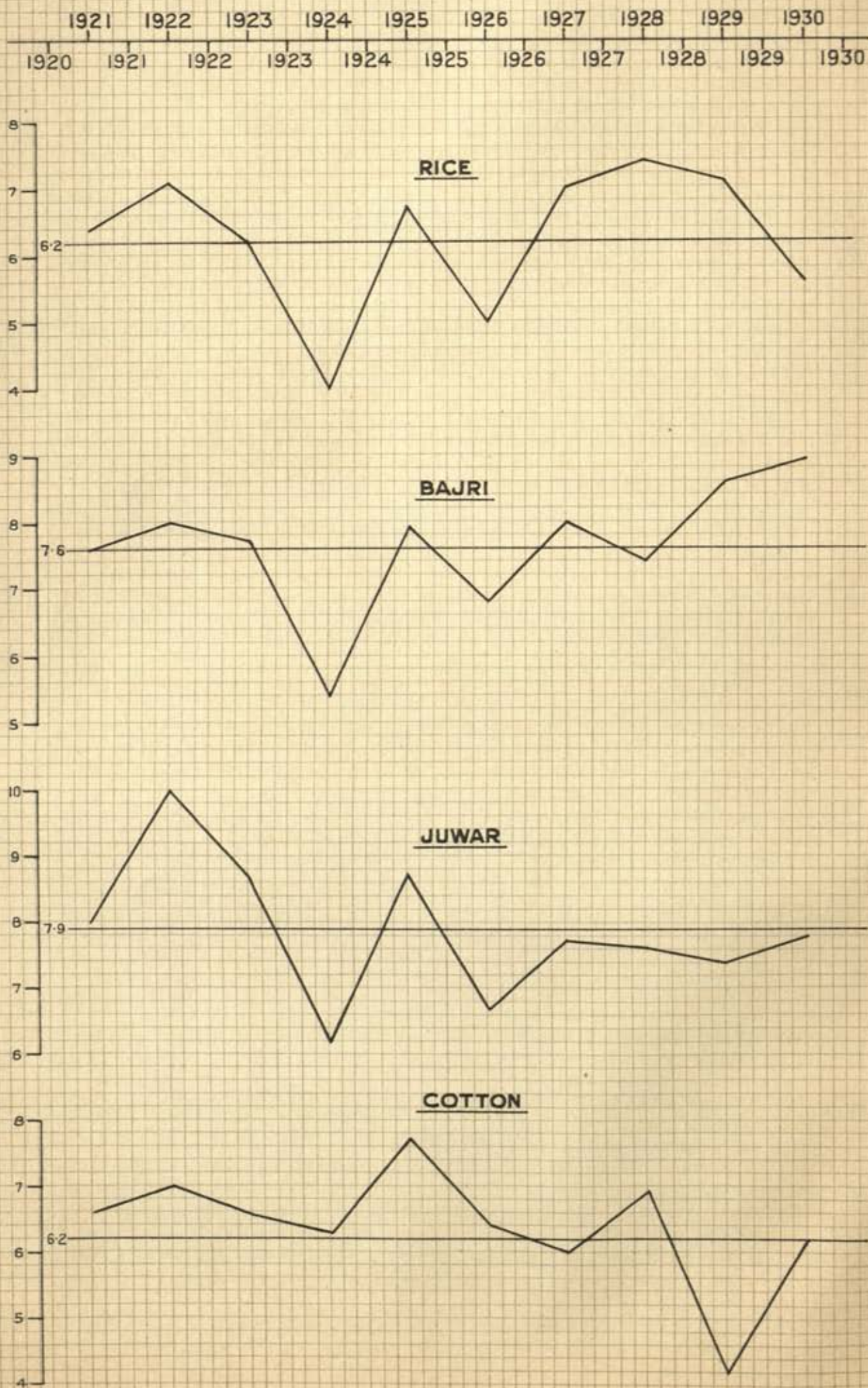


DIAGRAM **SHOWING YIELD DATA OF** **PRINCIPAL CROPS**

1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100



DIAGRAM
SHOWING YIELD DATA OF
PRINCIPAL CROPS



is because any influence of rainfall or prices on births will necessarily take some time to have effect. Of course, to have an exacter appreciation of any possible correlation between these data, one must not rely merely on absolute figures of rainfall but obtain the real volume of *effective* rainfall. If these could be accurately measured, it is possible to obtain a real correspondence between rainfall and birth-rate. But the recorded birth-rate itself is as we shall see presently an entirely faulty criterion. Births are far less accurately registered than deaths; but in the matter of record there is discernible a progressive improvement in registration, so that an increase in the volume of recorded births, and therefore in the birth-rate, is no real indication whether cognate, social and physical phenomena such as changes in the rainfall and prices are having their anticipated effect on the natural rate of variation. We shall presently show a device whereby the decennial average of recorded births could be tested and the true volume of births in the decade can be accurately estimated. But there is no possibility from this measure to deduce the number of actual births happening year after year, unless we assume that the deviations above recorded (in Subsidiary Table IX) are true deviations affected by real causes and not due to defects merely in the machinery of vital registration. On the whole therefore in view of the above circumstances, the curves plotted fail to give us any idea of close correlation between these phenomena. But even then it is possible to infer that the bad seasons of 1920, 1924 and 1925 made themselves felt in the lowered birth-rate of 1921, 1925 and 1926. The excessive floods of 1927 with consequent losses in house property and cattle did not however result in a diminished birth-rate in Central and North Gujarat. The deficiency in births in South Gujarat in 1923 must be put down to defective registration. In respect of prices also it must be remembered, as Mr. Sedgwick pointed out in the Bombay Census Report of 1921:—

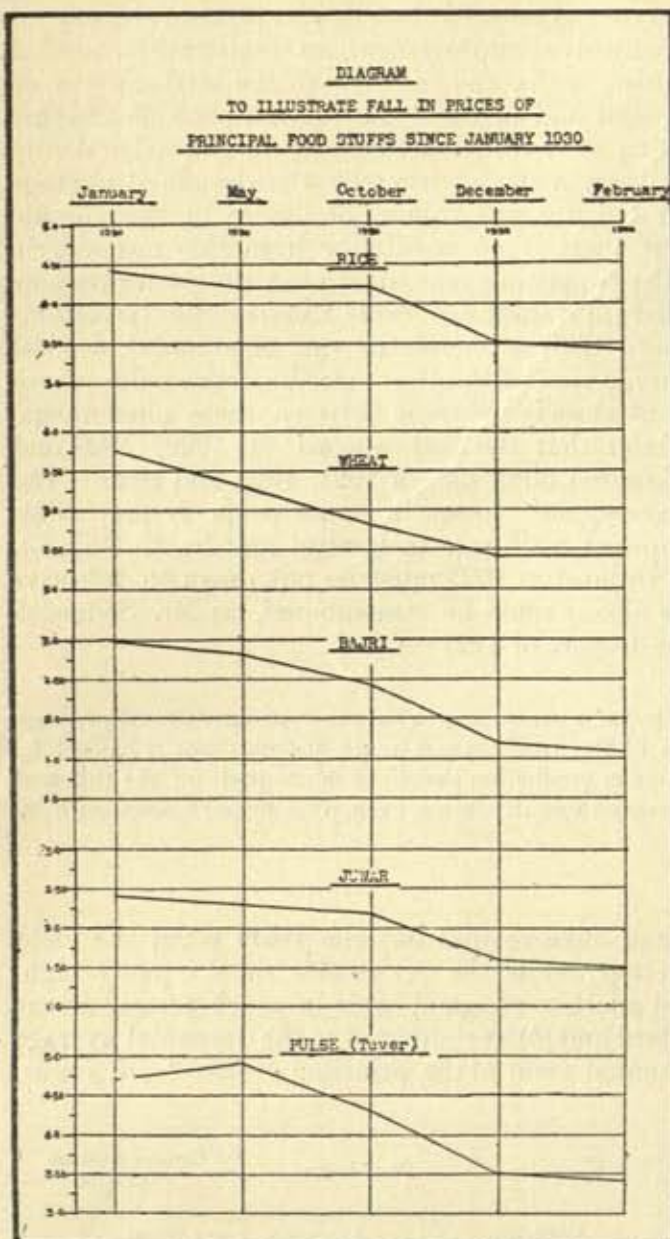
“In an agricultural country like India, a general rise in the values of agricultural produce, if caused by actual deficient production of the same, causes acute distress; but if caused by external influences without any diminution in production the effect is unequal on the different classes. The producers benefit: all labourers and all persons, even in the higher classes on fixed salaries or incomes suffer.”

During the decennium, we shall have to find out the years when the yield was greater than the decade's average, while the prices also ruled equally high. For this purpose, we have prepared another marginal table in which prices current (a) as compared to 1913-14 as standard and (b) as compared to the decennial average are placed side by side with the annual yield of the principal crops—*bajri*, *juwar*, rice and cotton. The outturn of all the four crops has been taken collectively and the yield is first compared to the standard sixteen annas as 100, and then proportioned each year to the decennial average. We find that in not a single year of the decade did the yield exceed 50 per cent of the standard expected. The average for the whole period was only 7 annas in the rupee; and this average was exceeded only in 1921-23, 1925, 1927-28 and 1930. The yield figures in the four principal crops are plotted in the accompanying diagram. Now if we compare the yield data with the prices, we find that the price curve is steep only in 1921-1922 but not in 1923, although the yield in that year was high. The yield rose in 1925, but the prices remained low. There was however a serious contraction in production in the next year and the prices rose. 1927-28 were again years of high prices with large yields. But the close of the decade saw a contraction both in prices and yields. From these facts, one would

YEAR	Price Index		General Average yield with	
	With 1913-14 as 100	With decennial average as 100	Standard as 100	With decennial average as 100
1921	169	116	45	103
1922	186	128	50	114
1923	134	92	48	109
1924	131	90	34	79
1925	136	93	50	114
1926	145	99	39	89
1927	147	101	45	103
1928	139	95	46	104
1929	137	94	43	97
1930	134	92	39	89

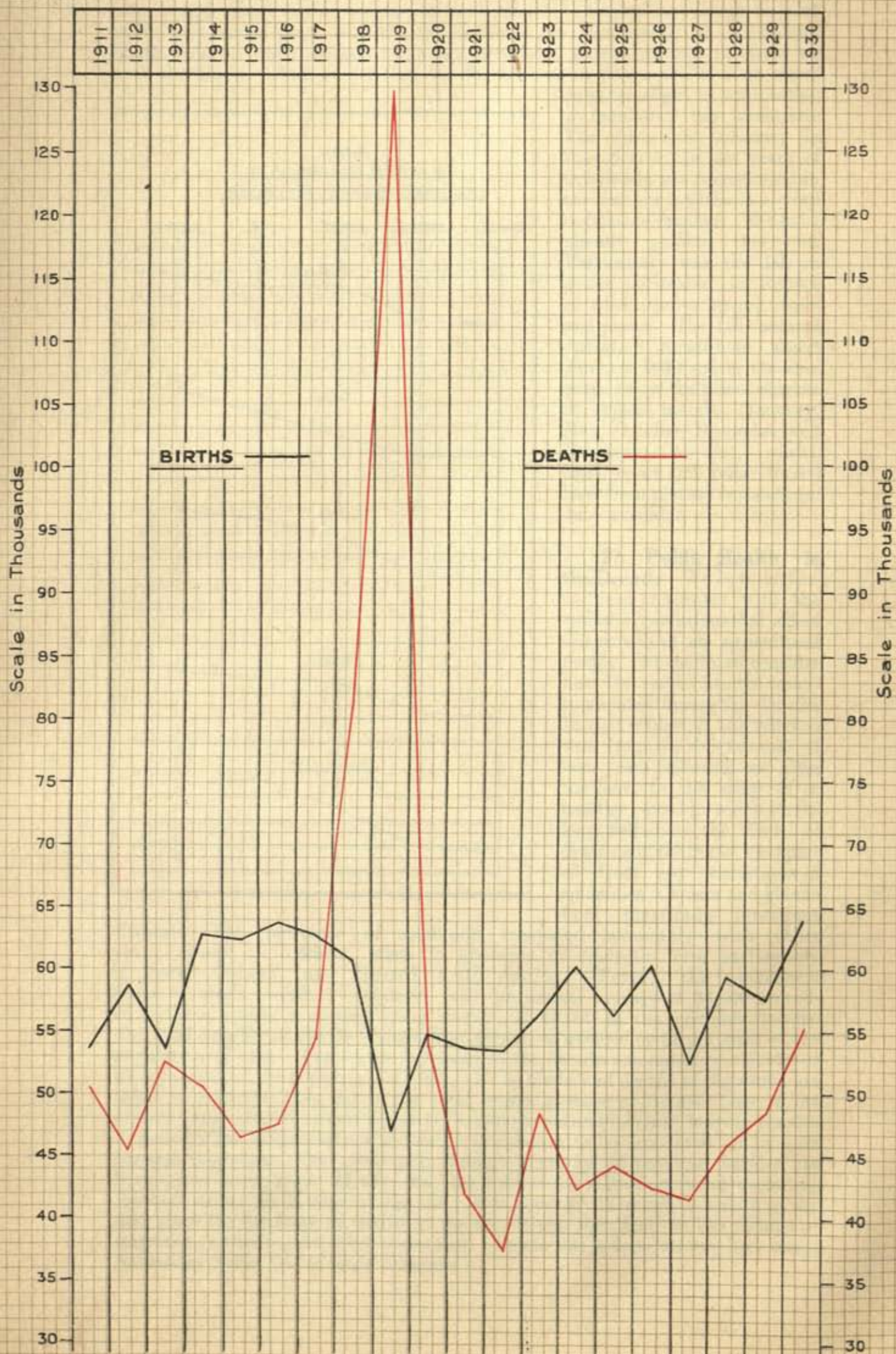
surmise an increase to happen in the birth-rate in the years 1923, 1927 and 1929-30. Sure enough there was an increase in the birth-rate in Central and North Gujarat in the first named year. In 1927, the birth-rate rose significantly in Central and South Gujarat, while the last two years recorded a general increase in births all over the State. Thus we see that the fluctuations in prices did have an effect

however slight in contracting or increasing the birth-rate. The downward tendency in the prices in the last years of the decade was accentuated in the last few months in a very noticeable manner. We have already pointed this out. Particularly was the fall in prices noticeable in respect of wheat, pulse (*tuvar*), *bajri* and *juwar*. The fall became operative somewhere about January 1930 and in the diagram below the prices current of typical months (January, May, October, December and February) of rice, wheat, *bajri*, *juwar* and pulse (*tuvar*) have been plotted from official data available.



visitants. The incidence of small-pox compared favourably with other years, except in 1929-30, when it appeared in epidemic form particularly in North Gujarat, and claimed 8,616 deaths. "Fever"—the commonest cause of death ascribed—claimed only an annual average of 35,000 recorded deaths as against a corresponding average of 38,000 in the previous decade. The total number of deaths registered amounted to 446,906 or 21 per cent of the population of 1921. The births registered in the decade amounted to 582,578 or 27.4 per cent of the population of 1921. If the births and deaths as registered are taken as accurate, then out of the total census increase of 316,485 (less 26,755 *hijrat*is), only 135,672, or over 46 per cent are due to natural increase, leaving 154,058 or well over half of the total real increase in population to be accounted for by gain through migration. Our usual gain through migration in previous decades has been never more than 22,408. So the balance of migration (after excluding *hijrat*is) cannot be so large as 154,058. It is necessary therefore to isolate in the first place the incidence of deaths in the decade and then find out the volume of migration, excluding the *hijrat* movement. Before this is done, we can here insert Subsidiary Table XI for ready reference :

DIAGRAM
SHOWING BIRTHS AND DEATHS
IN THE BARODA STATE
1911-1930



SUBSIDIARY TABLE XI

COMPARISON WITH VITAL STATISTICS

NATURAL DIVISION	1921(March) to 1931 (February) Total number of		Number per cent of population of 1921 of		Excess (+) or deficiency (-) of births over deaths	Increase (+) or Decrease (-) of population of 1931 compared with 1921	
	Births	Deaths	Births	Deaths		Natural Population	Actual Population
1	2	3	4	5	6	7	8
Baroda State	582,578	446,906	27.4	21.0	+ 135,672	+ 198,254	+ 287,735
Baroda City	33,537	30,611	36.5	33.3	+ 2,926	+ 44,634	+ 17,044
Central Gujarat.. ..	171,058	136,352	27.9	22.2	+ 34,706	+ 24,740	+ 83,367
Kathiawad	60,739	41,018	34.1	23.0	+ 19,721	+ 95,017	+ 26,075
North Gujarat	213,042	168,338	23.7	18.7	+ 44,704	+ 33,863	+ 107,724
South Gujarat	104,202	70,587	30.6	20.7	+ 33,615		+ 53,525

NOTE.—The floating population, the population of the Baroda Camp and of all the stations belonging to foreign railways have been excluded from this Table, as these are not included within the State registrable area. Also the *Hijrat*is are deducted from the population of various divisions. The total population of the State within the registrable area is thus 2,402,884. In 1921, the population of the corresponding area was 2,115,149.

28. Volume of Deaths in the Decade—We shall defer for the moment the estimate of the volume of migration in the last ten years, but in the meantime it is important to estimate at once the total number of deaths in the decade. For estimating the actual balance of survival we may adopt one of the many methods of calculating the true figure of deaths. The most famous is Sir George Hardy's : it consists in deducting the population aged 10 and over of one census (P_1) from the total recorded population of the previous census (P_2) and assuming the difference to be the deaths in the P_2 population, aged on an average 5 years and over. From the census figure of 1931, we must, at the outset, deduct the political immigrants (numbering 26,755) ; thus we get the true population figure for 1931. This population, less persons aged 0—10, should be now deducted from 2,126,522, the population total of 1921. The difference is 377,559 and represents the deaths in the 1921 population aged on an average 5 and over. But the recorded number of deaths of persons aged 5 and over is only 261,474. This gives us the margin of error (which is 30.7 per cent of the truth) in the record of deaths amongst persons aged 5 and over. The recorded number of deaths below these ages, *i.e.*, 185,432, must have a much larger margin of error than 30.7. The deaths amongst infants, it is notorious, are most often omitted from the record. For instance the recorded annual average of infant mortality (9,298) is 14.77 per cent of the infant population while in the Life Table as actuarially worked out by Prof. A. C. Mukherji, (*vide* Part II of Chapter IV of this Report—Table D thereunder). The mortality per cent of persons living at age 0 is 25.76. The corrected annual average of infant deaths is thus raised to 16,216.41. The deaths under one year for the ten years are therefore 162,164. With regard to the deaths between 1 and 4 years, the annual recorded average of which was 9,245, let us apply the same corrective proportion as for recorded deaths amongst persons aged 5 and over. Thus $9,245 \times \frac{377,559}{261,474}$ will give 13,349.4 as the corrected annual figure of deaths in the age-period 1-5. The total for the decade is thus 133,494. Totalling up these estimates for the different age periods, we get as under :—

(i)	Deaths amongst population aged 5 and over	..	377,559
(ii)	Deaths amongst children aged 1 to 5	..	133,494
(iii)	Deaths amongst the infant population	..	162,164
Total Number of deaths			673,217

The above figure, 673,217, represents the total number of deaths in the last decade on the basis of 1921 population. But that is not all. To be more correct, the number of deaths amongst the immigrants will have to be added. As these belong

mostly to adult ages (5 and over) a mortality rate of not more than 25 per mille per annum will be enough. The mean figure of immigrants (from the birthplace returns of the last two censuses) is, less the *hijratists*, 265,159. The deaths on the 25 per mille per annum basis for ten years are 53,032. Of these, 46,499 will have to be taken out as being the deaths in the immigrant population of the census of 1921, already included in the total estimate of deaths above. Thus only 6,533 deaths will have to be added as being deaths amongst immigrants (excluding *hijratists*) within the last ten years. The total number of deaths is 679,750 (or 680,000 in round numbers)* for the whole period or 68,000 per year. The registered average of deaths for each year is only 44,691. The margin of error therefore is 32.8 per cent of the truth. The final estimate of deaths in the decade preceding the Census of 1921 was 826,744 which gave a margin of error of 25.98 on the recorded figures. Thus we see that on the mean populations of the two decades the true death rate has declined from 39.8 per mille to 30.1 per mille per annum. The normal expectation of life after graduation of the mortality experiences of three decades has been found in the Life Table to be 27.66 years. Thus the normal mortality rate per mille per annum is 36.15.† As the last decade was from all points of view a healthy one, the estimate of deaths above suggested for the period may be accepted as the correct one. Assuming that the same mortality rate will persist through the next decade, the annual average of deaths expected should not be more than 77,250. A diagram is attached facing this paragraph, which plots the absolute figures of recorded births and deaths since 1911 showing how happily contrasted the last decade was in respect of balance of survival as compared to its predecessor.

29. Facilities for Relief and Indications of Progress—The story so far unfolded discloses a decade which though happy from relative freedom from disease was continually disfigured by vagaries of rainfall, a series of natural calamities and great economic strain. Notwithstanding all these buffetings of fortune, the processes of peace continued unabated. The State persevered in its enlightened policy of multiplying the facilities for rural relief and other amenities of civilisation. Co-operative societies rose from 491 in 1920 to 1,045 in 1930 (including four apex banks and two banking unions). Their membership and capital similarly grew from 15,800 persons and 24 lacs of rupees to 39,210 and 71.4 lacs in 1930. Occupied area increased from 3.78 million acres in 1920 to 3.92 million acres in 1930. Road mileage has now increased from 752 in 1920 to 405 metalled, 532 unmetalled and 129 (local board), altogether 1,066 miles. The railways have penetrated the farthest corners of the State—there being now 795 miles of railway (583 of which are owned by His Highness's Government) within the limits of the State. In 1911 there were only 504 miles of railway. In 1921, the mileage grew to 775. In agriculture, the tendency to concentrate on cotton did not increase, perhaps because it was a crop on which the farmer could no longer build as of yore for handsome returns. Indeed, the proportion of cotton to the gross sown area declined slightly from 25.6 in 1920 to 25.2 per cent in 1930. On the other hand there was no inclination observable on the part of the people to return to food crops, as the proportion of food crops to total cultivated area was more or less stationary (from 55.9 in 1920 to 56.4 per cent in 1930). The farmers tended more and more to irrigation as the one insurance against the vagaries of rainfall. 11 lacs of rupees were distributed by the State as *tagavi* to agriculturists during the decade, for wells and irrigation generally; 9.7 lacs were similarly given for maintenance, purchase of seeds and the like, and 7.7 lacs as relief for special calamities like the floods and frost. The number of *pucca* wells for irrigation increased from 60,433 in 1921 to 63,775 in 1930. Institutions for medical relief increased throughout the State in pursuance of a generous policy which aimed at opening at least one dispensary within a five mile radius. This meant a total of 104 possible places where such institutions would be required. In 1920 there were 67 hospitals and dispensaries in 54 towns and villages in the State. In 1930, there were 90 such institutions in 67 towns and villages. An efficient child welfare organisation in the City conducted baby clinics in different wards and was

* "Some Results of the Census" showed 660,000, but this estimate had not the advantage of the Life Table data before it.

† That is, by dividing 1000 by 27.66.

instrumental in bringing down the incidence of infant mortality. Baby-week exhibitions and anti-malarial campaigns are now a regular feature of the programme of the State Sanitation department.

§ 6. VARIATIONS SINCE 1921

30. Variations in Absolute Figures—We now have in the data given in the preceding paragraph an adequate idea of the circumstances influencing the movement of population in the last decade. On the one side, the absence of epidemics and of severe famine conditions such as scarred the life of the people from 1901 to 1921, had prepared the way for a large increase of population. Always there happens, a decade after, as one of the inevitable *sequelae* of famine and death, something which can be described in general terms as an outburst of fertility. High infant mortality also acts as a prelude to an increase in births. It was therefore not surprising at all that after the disasters of 1918-20, an increase in population would result in the present census which would be well over the average. The normal rate of natural increase is, as we have pointed out, 8.75 per mille per annum. The census increase in 1931 resulted in an addition of 316,485 persons, or 14.9 per cent on the population of 1921. The divisional variations will be presently studied but in the meantime the constituent elements of this census increase should be first analysed. We have already discovered one element of this increase—the temporary one contributed by the *hijratis*. Their total, 26,755, has to be deducted from the census increase, for obtaining the net variation in the population and estimating the real rate of movement in the decade. The net increase in population therefore is 289,730 or 13.6 per cent.

31. Variation in the Registrable Area—The total population enumerated in this census consists (a) of the population within the area of the State in which registration of vital occurrences is done under the State authorities, (b) of the population of the Camp and of Railway Areas outside the State administration but included within the population of the State, (c) of the *hijratis*, and (d) of the floating population—in boats and ships touching at ports, running trains and platforms, and homeless vagrants and passing travellers. Besides the *hijratis* (26,755), a further deduction of 13,368 has to be made on account of (b) and (d). Thus we get 2,402,884, as the population of the registrable area. The corresponding population within the registrable area in 1921 was 2,115,149. The difference is an increase of 287,735 or 13.6 per cent. Thus the rate of movement here is the same as the true rate for the whole State, as shown in the above paragraph.

32. Population in the Intercensal Years and Forecast for the next Ten Years—The census only records the population every ten years, but the estimates of population for the intercensal years as well as for the next ten years are often required for purposes of the administration and also for students and other workers in economic investigations. In the margin are given the estimates for these years on the basis of the rate of movement of the whole decade on the registrable area. The principle of calculation adopted is that of geometrical progression. Calculations by the method of arithmetical progression are not found so closely accurate as those by the other method. So long as our vital registration continues to be so sadly defective as it is now, these estimates will, it is trusted, be found very helpful. In 1941, at the present rate of movement, the population would rise to 2.73 millions.

YEAR	Census and estimated population
1921 ..	2,115,149
1922 ..	2,142,300
1923 ..	2,169,800
1924 ..	2,197,700
1925 ..	2,225,900
1926 ..	2,254,400
1927 ..	2,283,400
1928 ..	2,312,700
1929 ..	2,342,400
1930 ..	2,372,400
1931 ..	2,402,884
1932 ..	2,433,800
1933 ..	2,465,000
1934 ..	2,496,700
1935 ..	2,528,700
1936 ..	2,561,200
1937 ..	2,594,100
1938 ..	2,627,400
1939 ..	2,661,100
1940 ..	2,695,300
1941 ..	2,729,900

33. Constituents of the Census Increase—The census increase in population is 316,485. What are the factors that contribute to this increase? The *hijratis* contribution forms 8.4 per cent of it. Of the rest, 289,730, we have to find how much of it is due to natural increase and how much to migration. We have already estimated the volume of deaths in the last decade. If we can estimate

the exact number of births in the decade, then from the difference between births and deaths, we can find the extent of the natural increase. The total number of registered births from March 1921 till March 1931 is 582,578. If we assume that the margin of error in respect of births is the same as that of deaths, *i.e.* 32.8 per cent, then the correct figure for the ten years' births is raised to 859,260. But we know that births are sometimes less accurately registered than deaths: that birth registration is notoriously defective is obvious from the fact that the annual average of primary vaccinations amongst infants is 62,950, while the recorded births average only at 58,258 per year; and the mean infant population aged 0-1 of the decade is 77,740 corrected from the census figure. It is very essential therefore that the number of births in the decade should be estimated. This can be done in one of two ways. We know the number of deaths. There is the indirect method by which we can estimate the number of immigrants and emigrants during the decade, subtract the difference, if the balance is in favour of the State (or add if the balance is against) from the census increase and then add the result to number of deaths, for deducing therefrom the number of births. The second method is to attempt directly to estimate from the corrected age-returns at the age-period 0-1 (mean of the decade) the number of births for the preceding twelve months to arrive at the annual average of births by that means. This direct method is described in detail in Appendix I and need not be here repeated. Briefly the method consists in taking the corrected mean population of infants aged 0-1 in the decade, and calculating therefrom the average number of births per annum. This calculation is based on the hypothesis that the births in the twelve months before the census date in any normal year bear a fairly constant ratio. This ratio can be calculated on certain assumed rates of risk in the different months of the year, the first three months after birth being exposed to a greater mortality rate than the next quarter and so on. On this hypothesis, which is based on established mortality experiences of India and Europe, it is found that of 10,000 births occurring in the course of the year, 8,693.4 survive on the census date. There are difficulties attendant on each method of calculation. In the first place migration figures are obtained only from the birthplace returns of the census. No one is asked directly in the Census Schedule as to when he came to reside in the place in which he was enumerated and how long he is to stay there. There are no exact returns of immigrants and emigrants in the State. But from the birthplace returns of different censuses a method is devised by which the number of immigrants and emigrants within the decade can be estimated. This method has been briefly described already (*vide* para 21 above). But it is not exact, in so far as it is based on an assumed rate of mortality which may not always apply. The method detailed in Appendix I for calculating births directly is also open to the criticism that it assumes risks of mortality for different periods of an infant's life, which are somewhat arbitrary and may no longer be true with the extension of medical relief and child clinics and improved methods of midwifery in the State. As it will appear from the Appendix, the standard to be taken has had to be modified in view of the decrease in infant mortality.

34. Volume of Migration estimated—The number of persons enumerated in 1931 in the State, who were born outside, was 324,579 as against 232,494 in 1921. Part of this large increase was due to the influx of 26,755 *hijratis*. Deducting these and applying the Baroda formula, $ax \frac{(R^1 - I)}{(R - I)}$, we find the number of immigrants in the decade to be 130,401. The method as we have explained assumes a rate of mortality suitable for migrants, which is for this decade, 25 per mille per annum. In 1921, we assumed a higher rate of 35 per mille, because the previous decade was much more unhealthy than the present one. Migrants are usually of adult ages, *i.e.*, 5 and over, the corrected death-rate for which is about 21 per mille per annum. The rate of deduction for migrants must be reckoned a little higher than this, as many having come to a place, return to their homes or migrate to another. It is safe to assume therefore a rate of mortality or rather deduction of 25 per mille per annum. The estimate arrived at above—130,401—is based on this rate of mortality. There is one other method of calculation associated with the name of the well-known statistician, Dr. Longstaff, which

is somewhat less elaborate but less accurate than the Baroda formula.* It takes the average of figures of migrants of two censuses, applies to it some assumed rate of mortality and adds the result to the census increase in migrants. Thus applying 25 per mille per annum (or 25 per cent for the decade to the mean figure of immigrants (which is 265,159 less *hijratis*) and adding the result to the census increase amongst immigrants we get 65,330+66,290 or 131,620, which is the estimated number of immigrants, according to the Longstaff process. Whatever formula we apply we thus get very near results. Taking the mean of the two results, our estimate of true immigrants is 131,010. The number of immigrants estimated for the previous decade in 1921 was 100,593. Coming to emigrants (Baroda-born enumerated outside the State), the number was found to be 221,602 in 1921. As against this figure, only 195,446 Baroda-born persons were enumerated in the Provinces and States of India. 10 persons in the State were recorded in the Ceylon and Rhodesian censuses. There is thus a large decline in numbers of the Baroda-born found elsewhere; the Bombay Presidency figures (British territory) alone show a decline from 138,838 to 111,846, although Western India and other contiguous states show an increase of the Baroda-born from 76,443 to 78,471. Making similar assumptions as to the rate of mortality we deduce from these figures that a movement of 25,230† emigrants must have happened during the decade. Besides these we have to add the number of persons who have left the State to other countries outside India for which no census figures are available. Taluka statistics were however compiled in this census as in 1921 and we find that in the place of 5,410 persons reported to be residing abroad in 1921, there were now 10,490. Here we must apply a lower rate of mortality, say 20 per mille, and calculating on that rate by the Longstaff process, we must add to the above total of 23,640, an additional number of 6,670 on account of this overseas movement. This gives a total of 31,900 emigrants. The balance of migration apart from *hijratis* therefore is 131,010—31,900 or 99,110.

35. Extent of Natural Increase estimated—This leaves out of the total census increase of 316,485, a balance of 190,620 which must be credited to natural increase. Now the deaths we know amount to 680,000. The decade's births have been calculated in Appendix I to be 860,000. To it the reader must refer for details how this is worked out. This gives a natural increase of 180,000. Either way, we get fairly near results, but I am inclined to accept 190,620 (the higher figure) as the more accurate one. The direct way of estimating births runs the risk of under-estimating births, as the age-return of infants however correctly smoothed cannot remedy the error of omission of record. In the census returns, persons in this age-group are most liable to be omitted, so much so indeed that Mr. Meikle, the Government Actuary at the last Indian Census, was strongly of opinion that the shortage at infant ages was due partly to non-enumeration. The total estimate of births should therefore be raised to 870,620. We thus arrive at the following chief elements of the census increase :—

ELEMENT OF INCREASE	Number	Per cent of 1921	Per cent of the Increase
1. Natural increase	190,620‡	8.96	60.2
2. The Hijrati element	26,755	1.26	8.4
3. Increase due to balance of normal migration.	99,110	4.66	31.4
Total	316,485	14.88	100

36. Variation in Natural Population—Before we proceed to the discussion of variations in proportionate figures, we must dispose of one other item

* Vide Longstaff, *Studies in Statistics*, page 41.

† This figure is arrived at by calculating separately by the Baroda formula and the Longstaff method and taking the mean of the two results. The Longstaff method gives 25,975.

‡ The estimates given in "Some Results" (page 8) have now to be modified in view of fuller data. The estimate of births given therein is too large, as the index used is based on the 1921 rate of infant mortality. The balance of migration was only a surmise, as the figures of emigrants from Bombay Presidency had not then arrived.

connected with absolute figures, which is natural population. "Natural" population is that which consists only of persons born in any given area, irrespective of his place of enumeration. It differs from the "Normal" population which regards *domicile* as apart from *birthplace* as the test of record. In the margin we give the

Census Year	Natural Population	Proportion of natural population in each census (1901 figures as 1,000)	Proportion of censused population to 1901 census as 1,000
1901 ..	1,982,031	1,000	1,000
1911 ..	2,051,874	1,035	1,041
1921 ..	2,115,630	1,068	1,089
1931 ..	2,313,884	1,167	1,251

comparative figures of natural population since 1901, with increases shown as proportions of 1901 compared to similar proportions of the increases in the censused population. Thus we see that the natural population is growing at a slower rate than the censused population. Even if we deduct the *hijrat* from the censused

figure of 1931, the proportion is only reduced from 1,251 to 1,237. This points to two conclusions (i) that immigrants have increased at a faster rate than the native population, and (ii) the native born are going out of the State in less numbers than before. The net variation in natural population since 1921 is only an increase of 9.4 per cent, while the census increase we know is much larger (14.9). A Subsidiary Table is here subjoined in which the natural population is distributed in the divisions. Figures of emigrants are not usually compiled in other census units in India by the administrative divisions of this State but it is easy enough to distribute them, as the bulk of the population exchanges of the State are with the contiguous districts of British India and adjacent Indian States, and we can readily assign the Baroda-born enumerated in these districts to their proper homes in the State. In 1921, the Bombay Superintendent readily acceded to our request to record Baroda figures by districts of the State, but in 1931 presumably from motives of economy this was not done.

SUBSIDIARY TABLE XII

VARIATION IN NATURAL POPULATION

NATURAL DIVISION	POPULATION IN 1931				POPULATION IN 1921				Variation per cent (1921-31) in Natural Population Increase (+) Decrease (-)
	Actual Population	Immigrants	Emigrants	Natural Population	Actual Population	Immigrants	Emigrants	Natural Population	
1	2	3	4	5	6	7	8	9	10
Baroda State	2,443,007	324,579	195,456	2,313,884	2,126,522	232,494	221,602	2,115,630	+ 9.4
Central Gujarat including City ..	824,341	148,550	80,528	756,329	707,512	102,743	106,926	711,695	+ 6.3
Kathiawad ..	204,282	40,780	18,709	182,211	178,060	34,930	14,341	157,471	+ 15.7
North Gujarat ..	1,010,007	75,450	81,070	1,015,627	900,578	59,613	79,645	920,610	+ 10.3
South Gujarat ..	404,377	74,390	29,730	359,717	340,372	47,986	33,468	325,854	+ 10.4

NOTE.—As the Provinces and States where the emigrants were enumerated, did not supply the emigrant figures by districts of this State, they were distributed as under:—

- (i) Population of contiguous areas was assigned to the district contiguous to those areas, and
- (ii) Non-contiguous figures (males and females) were distributed *pro rata* among districts according to the proportion of the enumerated population.

37. Variation in Relation to Density: Subsidiary Table XIII—We now come to comparison of densities in different censuses. We have seen how far natural conditions have influenced density in different areas. We give below Subsidiary Table XIII in which the percentages of variation in each division are given since 1881 and compared with the mean variations in density per square

mile for the last six censuses. As the real area of the State since 1881 has practically remained unchanged, the density figures have been revised according to the latest figures of area. The net variation in the State since 1881 is 12 per cent or 32 more to the square mile. But South Gujarat alone shows the highest increase of 41 per cent or 64 more persons to the square mile than fifty years ago. North Gujarat has hardly progressed at all during the period. Even Kathiawad, which has had more than its share of ill luck in agricultural seasons and crop-yields, shows a much more progressive rate of proportionate increase than either North or Central Gujarat. The increase there in absolute figures (41.3 per cent since 1881) has to be discounted however on the score of better enumeration, as the census machinery in that remote area had not yet attained in 1881 the organisation of other parts. The proportionate increase in Central Gujarat during the fifty years has been only 32 to the square mile, principally because in 1881, it had already attained the high density of 394 which approached even then the critical point for an agricultural population.

SUBSIDIARY TABLE XIII

VARIATION IN RELATION TO DENSITY SINCE 1881

NATURAL DIVISION	Percentage of Variation: increase (+) decrease (—)					Net Vari- ation 1881 to 1931	Mean density per square mile					
	1921 to 1931	1911 to 1921	1901 to 1911	1891 to 1901	1881 to 1891		1931	1921	1911	1901	1891	1881
1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State	+14.90	+4.60	+4.10	—19.15	+10.68	+11.95	299	260	249	239	296	267
<i>Central Gujarat including City..</i>	<i>+15.79</i>	<i>+3.00</i>	<i>+6.65</i>	<i>—21.17</i>	<i>+7.29</i>	<i>+8.25</i>	<i>426</i>	<i>366</i>	<i>355</i>	<i>333</i>	<i>423</i>	<i>394</i>
Charotar ..	+18.31	— .95	..	..	..	..	748	632	..	..	..	..
Vakal ..	+16.11	— .53	..	..	..	..	642	553	..	..	..	..
Kahnam ..	+15.67	+2.20	..	..	..	..	291	251	..	..	..	..
Chorashi ..	+15.91	+17.17	..	..	..	..	254	219	..	..	..	..
<i>North Gujarat ..</i>	<i>+12.1</i>	<i>+8.22</i>	<i>— .31</i>	<i>—24.01</i>	<i>+11.15</i>	<i>+2.18</i>	<i>329</i>	<i>294</i>	<i>271</i>	<i>272</i>	<i>348</i>	<i>323</i>
East Kadi ..	+13.30	+7.36	..	..	..	..	396	350	..	..	..	..
West Kadi ..	+13.67	+12.06	..	..	..	..	277	243	..	..	..	..
Trans-Sabarmati Area ..	+11.72	+ .10	..	..	..	..	220	196	..	..	..	..
<i>South Gujarat ..</i>	<i>+18.8</i>	<i>+1.46</i>	<i>+11.66</i>	<i>—5.94</i>	<i>+11.09</i>	<i>+40.62</i>	<i>223</i>	<i>188</i>	<i>185</i>	<i>166</i>	<i>176</i>	<i>159</i>
Rasti ..	+15.77	+4.97	..	..	..	..	451	390	..	..	..	..
Semi-Rasti ..	+26.93	—2.95	..	..	..	..	202	159	..	..	..	..
Rani ..	+17.42	— .44	..	..	..	..	129	110	..	..	..	..
<i>Kathiawad ..</i>	<i>+14.72</i>	<i>— .12</i>	<i>+2.8</i>	<i>—3.74</i>	<i>+24.69</i>	<i>+41.29</i>	<i>151</i>	<i>132</i>	<i>132</i>	<i>128</i>	<i>133</i>	<i>107</i>
Mid-Blook ..	+13.70	—1.85	..	..	..	..	152	133	..	..	..	..
Scattered area ..	+6.09	—6.42	..	..	..	..	142	134	..	..	..	..
Sea Coast area..	+19.48	+5.32	..	..	..	..	154	129	..	..	..	..

NOTE.—The Density figures previous to 1931 have been revised according to the latest figures for area.

38. Variation in Areality and Proximity—Density is one way of studying figures of population by proportioning them to the square mile. There are other ways by which the pressure of population from the point of view of crowding as apart from means of subsistence can be gauged. “Areality” is the calculation of area commanded by each person, house or any other unit considered: “proximity” is similarly the measurement of distance between

each such unit on the assumption of equal distribution which can be calculated on the formula : $d^2 = \frac{200}{n \sqrt{3}}$ (when d is the distance between any unit and n is the number of such units in 100 square miles). The variations in the areality and proximity of persons are noted below :—

SUBSIDIARY TABLE XIV
AREALITY AND PROXIMITY

DIVISION	Areality in Acres			Proximity in Yards	
	1931	1921	1911	1931	1921
1	2	3	4	5	6
State	2.14	2.45	2.56	109	117
Central Gujarat	1.50	1.74	1.79	92	99
North Gujarat	1.94	2.16	2.34	104	110
South Gujarat	2.87	3.40	3.45	127	138
Kathiawad	4.24	4.86	4.85	154	165

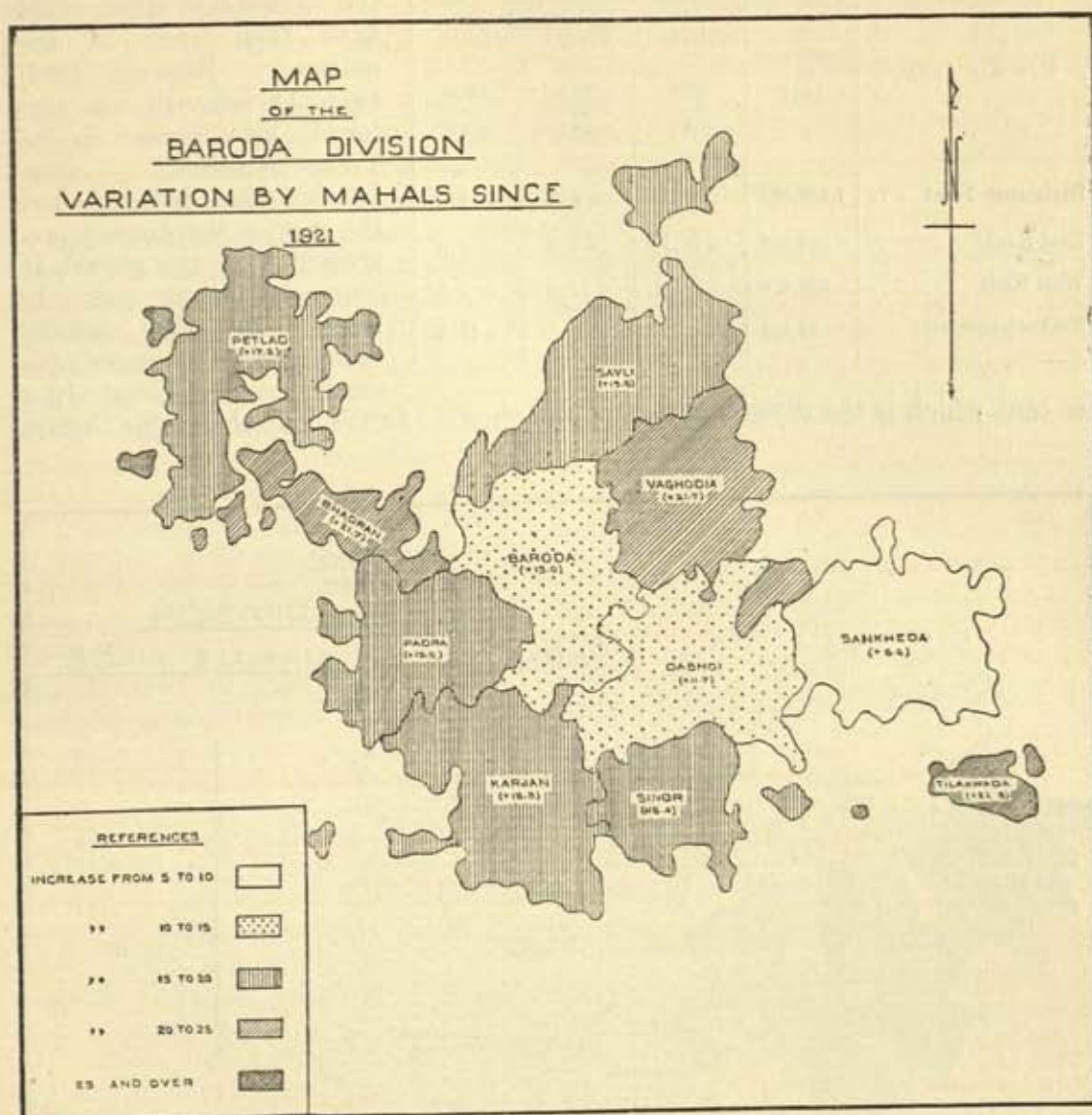
These figures may seem artificial but they are useful for showing how the pressure of space is becoming an increasing problem. In 1901, the proximity of an individual person was 122 yards. It is now 109. Of course these calculations are made on present area. The changes in area are so slight that it was not thought worthwhile revising the figures of other years.

39. Divisional Variations: Baroda Prant—We shall now take up the analysis of variations by administrative divisions and see how far the influences have varied in their operation in the different *prants*: as before we shall begin with the metropolitan district first. We shall start with the Famine census of

NATURAL AREA	Popula- tion in 1931	Percentage of variation		
		1921 to 1931	1911 to 1921	1901 to 1911
Divisional Total ..	824,341	+15.8	+ 3.0	+ 6.7
Charotar	201,194	+18.3	— 1.0	— 4.0
Vakal	291,577	+16.1	— 0.5	+ 2.4
Kahnam	170,853	+15.7	+ 2.2	+14.0
Chorashi	160,717	+15.9	+17.2	+27.0

1901. The immediate results of the famine were most acutely felt in Chorashi more than anywhere else, and the 1901 Census showed a decrease of 36 per cent. Since then there has been a rebound which has been kept up continuously for the last three censuses. The release of large grass reserves in these areas led to an influx of farming settlers from the congested villages in the Trans-Mahi country. In 1921, there were one additional village and at least 83 new hamlets in this tract. Since then the number of hamlets has not increased but the tendency is for the new settlers to get acclimatised to their surroundings and amalgamate the hamlets to the revenue villages to which they are affiliated. In Kahnam also, where the next highest increase is recorded, the tendency to incorporate hamlets is seen in the reduction of their number from 37 to 33. Charotar's position is peculiar; this census, it shows the highest rate of increase indeed, but as most of the *hijrat*is were concentrated there, the real increase (which is 10.6 per cent) can be got at only by their exclusion. Even then this rate of increase seems large in spite of its very high density, and in view of its practically stationary population before this census. The reason must be sought in the industrial expansion of this area—the rise of mills and factories in Petlad and other towns. The Charotar rural area (excluding *hijrat*is) only shows an increase of 4.9 per cent. Next to Charotar, Kahnam recovered the least from the famine of 1900 until this census. Vakal similarly shows signs of late recovery, but its low rate of progress until this census

was entirely due to the progressive decline in the City population (which is included in it) since 1891; the City has revived in this census; excluding the City, the Vakal rate of variation reads thus :—1901-11 (+7.3 per cent), 1911-21 (+2.2) and 1921-31 (+14.2). The trend of population eastward has continued although not to the same extent as before. The region of largest increase is still towards



the north-east, although there is an unbroken chain of talukas to the south and west, which have each received an increase of at least 15 per cent. Generally the district, although hard pressed by economic depression and agricultural adversities, has suffered less than the other parts of the State, except South Gujarat. Industrial establishments in the district (as apart from the City) increased from 49 to 102; and the total labour force employed (including directional and managerial staff) increased from 4,622 to 8,625. The survival rate from registered records of vital occurrences rose from a deficit of 2.9 per cent in 1911-20 to a surplus of 5.4 per cent in 1921-30. The natural population, as it appears from the marginal table, has increased at a much slower pace than the general population: the rate of increase is only a little more than the natural rate but that is because emigrants have declined in numbers. The volume of immigration however increased from 25,304 in 1911-21 to 75,269.* Even without the

POPULATION	1931	1921	Variation since 1921
Actual Population ..	824,341	707,512	+15.8
Immigrants	148,550	102,743	+44.6
Emigrants	80,528	106,926	-24.7
Natural Population ..	756,329	711,695	+ 9.4

* These figures are obtained by the Longstaff method.

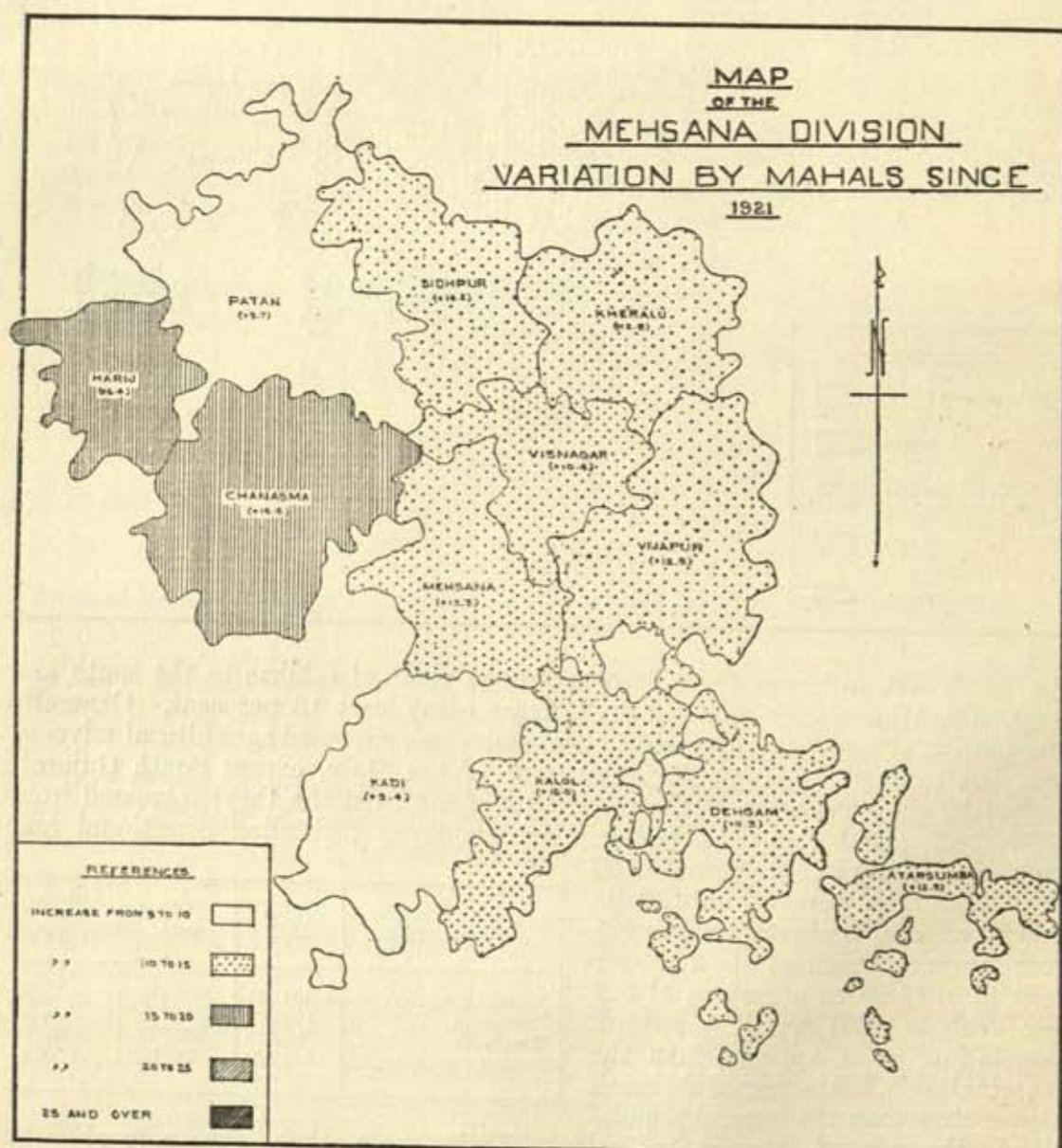
hijratis, the increase is more than double. Nearly three-quarters of the census increase in this division is due, it is estimated, to gain by migration.

40. Mehsana Prant—Coming to the largest district with the largest

NATURAL AREA	Population in 1931	Percentage of Variation		
		1921 to 1931	1911 to 1921	1901 to 1911
Divisional Total ..	1,010,007	+12.1	+ 8.2	+ 0.3
East Kadi	594,987	+13.3	+ 7.3	— 4.0
West Kadi	329,879	+13.7	+12.0	+ 5.0
Trans-Sabarmati ..	85,141	+11.7	+ 0.1	+11.0

population, we find that the increases since 1901 have been more or less uniform. Between 1901-1910 the recovery was uniformly slow except in the Trans-Sabarmati area. In the next decade, when the rest of the district progressed well, the growth in Trans-Sabarmati was the least. In the present census, the increases have ranged round about 12.1

per cent which is the divisional rate of variation. As the map shows the highest



increases are recorded in the westernmost talukas of West Kadi. The rest of the district except Kadi taluka shows a uniform rate of progress between 10 to 15

per cent. Mehsana and Sidhpur show the most growth, due to the increasing population of its urban areas; but agriculturally the fertile and well-wooded parts towards the East shows the highest rate of increase. Kalol's progress is due to the presence of mills, which started at the time of the industrial boom after the war but have not so far made good. Part of the agricultural progress of this area is due to the opening of new lands for cultivation and the establishment of new *paras* (hamlets) since 1921. These hamlets owe their existence to immigration. In 1921, a large movement from Jhalawad accounted for a considerable proportion of the census increase in the district. In the present decade, a movement of some strength was discernible from across the petty chiefships of the Mahikantha (Mansa in particular). East Kadi therefore records a large accession of these hamlets—of which Sidhpur, Vijapur and Visnagar show the largest number. This accession is remarkable in view of the fact that this district is usually a giver in the matter of migration and not a gainer. The natural population has gained as in other parts at a less rate than the general population. The number of immigrants in the decade was 32,620 (by the Longstaff method) as against 31,750 in 1911-21. But as the emigrants here have also increased the bulk of the census increase in this division in 1931 must be put down to natural causes.

HAMLETS	Number in	
	1931	1921
West Kadi	62	57
East Kadi	114	59
Trans-Sabarmati ..	90	77

POPULATION	1931	1921	Variation since 1921
Actual Population ..	1,010,007	900,578	+12.1
Immigrants	75,450	59,613	+26.6
Emigrants	81,070	79,645	+ 1.8
Natural Population..	1,015,627	920,610	+10.3

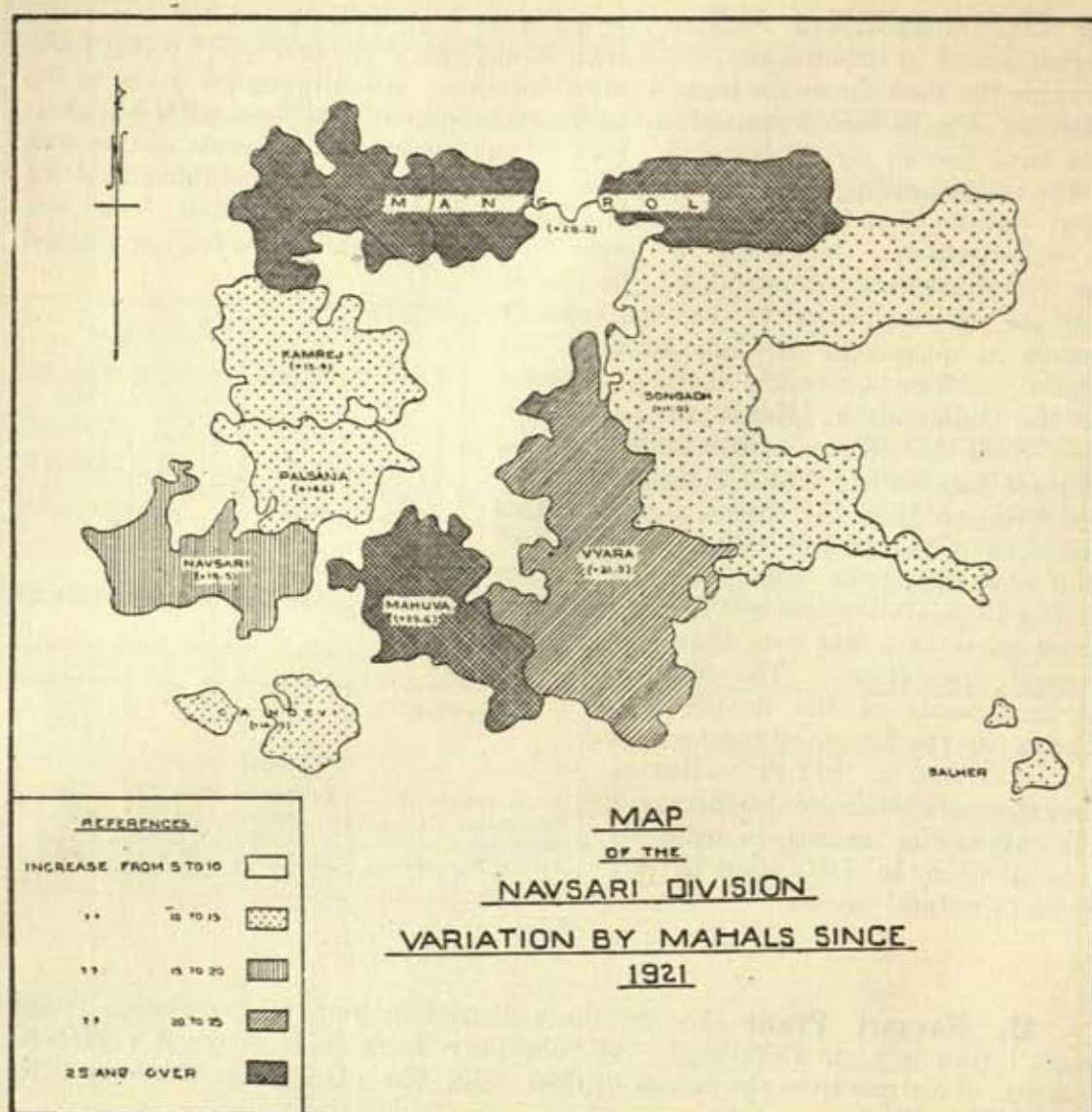
41. Navsari Prant—The Southern district in point of population is the most fortunately circumstanced. As Subsidiary Table XIII shows it evidenced less sign of distress from the famine of 1900 than the other two mainland divisions. The Rani was most

afflicted by it and suffered a decrease of 14 per cent on that account in 1901. In 1911, there was a rebound in that region of 31 per cent. But 1921 showed exhaustion and an actual decline was recorded. Influenza was severest in this tract and the Raniparaj people were more affected by it than the other sections.

In this census, all the three natural areas comprised in this division register large increases. But part of this growth must be ascribed to the *hijrat* movement which affected in varying degrees all the three areas of the division. Without the *hijrat*s, the increases in Rasti, Semi-Rasti and Rani are reduced respectively to 13.2, 12.7 and 15.4 per cent since 1921 while the mean rate of increase for the whole district becomes, by eliminating these people, 15.8 per cent instead of 18.8. The balance of migration turned sharply in favour of this district during the decade. By the Longstaff method, we find there were (without *hijrat*s) 30,240 immigrants and 4,290 emigrants, the balance being 25,950 in favour. In 1911-21, the balance (calculating by the same method) was only 4,579. The natural increase in the latest decade was therefore only 8.2 per cent and

NATURAL AREA	Population in 1931	Percentage of Variation		
		1921 to 1931	1911 to 1921	1901 to 1911
Divisional Total ..	404,377	+18.8	+1.5	+12.0
Rasti	188,606	+15.8	+5.0	— 1.4
Semi-Rasti	98,958	+26.9	—3.0	+20.8
Rani	116,813	+17.4	—0.4	+31.0

POPULATION	1931	1921	1911
Actual Population ..	404,377	340,372	335,467
Immigrants	74,390	47,986	50,229
Emigrants	29,730	33,321	35,014
Natural Population ..	359,717	325,707	320,252

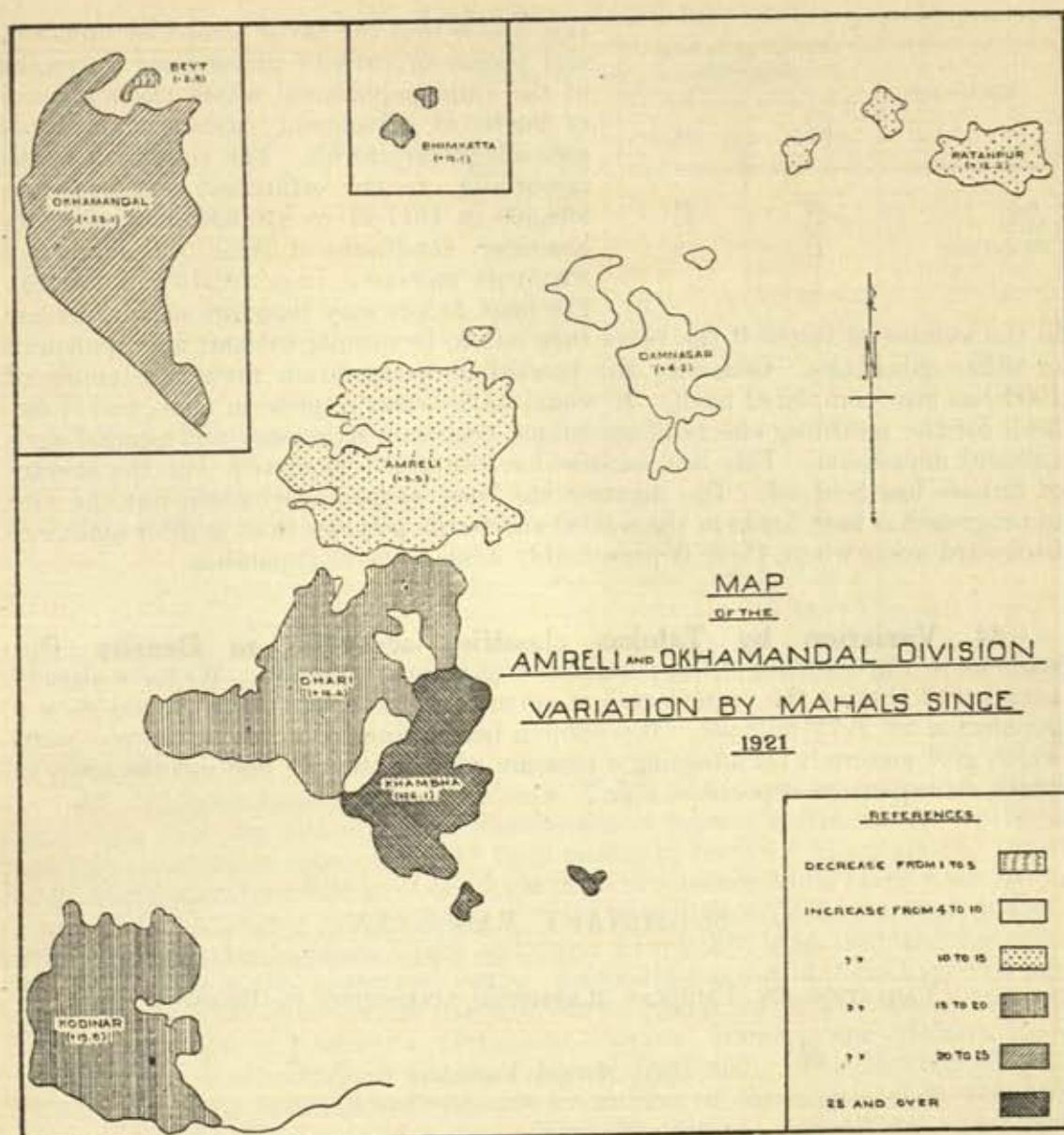


the increase due to real migration was 7.6 per cent (as against 4.7 per cent the general rate of migration increase in the whole State). The greatest increase in the district is in the northern part in Mangrol taluka (28.2 per cent). Of the Rasti talukas, Navsari shows the highest increase. The rural area also has shared in this all round growth (14.3 per cent).

42. Amreli and Okhamandal—It is convenient to treat these two units together. Okhamandal may be briefly dismissed. From 1891 to 1901, the population in rural areas in this remote mahal decreased by over a thousand or 4 per cent. The next decade was still more unfavourable, the decline registered being 7 per cent.

NATURAL AREA	Population in 1931	Percentage of Variation		
		1921 to 1931	1911 to 1921	1901 to 1911
Divisional Total ..	204,282	+14.7	-0.12	+3.0
Mid-Block ..	105,673	+13.7	-2.0	+6.0
Scattered Area ..	24,525	+6.1	-6.4	+1.4
Sea Coast Area ..	74,084	+19.5	+5.3	-1.5

In 1911-1921, the population was almost stationary, but excluding urban areas, there was a decrease of over 4 per cent. In the present census, there is indeed an increase of 23.1 per cent, which is confined to the rural areas entirely; this is due to the opening of the Port of Okha and the consequent increase in population of the neighbouring villages. Coming to the Amreli *prant* proper, we find the largest increases in Khambha (26 per cent), Kodinar (19.8), Dhari (16.6 per cent). The Scattered areas show the least progress. Surrounded by other states and with their trade



and industry crippled by the stranglehold of customs cordons, there is little wonder if people of these parts find it more profitable to leave their homes and seek fortunes elsewhere. Part of the increase in Middle Block is due to this emigration from the Scattered areas. Generally the gain in natural population shows a slightly higher rate than in the actual population. The gain through migration is slight—only 6,813 in the last ten years, but in the preceding decade, it was more—about 8,200. More people have apparently now left the district than they did in 1911-1921. The present decade was exceptionally healthy and the bulk of the variation is ascribable to this circumstance.

POPULATION	1931	1921	1911
Actual Population ..	204,282	178,060	178,269
Immigrants ..	40,780	34,930	34,931
Emigrants ..	18,709	14,341	14,206
Natural Population ..	182,211	157,471	157,544

43. Summary: General Trend of Population—We shall now summarise the general results of the discussion on movement. The general increase of 14.9 per cent in the population is largely due to natural increase; but Central and South Gujarat owe their present strength mainly to immigration, while in North Gujarat and Kathiawad, it is almost entirely due to natural causes. The rate of natural increase operative during the decade came up almost to the normal, but the gain through migration was the largest achieved since 1881. The age constitution of the people showed little difference in the two censuses, except that the child population is slightly less and the aged slightly more than in 1921. The reason why

AGE GROUPS	Percentage in total population	
	1931	1921
0-15	39	40
15-50	50	51
50 and over ..	11	9

this is so is that the havoc caused by influenza and plague in 1918-19 thinned out the ranks of the child population, which the high rate of births of subsequent years has not been able adequately to fill. The volume of births (according to our estimates) declined from 898,060 in 1911-21 to 870,620, but owing to healthier conditions of living, the number of survivors increased from 71,316* to 190,620. The next decade may therefore see an increase

in the volume of births if the years turn out to be normal without any epidemics or other calamities. Generally the process of recuperation since the famine of 1900 has now completed itself. It would have been complete in 1921, had it not been for the retarding effects of epidemics, economic stringency and general agricultural depression. This last *malaise* has continued unabated, but the spectre of disease has held off. The increase has been general everywhere but the rate of progress has been lower in the settled and fertile portions than in drier and more backward areas where there is presumably more scope of expansion.

44. Variation by Talukas classified according to Density—This leads us to the question of the possibilities of future expansion. We have already anticipated that at the present rate of movement, the 1941 Census should show a population of 2.73 millions. We subjoin here a Subsidiary Table in two parts which give materials for affording a measure whereby we can find out the areas in which an expansion is possible.

SUBSIDIARY TABLE XV

VARIATION BY TALUKAS CLASSIFIED ACCORDING TO DENSITY

(a) Actual Variation

NATURAL DIVISION	Decade	Variation in talukas with a population per square mile at commencement of decade of							
		Under 150	150 to 300	300 to 450	450 to 600	600 to 750	750 to 900	900 to 1,050	Over 1,050
1	2	3	4	5	6	7	8	9	10
BARODA STATE	1901-1911 ..	— 44,062	+ 221,212	— 27,564	— 59,666	— 4,412	..	+ 3,658	— 9,060
	1911-1921 ..	— 24,724	+ 8,602	+ 54,796	+ 59,086	— 34,343	+ 34,630	+ 310	— 4,632
	1921-1931 ..	+ 9,570	— 218,856	+ 460,455	— 32,350	— 74,074	+ 153,700	— 108	+ 18,148
Central Gujarat with City	1901-1911 ..	— 26,082	+ 69,289	+ 10,408	+ 209	— 6,550	..	..	— 4,445
	1911-1921 ..	— 24,269	+ 47,760	+ 3,382	— 343	— 1,285	..	..	— 4,633
	1921-1931 ..	..	— 74,054	+ 141,591	— 43,327	— 74,074	+ 148,545	..	+ 18,148
North Gujarat	1901-1911 ..	+ 3,442	+ 87,218	— 93,242	..	..	..	..	..
	1911-1921 ..	+ 3,279	— 41,547	+ 106,684	..	..	..	..	..
	1921-1931 ..	— 19,226	— 63,469	+ 192,124	..	..	..	..	..
South Gujarat	1901-1911 ..	— 26,117	+ 63,610	+ 55,270	— 59,875	+ 2,138	..	..	..
	1911-1921 ..	— 2,316	+ 1,490	— 55,270	+ 50,429	— 33,058	+ 34,630	..	..
	1921-1931 ..	+ 15,672	— 94,539	+ 126,740	+ 10,977	..	+ 5,155	..	..
Kathlawad	1901-1911 ..	+ 4,695	+ 1,095	..	..	..	..	+ 3,658	— 4,615
	1911-1921 ..	— 1,418	+ 899	..	..	..	..	+ 310	..
	1921-1931 ..	+ 13,124	+ 13,206	..	..	..	..	— 108	..

* Baroda Census Report, 1921, para 58.

(b) Proportional Variation

NATURAL DIVISION	Decade	Variation in talukas with a population per square mile at commencement of decade of							
		Under 150	150 to 300	300 to 450	450 to 600	600 to 750	750 to 900	900 to 1,050	Over 1,050
1	2	3	4	5	6	7	8	9	10
BARODA STATE	1901-1911 ..	-18.8	-32.2	+4.21	-57.7	- 2.7	..	+100.0	-8.4
	1911-1921 ..	-13.0	+ .946	+8.74	+135.0	- 21.3	+100.0	+ 8.5	-4.7
	1921-1931 ..	+5.8	-23.4	+67.5	-31.5	- 53.4	+444.0	- 2.72	+19.1
Central Gujarat with City	1901-1911 ..	-51.8	+40.9	+ .07	+ .5	- 4.9	..	..	-4.3
	1911-1921 ..	-100.0	+20.0	+ .02	- .8	- 1.0	..	..	-4.7
	1921-1931 ..	..	-25.8	+ .9	-100.0	- 53.4	+100.0	..	+19.1
North Gujarat	1901-1911 ..	+27.5	+28.1	-18.2	..	..	..	..	..
	1911-1921 ..	+20.6	-20.5	+25.4	..	..	..	..	..
	1921-1931 ..	-100.0	-17.8	+36.5	..	..	..	..	..
South Gujarat	1901-1911 ..	-23.9	+63.3	+100.0	-100.0	+ 6.9	..	..	..
	1911-1921 ..	- 2.8	+ 0.9	-100.0	+100.0	-100.0	+100.0	..	..
	1921-1931 ..	+19.4	-57.1	+100.0	+ 18.4	..	+ 14.8	..	..
Kathilawad	1901-1911 ..	+7.6	+ 1.0	..	..	..	..	+100.0	-100.0
	1911-1921 ..	-2.1	+ 0.8	..	..	..	..	+ 8.5	..
	1921-1931 ..	+20.2	+12.1	..	..	..	..	+ 2.72	..

45. Consideration of the above Table—It must be premised about this Table that the rather sudden fluctuations it reveals is due to regrouping of talukas according to class of density from census to census. The class of "under 150" had suffered no change of this kind until this census when Harij went up to the next higher class. But the class of "150-300" has suffered regroupings from time to time. For instance Vyara and Savli were below it in 1901 and travelled up to this class in the subsequent years. Vaghodia was out of it both in 1901 and 1911 but its rapid growth since has now placed it high up in this class. Talukas like Dabhoi, Sinor, Tilakwada, Chanasma, Palsana, Kamrej, and Mahuva have now left this class and joined the class above (of 300-450). This last named class however has not hitherto suffered any defections to the higher class 450-600. There is thus a slower rate of increase from 450 upwards everywhere. The very high density classes (excepting the urban areas), are 750-900, 600-750 and 450-600. To the first named Petlad and Gandevi belong. Even if we exclude the *hijratis*, these two talukas still retain their position in this class. In the second class Bhadrans alone is included; and Navsari belongs to the third class. These four talukas are the highest density areas in the State, and excluding the *hijratis*, they have grown by 12.1 per cent since 1921. But the bulk of the increase recorded is limited to urban areas, as the variation in rural areas of these four talukas (always excluding *hijratis*) is only 7.5 per cent. Thus agriculture has very little to do with the growth of these highly populated areas. Coming to the class of 300 to 450, there are only Padra (in Central Gujarat), and Kalol, Vijapur, Visnagar, Mehsana and Sidhpur (in North Gujarat), that have permanently retained their place in it since 1901. The talukas with a density between 400 and 450 now number three—Padra, Vijapur and Sidhpur.

46. Possibilities of Expansion—From these materials, the general conclusion seems to be that room for expansion can only be within areas which have a density of 150 to 450. The talukas below this limit have indeed shown uniform progress, in spite of their having high density on cultivable area. But this progress is merely the completion of the process of rebound after the famine of 1900. At the next census, one would expect these areas not to show much progress unless extraordinary improvements are undertaken in respect of soil, climate and the condition of the people residing there. These low density areas are now 1,697 square miles in extent; on the other hand the upper limit of 450 marks "the critical point beyond which a population mainly subsisting on

agriculture cannot advance at least in this State without a serious deterioration in the standards of life."* It may be said that these standards vary from place to place and that even within the same area there are as many gradations as there are strata of society. But these gradations notwithstanding, even the small increase of 7.5 per cent which the rural areas in talukas of highest density have so far shown could not have been effected without an appreciable lowering in the standards of comfort and even of subsistence.

47. Areas with a Density of 150-450—As to the areas with a density of 150 to 450, a test was devised in 1921, by which wherever the difference between the densities on cultivated and cultivable areas was larger than 100 per square mile, there it was expected that population would expand normally. By this means, certain talukas were marked off as indicating where such an expansion could be looked for.

TALUKA	Density on cultivable area in 1921	Difference between densities on cultivated and cultivable area in 1921	Increase since 1921
Dabhoi	333	117	11.7
Savli	264	137	19.8
Kadi	296	103	9.4
Vijapur	433	383	12.9
Mehsana	378	119	13.3
Palsana	335	150	14.6
Kamrej	311	116	13.4
Vyara	318	130	21.9
Mahuva	328	217	25.6

density on cultivable area should not be more than 450. On this basis, as shown in the inset only the Semi-Rasti, the Rani tracts and the Sea Coast

NATURAL AREA	Density of cultivable area	Density on cultivated area	Difference between the two densities
Charotar	827	877	50
Rasti	532	729	197
Vakal (excluding City)	487	560	73
East Kadi	454	522	68
Kahn timer	340	420	80
West Kadi	318	398	80
Semi-Rasti	304	434	130
Chorashi	313	348	35
Rani	297	418	121
Trans-Sabarmati ..	296	352	56
Sea Coast	202	331	129
Mid-Block	188	254	66
Scattered areas ..	157	228	71
State	378	471	93

region together forming 1,875 square miles or about 23 per cent of the State area point to the directions where we can hope for some future increase in population. In the Rani area, however, until the malarial problem is taken in hand seriously, no large increase in population is possible. In the Scattered areas in Amreli also, the poverty of the inhabitants and the peculiar geographical situation of certain talukas like Damnagar, Ratanpur and Bhimkatta, hemmed in by neighbouring states, have so far prevented progress and are likely to continue to do so in the near future. The Sea-coast mahals indeed show a comparatively low proportion of net cultivated area, but the lands included under cultivable there contain large areas of salt, which can only be called "cultivable" in a very limited sense. Similar is the case with Rasti where the whole sea-coast in Navsari and Gandevi talukas is unfit for cultivation under normal conditions and can only be cultivable after large expenditure of capital, which is beyond the present capacity of agriculturists. In the Rasti also, the very high degree of density on cultivable land militates against any future expansion on an agricultural basis. Kahn timer has a comparatively low density, but its principal crop is cotton, which requires not much labour, and its cultivated portion has so increased that only marginal areas are now available. Charotar

* Baroda Census Report of 1921, page 59.

has reached the most critical point in its agriculture. In other parts, the tale is more or less the same. Thus the pressure of population on the land combined with other factors holds out little promise of any large growth of population, unless industrialisation sets in on a large scale.

48. Possibilities of Agriculture—The above conclusions may sound doleful. In 1921 I wrote :—

“ Enough has been indicated above to show that a period of intense devotion of national energies to agriculture is now fast giving place to another in which the people driven by their misfortunes from their passionate attachment to the soil will strive to seek more and more in a varied industrial life the requisite relief for the pressure of an increasing population on their means of subsistence.”

Ten years are too short a period for these tendencies to work themselves out in the life of masses of people. But there can be no doubt that with an ever increasing population, the soil has ceased to bring its expected return. Progressively the size of the agricultural holdings is becoming less and less economic: as the inset table shows, the proportion of small sized holdings has grown even more rapidly than the variation in the population. With the increase of the sown area year after year—from 4,247 square miles (in 1891-1900) to 4,351 (in 1910-20) and 5,175 square miles in the latest decade,—the marginal lands are taken more and more into cultivation. Newer and more thriftless classes have been driven to the land, where through economic competition, they have been left only with the more uneconomic holdings. The cultivable area is now 6,462 square miles, and the occupied is 6,135 square miles, leaving only a residuum of 327 square miles which is barely fit for cultivation. A marginal table is here given showing comparative variations in population and occupied area since 1901 and also the average size of holdings for selected years since 1905: The percentages of registered holders of land to inhabited houses however are shown since 1911, for it is from that date that the definition of a “ house” has been altered to make it identical with a commensal family. These figures show how population has begun to outpace the means of subsistence on agriculture. The size of holdings has become progressively smaller; the proportion therefore, it is needless to add, of registered holders to number of inhabited houses has become less than 1921. There is little scope for further increase in the occupied area. Figures of yield already given (as proportions of the standard) prove that even in good years, agricultural returns are only a fraction of the best possible—and this is the case in Gujarat, which is the home perhaps of the most industrious and the most intelligent peasantry in India. The stage is set therefore in this country as perhaps in other parts of India for a general industrialisation which should have set in much earlier than now, were it not for the whirlpool of outside factors which has riddled the economic life of the people and retarded its growth.

YEAR	Holdings of 5 bighas and over	
	Number	Proportion
1930 ..	106,484	120
1920 ..	94,747	107
1910 ..	88,397	100

	1901	1911	1921	1931
Variation in occupied area	100.	104.45	110.7	114.9
Variation in population	100.	104.1	108.9	125.1
Average size of holding in bighas ..	17.75 (1905)	19.9	19.52	18.7
Percentage of registered holders to inhabited houses	Not available	60.8	64.0	63.5

§ 7. HOUSES AND FAMILIES

49. Houses and Families—Before we leave this general discussion of census figures and turn to a detailed analysis in other chapters, we must refer here briefly to statistics regarding houses. There are two main definitions of

"house" in use in the Indian Census: the structural and the social. The social definition has been adopted in the Baroda Census ever since 1911. The structural definition, which laid down that a house should be a dwelling place of one or more families, "having a separate entrance whether the entrance be from a public road, compound, corridor, balcony, gallery or otherwise", was the basis of the censuses of 1901 and previous years. So any comparison with the figures of inhabited houses before 1911 is useless. In 1911, the definition was that a house consisted "of the buildings one or many, inhabited by one family, that is, by a number of persons living and eating together of food cooked on one *chulah* (hearth) or in one mess, with their resident dependents such as mother, widowed sisters, younger brothers, etc., and their servants who reside in the house, in other words, the unit is the commensal family and not the homestead or enclosure." This definition was continued for subsequent censuses as the basis of the enumeration. The above definition was well understood by the people and ordinarily gave rise to no difficulty. Exceptions to the standard definition were allowed in certain cases. For instance, even if more than one family resided in a one-room tenement, only one number was given. Again, although the definition implies that if a commensal family possessed more than one structure, only one number was to be given, municipal bodies, with their eye on the house-tax insisted on numbering all these structures individually. Sometimes their zeal outran their discretion. They did not spare in the City of Baroda even the fowl houses of high officials in their work of house-numbering. Otherwise the definition worked well. It did lead to overnumbering but as the census only took account of inhabited houses, such surplus houses were left out as uninhabited, and there was not much error involved in taking the number of inhabited houses as identical with the total of commensal families. But in spite of all precautions, even this clearly worded definition ran the risk of peculiar interpretation at the hands of local workers. The intention was to number all commensal families, the presumption being that each had a separate *chulah*: there were numerous houses where separate families resided in distinct tenements but from motives of economy had a common kitchen; sometimes the practice was observed of giving them only one number. But such cases were exceptional and wherever found they were corrected.

50. Persons per House and Houses per Square Mile—With these preliminary observations, we subjoin Subsidiary Table XVI.

SUBSIDIARY TABLE XVI

PERSONS PER INHABITED HOUSE AND INHABITED HOUSES PER SQUARE MILE

NATURAL DIVISION	Average number of persons per house						Average number of houses per square mile					
	1931	1921	1911	1901	1891	1881	1931	1921	1911	1901	1891	1881
1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State	4.34	4.14	4.01	3.98	4.48	4.56	68.94	62.82	62.03	60.01	66.02	58.75
Baroda City	3.75	3.52	3.47	3.32	3.63	3.64	2,738.18	2,442.73	2,600.27	2,840.91	2,912.45	2,645.45
<i>Central Gujarat Exclusive of Baroda City</i> ..	<i>4.23</i>	<i>3.98</i>	<i>3.91</i>	<i>3.82</i>	<i>4.31</i>	<i>4.30</i>	<i>87.47</i>	<i>80.02</i>	<i>78.18</i>	<i>73.48</i>	<i>82.38</i>	<i>75.63</i>
Charotar	3.89	3.63	..	..	..	..	192.11	173.02	..	..	..	..
Vakal	4.13	3.84	..	..	..	..	97.61	91.84	..	..	..	..
Kahnani	4.48	4.22	..	..	..	..	64.84	60.59	..	..	..	..
Chorashi	4.65	4.40	..	..	..	..	55.47	49.88	..	..	..	..
North Gujarat	4.19	4.02	3.79	3.82	4.40	4.50	78.58	72.96	71.70	71.15	81.44	71.45
East Kadi	4.17	4.01	..	..	..	..	95.06	87.29	..	..	..	..
West Kadi	4.39	4.08	..	..	..	..	62.99	59.59	..	..	..	..
Trans Sabarmati Area ..	4.04	3.89	..	..	..	..	62.67	57.95	..	..	..	..
South Gujarat	5.04	4.94	4.93	5.01	5.25	5.27	44.27	38.06	37.58	33.05	33.61	30.23
Rastri	4.62	4.5	..	..	..	..	97.66	86.60	..	..	..	..
Semi Rastri	5.33	5.24	..	..	..	..	40.57	30.68	..	..	..	..
Rani	5.61	5.58	..	..	..	..	23.05	19.76	..	..	..	..
Kathiawad	4.72	4.52	4.52	4.41	4.68	4.73	32.03	29.13	29.14	29.09	28.48	23.02
Mid-Block	4.79	4.51	..	..	..	..	50.20	46.81	..	..	..	..
Scattered Area	4.63	4.55	..	..	..	..	30.61	29.36	..	..	..	..
Sea Coast Area	4.65	4.59	..	..	..	..	33.05	28.47	..	..	..	..

NOTE.—The figures for density of houses per square mile for 1921 and previous years have been calculated on the latest figures for area.

51. Consideration of Subsidiary Table XVI—The above table gives proportionate figures since 1881, but as pointed out already, owing to change of definition, comparison is only possible from 1911 onwards.* As the business of numbering of houses is now left with the municipal authorities, the tendency to over-number is on the whole on the increase. Bearing this in mind, the increase in the size of household from 4.01 to 4.34 has to be considered. The number of inhabited houses increased by 1.3 per cent in 1921 and by 9.7 per cent in 1931. Part of this increase in 1931 is suspect, particularly in Central and North Gujarat where the destruction caused by the floods of 1927 was too recent for people to have repaired or re-built their homes completely before the Census of 1931. The increase of houses per square mile, as disclosed by the census is 295 in the City, 7 in Central Gujarat and 6 in North Gujarat. In the previous decade there was actually a decline in the density of inhabited houses in the City. The marginal table above has been prepared from absolute figures of houses for three censuses and shows how the population is beginning to outpace accommodation. This feature of "overcrowding" appears in all parts of the State, but Kathiawad figures show a roomier space per individual household and a less proportionate increase in their number per square mile than in the other divisions. Charotar is the most overcrowded part of the State. The size of the "household" is largest in South Gujarat particularly with the Raniparaj, whose dispersed huts round the parent roof tree are a feature of their domestic organisation.

Number of occupied houses		Population increase
Year	Proportionate figure	Proportionate figure
1911 ..	100	100
1921 ..	101.3	104.6
1931 ..	111.2	120.2

52. Building Site Area and Population—We shall now consider how far population changes are pressing on space, as apart from means of subsistence. For this purpose, the exact area of the space occupied by tenement sites within the State has to be ascertained. This is not difficult in Baroda, or for that matter in Gujarat generally, as the village sites are marked off fairly clearly from cultivated fields and even the hamlets have fixed areas. Only in the Rani area, where isolated huts within individual farms are numerous, the matter of obtaining the area of the space covered by the tenements was difficult. But against omissions in this respect may be set off the area included within village sites of roads and open spaces for pastures, cattle rests, dung heaps, brick kilns and the like. The collected data give us the total inhabited area. On this may be calculated the density of Normal Population as arrived at in para 12 above. We get thereby the following Table :—

SUBSIDIARY TABLE XVII
DENSITY OF NORMAL POPULATION PER INHABITED AREA

NATURAL DIVISION	Area of inhabited sites		Normally Resident Population	Density	
	In bighas	In square miles		Per bigha	Per square mile
1	2	3	4	5	6
State	112,388	103.2	2,404,847	21.4	23,302.8
Central Gujarat including City ..	41,808	38.4	807,649	19.3	21,032.5
North Gujarat	41,149	37.8	1,002,275	24.3	26,515.2
South Gujarat	20,555	18.9	391,446	19.0	20,658.2
Kathiawad	8,876	8.1	203,477	22.9	24,814.3

The above table is very remarkable. Out of a total area of 8,164 square miles, only 103 or one-eightieth are inhabited, the remaining portion being open spaces and cultivated fields. Within this cramped space, the State houses its normal

* What difference in figures the change in definition makes is apparent from the figures in the City, where both the definitions were worked out. (*Vide* Chapter II under the City Tenement Census.)

population. For the whole State, the density per square mile of inhabited area is 23,303. The City by itself is not so overcrowded, as the State. Within an area of 11 square miles, it finds room for nearly 11,000 persons per square mile. The rest of the population of Central Gujarat is accommodated within 27.4 square miles. North Gujarat is even more congested; while, strangest of all, the whole population of Kathiawad is accommodated within an area smaller than that of the Capital City.

53. Break-up of Joint Family—Apart from overcrowding, the question is often asked how far the census return of houses is an indication of the well-known modern tendency of the breaking up of joint families. In the 1921 Census Report of the State, two tests were laid down. In the first place, the variations in the total of married females aged 15 and over and of bachelors and widowers aged 25 and over were compared to variations in inhabited houses. Where the correspondence was close, there the joint family system would appear to have succumbed seriously to disruptive influences. It is the combination of both these factors that leads towards breaking up of the joint establishments. Young married women who have become mothers and begun to feel the leading strings of the mother-in-law irksome in the extreme feel inclined to set up separate houses. Similarly grown up bachelors or widowers of 25 and upwards do likewise, for it is about that age that a man irrespective of his civil condition begins to set about earning his livelihood

Year	Proportion of		
	Married females (15 and over) and bachelors and widowers (25 and over)	Registered holders of land	Inhabited houses
1911 ..	100	100	100
1921 ..	101.4	106.6	101.3
1931 ..	114.0	116.1	111.2

away from his parent home. The second test was to take the variations in the number of *khatedars* (registered holders of land) and correlate them similarly to inhabited houses. The figures of *khatedars* are interesting as affording a clue to another factor of disruption. As soon as a member of a joint family begins to earn independently as a farmer, his tendency is to separate from the parent home and set up an establishment of his own. The margin compares the variations in these two cases with the variations in inhabited houses. The second test does not operate so effectually as the first, in whose case the correspondence is close; but in the latest census, the number of houses has not kept pace with the increase of married families and of bachelors and widowers. The phenomenal destruction of houses in 1927 must have had the effect of retarding the break-up of joint families. Economic stress and agricultural depression also combined in this direction.

APPENDIX I

A METHOD TO TEST THE ACCURACY OF BIRTH REGISTRATION

1. Assumptions involved in the Method—The following method is suggested for estimating the number of births in any given year from the corrected Census Return for the age period 0-1. The method assumes, in the first place, that there is a constant ratio between the census return at that age and the number of births in the 12 months preceding; and this relation enables us to compute to a high degree of accuracy the number of births in any one year and to estimate the births of the decade. So long as the registration of vital occurrences continues to be defective, some such method is necessary. The census return, however, in the age period 0-1 is very rarely accurate, because very often numbers of unweaned infants over 1 are included in the earlier age period. In this census we have adopted a procedure of smoothing, which, unlike the method of Bloxam's, does take into account the age period 0-1.

2. Construction of the Vitality Table: Varying Risks of Mortality—The next point is how to construct a table showing the number of deaths in each batch of 100 births per month from 1st March 1930 to the census date. With a view to do this, it is necessary for us to assume that infant mortality proceeds more or less on the basis of a law. It is a universal experience that it decreases in force as the infant grows and this decrease is perceptible from month to month and even from week to week. It is the first weeks and the first three months that constitute the most critical period in the infant's life. The more accurate vital experiences of European statisticians may serve as a guide. From the general experience of mortuary returns for 1881-90 of England and also from the death figures for three rural counties, five manufacturing counties and three selected towns (*vide* Newsholme's *Vital Statistics*, page 182) it has been observed that the proportion of mortality in the first three months after birth varies from 41 per cent to 49 per cent of the total infant deaths during the year. Notter and Firth (*vide* their *Practical Hygiene*) observe as their experience that out of a total of 121.1 infants dying within a year no less than 66.6 die in the first three months and a further 24.7 die within the next three months. The Life Table of General Census of England and Wales states that 73 per cent of infant deaths happen within 6 months after birth.

3. Assumptions modified for the State—Now taking these results, we may fairly assume for this state and India generally, 60 per cent to be the proportion of infant deaths occurring within the first quarter, 20 per cent in the second quarter, 12 per cent in the third quarter and 8 per cent in the last quarter of the year. These assumptions are necessary because at the census date the infant population would be existing at varying "risks," the largest amount of average risk being $11\frac{1}{2}$ months for those born between March and April 1930 and the smallest average risk being $\frac{1}{2}$ a month of those born in February-March 1931. Between these two batches of births, the mortality varies in intensity inversely to the lapse of months. Children born in March-April 1930 and living on the census date will have escaped the full intensity of infant mortality of the first six months and survived into the healthier portion of their first year life. Children born in the later months will be progressively subjected to a higher rate of mortality month by month than those born earlier. Therefore, starting with a normal rate of mortality, we have progressively to weight it according as the intensity grows stronger.

4. What should be the Normal Mortality Rate for Infants?—Now what should be the normal rate of mortality for infants calculated on the total amount of births (*i.e.*, of those living at age 0). Professor Vaidyanathan in his life table for Baroda for 1921 assumes a rate of 29.7 per cent for those living at age 0 in order to keep alive a stationary population. Mr. Ackland in his life table for 1911 for all-India assumed for the Bombay Presidency males similar mortality rate of 29.7 per cent on births. The actual recorded rate of mortality amongst infants in Baroda State is only 170 per mille. This rate is wholly false, because in Madras, for example, the recorded rate is no less than 203 per mille. In the City of Baroda itself, where the record of infant deaths is the most accurate and where facilities for maternity welfare are effective, the recorded rate of infant mortality (per 1,000 births) in 1921-31 was no less than 26.22. How far out of the truth the recorded rate of infant mortality for Baroda State is, can be also gathered from the fact that if we exclude the average annual number of infant deaths from the average annual number of births, we get an average annual number of surviving infants below 1 of 49,230; while the actual figure recorded in the census at the age period 0-1 is 87,439. Therefore, we can well start with the assumption of 30 per cent to be the normal rate of infant mortality.

5. How is the Mortality Rate to be weighted Month by Month?—The question now remains how the mortality rate is to be weighted month by month. The March-April born are subjected to $11\frac{1}{2}$ months' risk on an average. Therefore, they yield $\frac{30 \times 11.5}{12}$ or 28.75 deaths per 100 births. The June-July born will have $8\frac{1}{2}$ months' risk and should have, according to our assumptions, 92 per cent of 28.75 or 26.00 deaths. Those born in September-October 1930 will be subjected to $5\frac{1}{2}$ months' risk and should, therefore, yield according to our assumptions, 80 per cent of 23.75 or 23.00 deaths. Those born in December-January will have $2\frac{1}{2}$ months' risk and should, therefore, suffer 60 per cent of 28.75 or 17.25 deaths. Of these 17.25 deaths the first month after birth should absorb the largest number, as it is in that period the infant is liable to the greatest risk.

6. Interpolation for Intervening Months—From these data we have now to work up the rates of intervening months; for this purpose we should take as our guide the Hamburg City Vitality experience for 1911 and 1912 (quoted in Whipple, *Vital Statistics*, page 342) perhaps the completest record of births and infant deaths. We find the specific mortality rate or infants for that city from that table to be 15 per cent for each of those years. As we have taken 30 per cent to be our rate, the Hamburg Record may well be taken as our basis. From that table, the monthly records of deaths among births may be averaged, so also the monthly record of births; and from the proportion between them our deaths may be distributed month by month and the monthly mortality rates deduced thereupon. Thus we get the following tables (corrected to three decimals):—

TABLE I

YEAR AND MONTH	Births	Died before Census Day	Survived on Census Day
March-April 1930	100	$\frac{30}{12} \times 11.5$ or 28.750 ..	$100 - 28.750 = 71.250$
April-May 1930	100	$\frac{32.31}{12} \times 10.5$ or 28.268 ..	$100 - 28.268 = 71.732$
May-June 1930	100	$\frac{34.63}{12} \times 9.5$ or 27.413 ..	$100 - 27.413 = 72.587$
June-July 1930	100	$\frac{37.34}{12} \times 8.5$ or 26.450 ..	$100 - 26.450 = 73.550$
July-August 1930	100	$\frac{40.79}{12} \times 7.5$ or 25.492 ..	$100 - 25.492 = 74.508$
August-September 1930	100	$\frac{45.02}{12} \times 6.5$ or 24.388 ..	$100 - 24.388 = 75.612$
September-October 1930	100	$\frac{50.18}{12} \times 5.5$ or 23.000 ..	$100 - 23.000 = 77.000$
October-November 1930	100	$\frac{57.6}{12} \times 4.5$ or 21.600 ..	$100 - 21.600 = 78.400$
November-December 1930	100	$\frac{67.28}{12} \times 3.5$ or 19.623 ..	$100 - 19.623 = 80.377$
December 1930-January 1931	100	$\frac{82.8}{12} \times 2.5$ or 17.250 ..	$100 - 17.250 = 82.750$
January-February 1931	100	$\frac{111.47}{12} \times 1.5$ or 13.934 ..	$100 - 13.934 = 86.066$
February-March 1931	100	$\frac{218.71}{12} \times .5$ or 9.113 ..	$100 - 9.113 = 90.887$
Sum ..	1,200	265.281	934.719

TABLE II

YEAR AND MONTH	Died from March 1, 1930 to February 28, 1931, before reaching the age of one year													
	Births	March-April	April-May	May-June	June-July	July-Aug.	Aug-Sept.	Sept-Oct.	Oct-Nov	Nov-Dec.	Dec-Jan.	Jan-Feb.	Feb-March	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
March-April ..	100	9.113	4.821	3.316	2.373	1.977	1.400	1.388	1.104	.958	.963	.855	.482	28.750
April-May ..	100	..	9.113	4.821	3.316	2.373	1.977	1.400	1.388	1.104	.958	.963	.855	28.268
May-June ..	100	..	..	9.113	4.821	3.316	2.373	1.977	1.400	1.388	1.104	.958	.963	27.413
June-July ..	100	..	..	..	9.113	4.821	3.316	2.373	1.977	1.400	1.388	1.104	.958	26.450
July-Aug. ..	100	..	..	..	..	9.113	4.821	3.316	2.373	1.977	1.400	1.388	1.104	25.492
Aug.-Sept. ..	100	..	..	..	..	..	9.113	4.821	3.316	2.373	1.977	1.400	1.388	24.388
Sept.-Oct. ..	100	..	..	..	..	..	..	9.113	4.821	3.316	2.373	1.977	1.400	23.000
Oct.-Nov. ..	100	..	..	..	..	..	..	..	9.113	4.821	3.316	2.373	1.977	21.600
Nov.-Dec. ..	100	..	..	..	..	..	..	..	..	9.113	4.821	3.316	2.373	19.623
Dec.-Jan. ..	100	..	..	..	..	..	..	..	..	..	9.113	4.821	3.316	17.250
Jan.-Feb. ..	100	..	..	..	..	..	..	..	..	..	..	9.113	4.821	13.934
Feb.-March ..	100	..	..	..	..	..	..	..	..	..	..	..	9.113	9.113
Sum ..	1200	9.113	13.934	17.250	19.623	21.600	23.000	24.388	25.492	26.450	27.413	28.268	28.750	265.281

7. Final Results—Thus an enumeration of 934,719 infants on the census day accounts for 1,200,000 births that have taken place within twelve months before that date. Or in other words $\frac{934,719}{1,200}$ or 77.893 per cent of the children born in the course of just one year preceding the census are enumerated on the census date, and this ratio worked out on the mid-decade population of 0-1 (calculated on the principle of geometric variation from the corrected data of two censuses) would give the average annual number of births or the total of the decade, on the assumption that of a thousand children born a twelve months before the census date, 28.75 per cent die before that date. This assumption has to be a little modified for this decade. A Life Table has been prepared for this State, in which after careful actuarial analysis, Prof. A. C. Mukherji has found out that the normal infant mortality rate should not be more than 25.76 per cent of 100 born. Thus the above factor of 77.893 has to be raised by $\frac{28.75}{25.76}$ to be useful for our calculations for the past decade and the next one. This becomes 86.934 per cent so that for the purposes of this decade, and the succeeding one, the annual average of births should be $\frac{100}{86.934}$ of the corrected return in age 0-1. The mean corrected number of persons living in that age period in the decade has been found to be 33,085 per million. For the mean population of the last decade within the registrable area, which is 2,259,016, the strength of the infant population is therefore 74,740. The annual average number of births is therefore $\frac{74,740 \times 100}{86.934}$ or 85,973. The total births for the last decade ought to have been therefore 859,730* instead of the registered total of 582,578. The margin of error therefore is 32.24 per cent. For the next decade 1931-41, taking the mean population at 2,556,392, the annual average of births should be $2,556,392 \times \frac{3,308.5}{100,000} \times \frac{100}{86.934}$ or 97.675. In 1921, on a higher rate of infant mortality, the annual average of births for the decade 1911-21 was fixed (striking a mean of various estimates) at 898,060. This gave a margin of error of 36 per cent.

* This is raised to 870,620 in para 35.

APPENDIX II

HOUSES AND HOUSE ROOM

1. Classification of Homesteads according to Standards of House Room—In the body of the chapter, we considered various aspects of density in so far as it affected means of subsistence or space. There is another way in which density in general and the problem of overcrowding in particular can be studied from the point of view of the standard of comfort, namely their relation to house room. The classification of homesteads according to house room was a special enquiry initiated in 1921 and it has been continued in this census also. Along with the house list, and between the columns for the census of livestock and those for the name of the head of the household and the number of the house, additional columns were provided for eliciting information regarding the amount of room space per unit of population. Homesteads can be classified, as pointed out in the Report of 1921, in a variety of ways: according to extent for instance as shown by the number of rooms and floors; according to quality of structure as shown by the materials with which it is built; and lastly according to accommodation, as shown by the number of individuals inhabiting per unit of space. As the "house" meant the family, the house room per unit individual was calculated on the actual number of adult persons residing, children under ten being excluded from the calculation. Where house room to the extent of two rooms per each such adult person was *actually in use*, that house would come into the first class or "Above comfort;" where only a third of a room was available for an adult individual, such house or tenement came to the third class or "Below comfort;" all other tenements went to the second class or "In comfort." A special exception was made in the case of bungalows with compounds: where it had at least four living rooms, it was put in the first class straightway whether it was inhabited or not: in all other cases only inhabited houses were to be classed. These instructions, although clear, were not always properly grasped. Mistakes were numerous, and the work had to be redone in many talukas and

NATURAL DIVISION	Proportion of 1st and 2nd Class to 1,000 houses classed			
	1931		1921	
	Urban	Total	Urban	Total
City	777	..	799	..
Charotar	616	641	365	269
Kahnām	678	554	535	351
Vakāl	731	300	441	150
Chorāshi	513	264	461	153
Rāsti	419	249	468	220
Semi-Rāsti	493	129	..	119
Rāni	350	66	402	65
East Kadi	379	172	323	148
West Kadi	357	161	388	130
Trans-Sabarmati	328	151	220	94
Mid-Block	156	15	65	96
Scattered areas	112	65	257	53
Sea Coast	503	274	158	75

towns. The marginal table compares the proportions of first and second class houses to 1,000 houses classed in the two censuses. The total number of houses classed was 583,342. The number of adults (aged 10 and over) is 1,748,963 (less *hijratis*). Thus there were three adults to each household. 29,323 households were "above comfort" with at least two rooms apiece. On an average of 3 rooms for this class of house, there were only 264,000 rooms for 88,000 adults in the first class. Thus only 5 per cent of adults resided in such homesteads. In the second class with an average of only a room and three twentieth part of a room per adult, there were nearly 418,000 rooms for 411,000 adults. In the third class, 1.25 million adults or over 71 per cent resided in 416,370 households. In 1921, there were 1,556,841 adults for 522,219 households or about 3 per household. Below comfort, there used to be 418,499 houses in 1921. The proportion of "below comfort," therefore, has declined from 810 per mille to 714 per mille in the decade. Charotar shows the most spacious

comfort relatively to other parts of the State. The urban areas generally have more roomy houses than in rural areas, but in Charotar, owing to overcrowding in Pij and Nar, the spatial accommodation is actually less in urban areas than in the whole taluka. In Baroda City, the room space index is shown by 777 per mille of its houses belonging to the first and second categories. In 1921, the corresponding figure was 799, showing that the havoc of the floods of 1927 is still in evidence.

2. Summary Table—For further details, the reader is referred to State Table XII in four parts, of which a summary is detailed below:—

NATURAL DIVISION	CLASSIFICATION OF HOUSES			Total number of houses classed
	Above comfort	In comfort	Below comfort	
1	2	3	4	5
Baroda State	29,323	137,649	416,370	583,342
<i>Baroda State excluding City</i>	<i>22,127</i>	<i>120,012</i>	<i>409,227</i>	<i>551,366</i>
Rural Area	10,696	81,933	346,754	439,383
Urban Area	11,431	38,079	62,473	111,983
<i>Baroda City</i>	<i>7,196</i>	<i>17,637</i>	<i>7,143</i>	<i>31,976</i>
<i>Central Gujarat excluding City</i>	<i>12,598</i>	<i>66,038</i>	<i>93,995</i>	<i>172,631</i>
Rural Area	7,111	50,883	81,491	139,485
Urban Area	5,487	15,155	12,504	33,146
<i>North Gujarat</i>	<i>5,970</i>	<i>36,253</i>	<i>211,056</i>	<i>253,279</i>
Rural Area	2,043	20,506	177,527	200,076
Urban Area	3,927	15,747	33,529	53,203
<i>South Gujarat</i>	<i>2,736</i>	<i>11,452</i>	<i>67,078</i>	<i>81,266</i>
Rural Area	1,284	6,873	58,396	66,553
Urban Area	1,452	4,579	8,682	14,713
<i>Kathiawad</i>	<i>823</i>	<i>6,269</i>	<i>37,098</i>	<i>44,190</i>
Rural Area	258	3,671	29,340	33,269
Urban Area	565	2,598	7,758	10,921

3. Kind of Houses—While on the question of houses, it will be of use to give here a general description of different types of houses in the State. For convenience' sake, the houses will be described according to the religion of the inhabitants. The following description of houses is summarised from the Gujarat Population Volume of the Bombay Gazetteer. Speaking generally, a house is an inevitable concomitant of a Hindu family. It is the goal of his ambition to have a house of his own. As the saying gives "A woman can get on without a husband, but no man can get on without a house."

4. Dwellings of Hindus—For purposes of description, the dwellings of Gujarat Hindus are broadly divided into urban and rural tenements. Town-houses of the better class with tiled roofs are generally built on a slightly raised plinth. This plinth is reached by two or three steps, usually built of stone and almost always set parallel to the line of the street. Along the outer edge of the plinth, is a row of wooden pillars set on stone pedestals with their capitals let into a heavy cross-beam that supports the upper storey. Behind the row of wooden pillars and under the projecting part of the upper storey is an open terrace from two to four feet wide. In the early morning the people of the house sit on this terrace, clean



House of a Petlad Nagar illustrating outside entrance of a Gujarat town House

their teeth or converse. During the rainy weather it is a welcome shelter to beggars and other stragglers. At the back of the terrace runs the front wall of the lower part of the house with an entrance in the middle furnished generally with a strong wooden-barred door.

5. General Scheme of Town Houses—The house consists of a front and a back part separated by a small open court on each side of which is a passage, and in the upper storey an open terrace connecting the front and back parts of the house. This plan of house is popular because when children have grown up and sons have families of their own they can share the same house and yet to some extent each family can live apart.

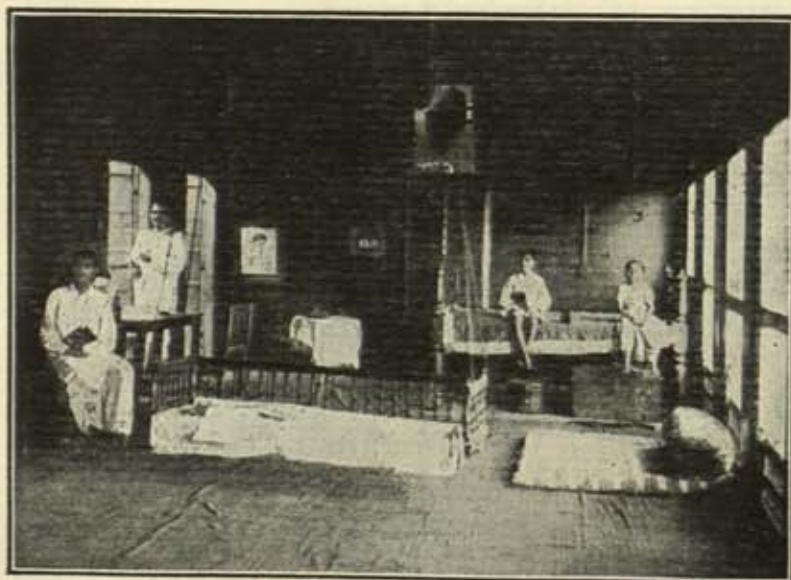


House of a Patan Vania

if the owner of the house is an artisan. When not used as a public room the women sometimes sit in the *parsal*, and it is to this place that the dying member of the family is brought and laid out an hour or two before death. The *parsal* leads to a small court or *chok*. The floor of this court is paved with stone or lined with cement and is used as a bathing place. Except for a framework of iron bars thrown across overhead at the level of the upper floor this court is open to the sky. The passages on either side of the court are used as rooms. The space on one side is taken up partly by the cooking room (*rasodu*) and partly by the water-room (*paniaru*), where large brass pots filled with water always stand. A store of well-burnished brass vessels is generally arranged on shelves near the large water pots. On the other side the space is divided into two rooms, one set apart as the chamber of the household gods and the other containing a well or cistern from which water is drawn for bathing purposes. Besides the well every better class house contains a cistern in which rain water is collected and used for drinking purposes. Behind the court and opposite the entrance room there are generally one or two chambers (*orda*), which are usually dark and used as store for grain and firewood and even as bedrooms for the women of the house. In a strong box in this

6. Different Portions of the House—The different portions of the house are named thus: entering from the street the first room is called the *parsal*. It is generally without furniture and is in some cases used as a store or lumber room. Occasionally it is used as a public room (*kacheri*), or as a workshop

room the family ornaments are sometimes placed. In a house built on the court or *chok* plan the distribution of rooms is not always the same. But so far they are alike that the builder must set apart on the ground floor places for cooking, dining, worshipping, bathing, grainstoring, and business-transacting. Most town houses are provided with a water-closet which is generally at one end of the verandah.

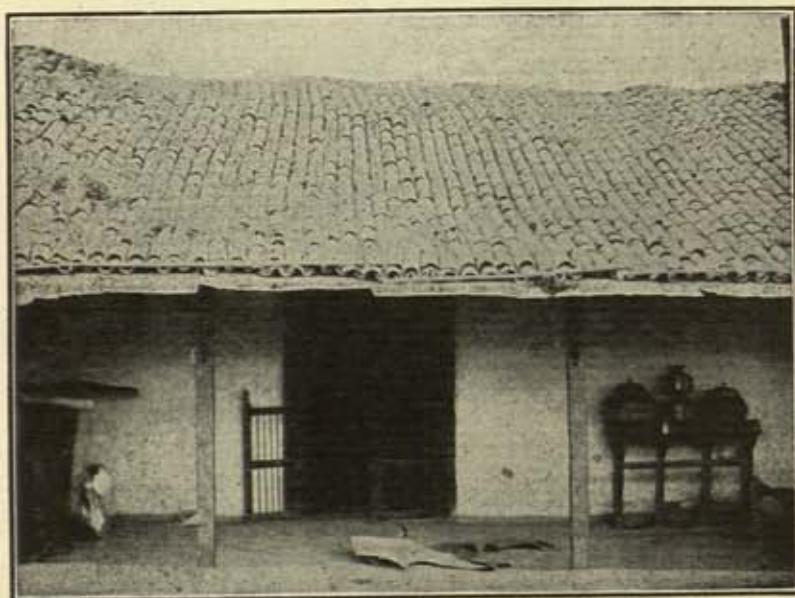


Inside of a Petlad Nagar's house showing typical furniture

7. Arrangements on the Upper Floor—To get to the upper floor there is generally in one

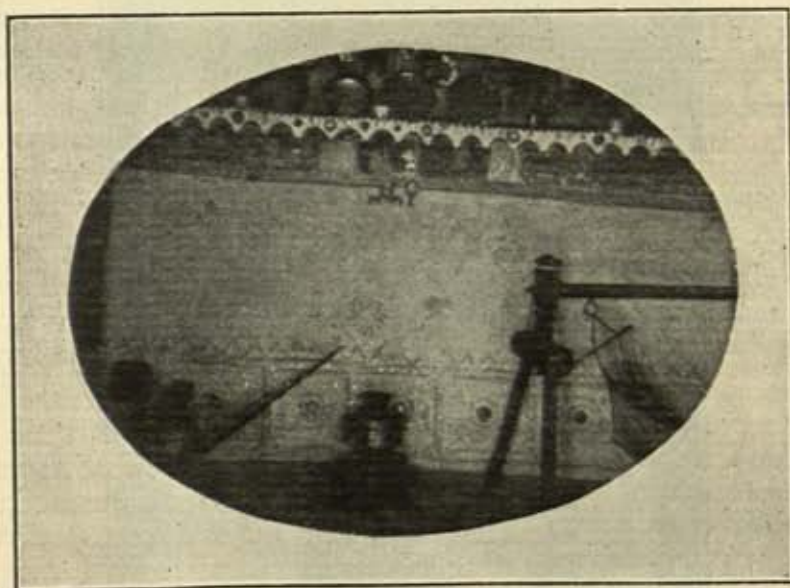
corner of the entrance room a wooden stair almost like a ladder, with a rope hung from the floor of the room above to help in going up and down. The front room in the upper storey above the *parsal* called the *medi* or parlour is the room for receiving guests (*divankhanu*). Except for a carpet and a row of cushions propped against the walls, some lamps hung from the ceiling, and perhaps a mirror or two, this room in the house of a man who keeps to old customs is almost bare of furniture. In some cases a swing-cot or bed will be found, for the head of the family generally sleeps in the *medi* at night. Among those who adopt new ways this room is furnished with tables, etc., in Western fashion. At the back of the public room and round the opening above the court is a terrace used in the fair season for drying grain and vegetables. The roofs of the house slope inwards towards the terrace, and in the rains the water that runs off the roofs on to the floor of the terrace is collected in a pipe and carried to the cistern in the ground floor. The back rooms opposite the upper sitting room called the *pachhali medi* are used as bedrooms by the sons of the family. The family clothing and sometimes the jewels are stored in these rooms in strong boxes called *petara*.

8. Dwellings of Artisans and Poorer Classes—The above description of house also applies to dwellings of artisans except that they are generally without an upper storey, and are a room or two less. The entrance room for such classes is also used as a workshop.



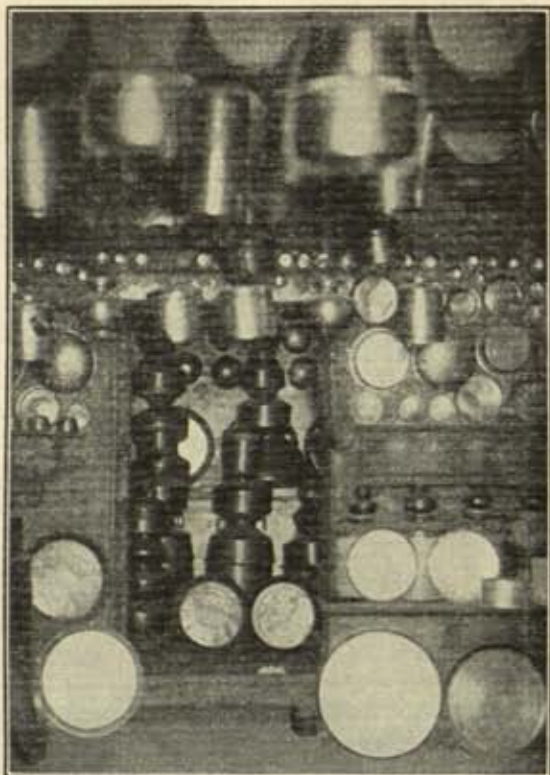
A Dhed's house in Amreli—Exterior

The dwellings of the poorest classes are little better than huts, the roofs being of tile or thatch and the walls of reed daubed with mud. The space enclosed is sometimes divided into two by a partition of millet stalks, but in many cases the house has but one room.



Interior of a Dhed's house in Amreli

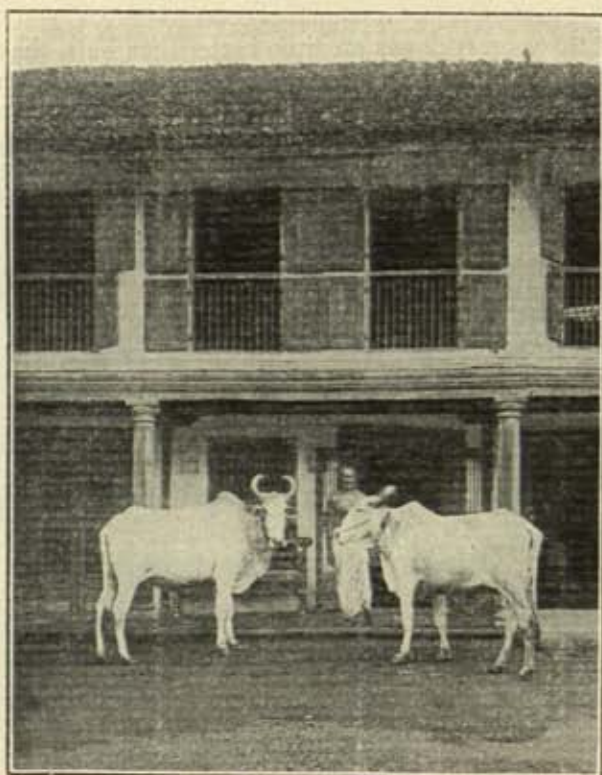
9. Furniture of a Town House—In urban areas, a trader's house generally contains cots or *palang* including a swing cot, cupboards, couches, boxes, carpets, quilts and mattresses. Except among younger men, some of whom have begun to furnish their rooms after European fashion, almost nothing is spent even by rich Hindus on wooden furniture. By way of house ornaments, the chief pride in a Hindu family is to be able to exhibit a store of well-polished



Interior showing furniture of a Patan Vania House

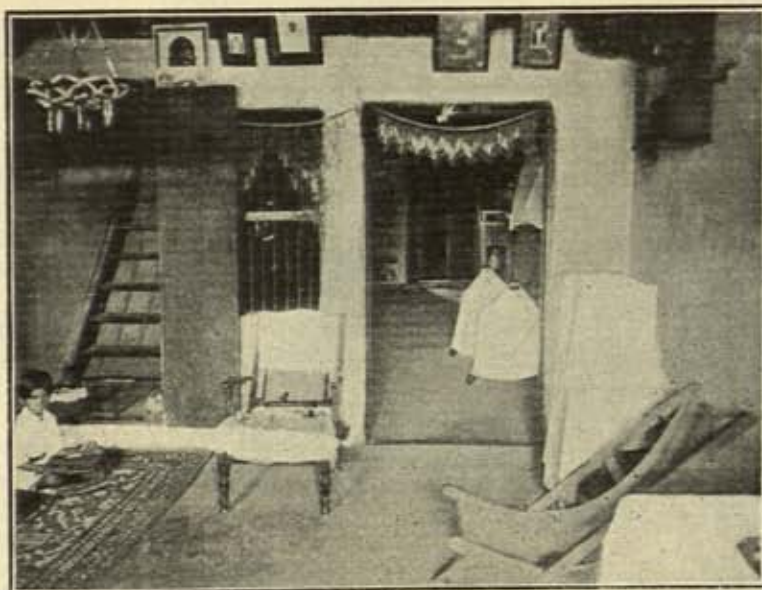
brass and copper vessels. The furniture of an artisan in middling circumstances consists of one or two quilts or *godadas*, a cot (*khatlo*), two or three beds, and cooking and drinking pots. A poor labourer possesses only a few earthen jars and one or two quilts (*godadas*).

10. General Type of Rural Houses—The houses in rural areas as a general rule, are most substantial and roomy than those of the townspeople. The walls of the houses are made of burnt bricks and mortar or mud and the wood work of solid timber. The roof is tiled and in



Outside of an Anavala house in Navsari

some cases there is an upper storey. Unlike the urban, the rural house has no plinth but is raised a little above the surface level. About the middle of the front wall of the house is the doorway, used both by the inmates and their cattle, though in case of houses of the better sort, there is usually near one end of the front wall a separate entrance leading



Interior of an Anavala's House, Navsari

direct to the stable. Passing through the central door, the first part of the house is the entrance room or *parsal* where the head of the family receives visitors and transacts business.

In the inner wall of the entrance room and opposite the opening of the street is a second door leading to the interior of the house, which consists of a central space (*orda*), walled off on one side and the other opening into a stable and cowhouse (*kohodiu*). Between the central room and the cowhouse, there is no partition. To keep the full-grown animals in their quarters, a bar of wood is drawn across the front of the stable about three feet from the ground and from the stable the wall that limits the central place on this side has three doors leading into separate rooms each about 10 feet square. Of these rooms that next the front of the house is used as a store room for clothes, ornaments and grain, and the middle room is generally the cooking room and that next the back of the house, the water room. In the central space (*orda*), the family take their meals, and in the rainy months some sleep there; others sleep in the *parsal* or upper storey if there is one. In the fair weather they generally sleep in the open air outside the street door. In the back wall of the house, is a door leading into the yard (*vado*) of considerable extent, sometimes as much as the fourth part of an acre. This back-yard is used for storing crops and grass and raising temporary sheds for cattle in winter and summer; during the rains, a few vegetables are also grown there. The houses of cultivators in middling circumstances are built on the same plan but on a smaller scale.

11. Lower Class Rural Houses—Houses of the lower classes and the dwellings of the so-called impure castes are generally situated on the outskirts of the village. They are small huts thatched with grass or palm leaves, the walls of earth or of split bamboo smeared with mud and enclosing a space about 12 feet square, divided in some cases into two rooms by a partition consisting of split stalks, the inner being used for cooking and the outer for sleeping, though in many cases the whole of the interior forms but one chamber.

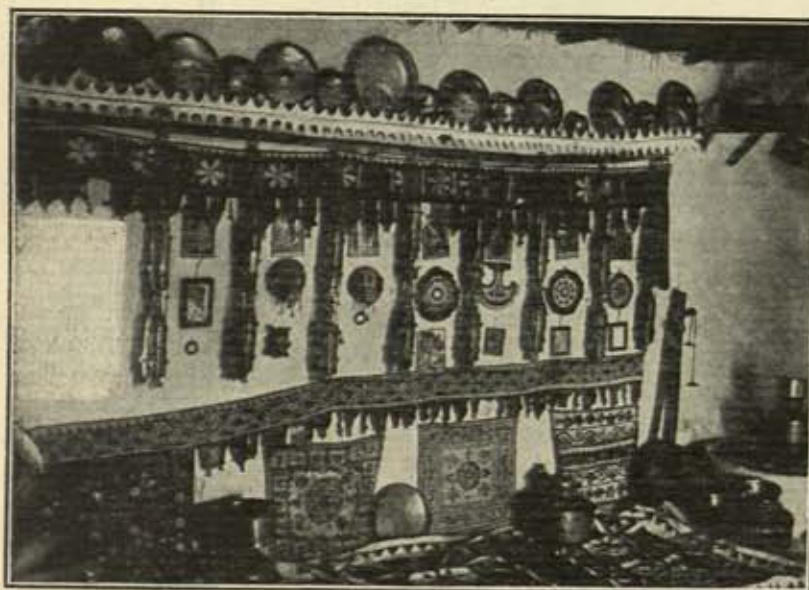
12. Furniture in a Rural House—The furniture of a well-to-do cultivator consists of one or two boxes (*petara*) for holding jewels or clothes, three or four wooden bedsteads, one or two swing cots, mattresses, cotton carpets, about 15 to 20 coverlets and brass cooking pots. The furniture of a cultivator in middling circumstances or of a village artisan consists of one or two bedsteads, an equal number of coverlets, a *petara*, and copper and brass vessels. The poor labourers have no furniture except a mattress and a few earthen jars.

13. Houses in Kathiawad—In Central, South and North Gujarat, the houses are



Exterior of a Vagher's House in Okhamandal

a village or town. The houses of the better class are solid and comfortable and are often ornamented with rich wood carving. The houses of the poorer classes do not however much differ from those of their kind in other parts of the State.



Interior of a Vagher's House, Okhamandal

wash. Passing up a flight of three or four stone or cement steps and entering by a massive door, is the square (*dalan*), with, in some houses, a well or a cistern for drinking water. Off this court, on one side, is a room for receiving chance visitors. On the other side, is a store room, and in houses where hired cooks are kept, the cookroom is close by. From one of the side rooms rises a staircase, which in houses of recent construction is generally made of wood and in old houses of lime brick and in some cases of masonry. The staircase is, except in the houses of very rich, often little better than a ladder. The upper storey is divided into four or five rooms. The room above the entrance door is the public room (*divankhanah*), another is the sitting room (*baithak*), in some cases used also as a sleeping room. The remaining two rooms are set apart for the ladies of the house—one for sleeping, the other for sitting. If the house has three storeys, the two rooms on the second floor are both used as sitting rooms for the ladies and the sleeping room is in the top storey. Some rich houses are provided with bath rooms, but each has its water room (*abdurkhanah*).

14. Muslim Houses—Richer Class

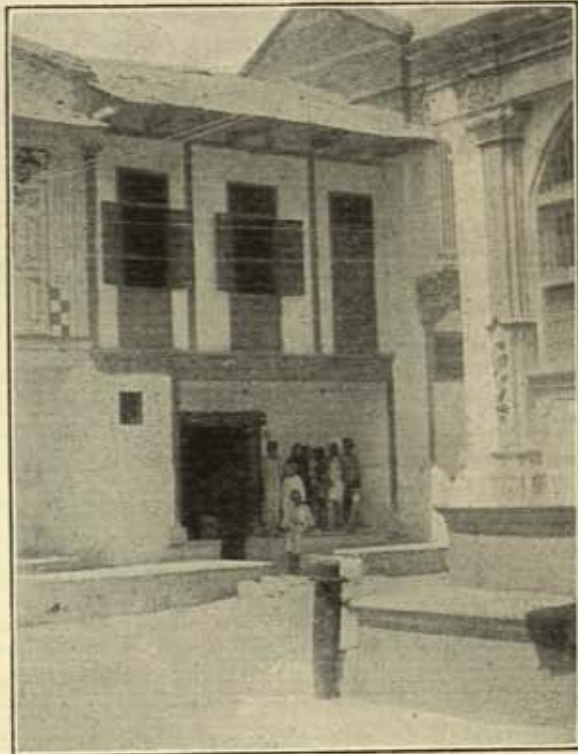
The house of a rich Musalman is generally two or three storeys high, the walls of brick and mortar and the roof of tile. Raising from a plinth three to six feet above the level of the ground, the outer walls are covered with a white, yellow, blue or rose

15. Muslim Houses in North Gujarat—In North Gujarat, the houses are much less large and roomy and are generally two storeys high. Through fear of being robbed, the old houses had fewer windows than the houses of South Gujarat. But in new houses this peculiarity has been given up. In front is a verandah about six feet wide. Within it is the entrance-room (*deodi*), about twelve feet square and ten high. From this a passage leads to an open cement-lined courtyard with a well and cistern, the mouths of both raised two or three feet above the

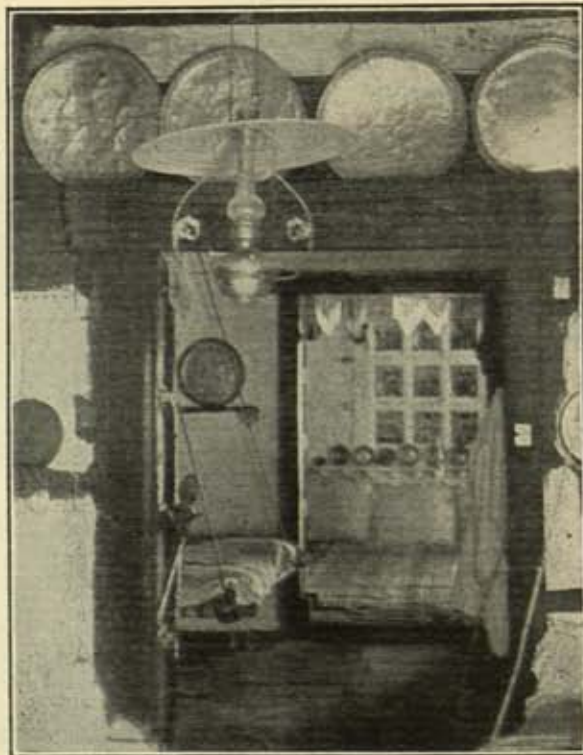
level of the ground. On one side of the court is the cook-room with an open space above the ceiling for storing fuel. On the other side is the water-place with its stone shelf and earthen water jars. Across the court, i.e., opposite the entrance passage, with a small chamber on each side of it, is the public room used for sitting or dining, and if there is no bedroom near, for sleeping. From the lower to the upper storey are generally two stairs, one near the entrance door leading to the two front rooms, the other a back stair leading to the two rooms behind the court. Of the front rooms, the largest, is used as the public room; the other front rooms and the two back rooms are bedrooms.

16. Furniture in a Rich Musalman's House—

Except that there is a larger supply and that articles of European manufacture are commoner, the furniture in South Gujarat does not differ from that in the North of the province. The men's public room (*mardana*) has its walls coloured generally with a brown or chocolate wash, with arabesqued scrolls from the *kuraan* and doveshaped monograms or *maddis* picked out in black and white as a border and cornice. The flat surface of the wall is broken by niches and recesses. The chief of these, in the middle of the wall, is the *naukhanah* or nine chambers. This as well as the smaller niches are filled with ornaments, most of them china plates and bowls. The blank spaces on the walls are hung with pictures, chiefly landscapes though of late years the practice of hanging up family photographs has become common. The floor is covered with a country made carpet, and on the carpet opposite the middle of one of the walls is spread a Persian rug called *ghalichah*. On this again is laid a cushion or mattress and on the mattress near the wall a pillow. Ranged along the wall on either side of the pillows are sofas, chairs or easy-chairs. In the middle of the room is a table with clocks, musical boxes and other ornaments, and against one of the walls a glass doored cabinet with articles of European glass or chinaware and other nicknacks. From each corner of the ceilings hangs a glass lamp, from its middle a chandelier, and if space allows, a gaily cushioned cot (*jhula*), swinging on bars of polished brass. The walls of the women's room, especially of the room set apart for the mistress of the house, are of plain white. Sometimes there are niches or recesses and sometimes none. But always about six feet from the ground a shelf runs round the room furnished with china, glass and other ornaments. From the ceiling hangs a glass lamp and swinging-cot (*jhula*). The floor is carpeted and on the carpet against the middle of one of the walls are set a mattress and cushion. A cot with legs of green and gold, one or two stool-like seats (*pidi*), and if there is a child a cradle (*palna*), of red and yellow or blue lacquer-work, and in a corner of the room a brass lamp (*filsoz*) complete the furniture. Except when their walls are filled with copper pots and plates ranged on shelves most of the other rooms have little but a carpet or mat on the floor and against the wall on one side a cushion or mattress.



Exterior of a Vohra's House, Sidhpur



Interior of a Vohra's House

17. Middle Class Muslim Houses—As is the case with the dwellings of the rich, the houses of middle class Musalmans in South Gujarat differ from those in the North. In North Gujarat the houses are generally one-storeyed and walls of bricks and mortar and the roof of tiles. Entering from the street through a door in the centre of a wall about seven feet high is an enclosed yard from twenty to forty feet square with a well or cistern and in one corner a shed for cooking. The side walls slope upwards towards the back of the enclosure where from a wall from thirty to forty feet high a roof slopes forwards over the yard, the space covered by the roof is generally divided into three or five rooms with a centre hall (*divankhanah*), having on either side one or two rooms serving as bed, sitting, and store rooms.

18. Middle Class Houses in South Gujarat—In South Gujarat the houses of middle class Musalmans are larger and better built. They are seldom more than two storeys high. The walls for about 10 feet are of brick and above that of wood. The roof is tiled. Each floor has generally four rooms. But unless the family is very large the ground floor rooms are seldom used. The stair is generally steep, little easier to mount than a ladder. The first room in the upper storey is the men's room (*wardanah*). Besides the men's room there are three others, a kitchen and storeroom, a ladies' room, and a sitting room. The floors are of wood or cowdunged earth, and the ceiling of cloth or wood. Each room has as at least two windows covered with green or red blinds of coloured bamboo. The more used rooms have the floor covered with mats and carpets, the less used with mats only.

19. Furniture in Middle Class Musalman Houses—In the houses of the middle class Muhammadans of Charotar and North Gujarat there is sometimes an inconvenient lack of furniture. In the open hall there is nothing but a swinging cot or two, a cushion and a pillow, a bedstead, and a Persian rug (*ghalichah*). In South Gujarat besides several chairs, a table and a cupboard, the shelves are ornamented with small bright trays and other glass or china ware. The water shelf too is bright with a well polished pile of brass and copper pots, and in different parts of the house are handsome brass bound boxes. The floor of the women's room is matted. Besides a swinging cot it contains a bedstead with a carpet laid down before it, coat, and a brass lamp (*filsoz*). In the kitchen cooking vessels and pots are arranged and on the floor is a small handmill worked by the kitchen maid.

20. Poor Musalman Houses—The houses of the poor Musalmans in North Gujarat are made of common clay and brick. The framework of the roof is of bamboo. If there happens to be an upper storey there are two rooms; if not there is only one with, up the middle, a wattle



Exterior of a Memon's House

and daub partition. One of the corners of the house is chosen for the fire-place where cooking pots, most of them earthen, are kept. The rest of the rooms serve for dining, sitting and sleeping. In South Gujarat, the houses of the poor are made of wood or wattle and daub and do not differ

from those of the North, except that they have in South Gujarat a loft (*machhda*) about three feet below the roof where they store fuel and lumber. At the back is a yard or *vada* with a



Interior of a Memon's House

well in some cases. The only furniture in houses of this class is a cot, a grindstone, a coverlet or two and a few copper or earthen pots. To own a house is a great object among poor Musalmans.

21. Exterior of a Parsi House—Houses of town Parsis are generally large and well built, one or two storeys high, with walls of brick and mortar and tiled roofs. In villages, however, though the roofs are always tiled, the walls are made of mud. All have a front verandah



Exterior of a Parsi's House

and inside of verandah, a large hall filling the whole breadth of the house. All have a separate cooking room and a lying-in room. The houses of the poorer Parsis have only one or two rooms at the most. In houses of the well-to-do, the number of rooms varies from six to ten according to space, means and requirements.

22. Furniture in a Parsi House—The furniture in a rich Parsi house includes sofas, chairs, tables, clocks, mirrors, pictures, carpets and cushions and in bedrooms, they have bedsteads, boxes and wardrobes. In a middle class house, the furniture consists of a few boxes,



Interior of a Parsi's House

cupboards, chairs and two or three wooden stools. A rich man's house has silver water vessels, copper and brass cooking vessels, cups, dishes, trays and silver and brass goblets. These vary according to means in houses of middle class Parsis.

CHAPTER II

URBAN AND RURAL POPULATION

§ 1. GENERAL RESULTS

54. Introductory—In this chapter will be dealt with figures of distribution of population according to the kind (or rather size) of the census unit which they inhabit. These units are broadly either urban or rural. We must begin therefore with definitions. No satisfactory definition of a village or town has been devised, under which anything like a uniformity of interpretation can be achieved from census to census. Again where agreement has been found in the meaning of certain points, the exercise of discretion involved in the definition has led to changes in class from town to village and *vice versa*, which have vitiated the figures and in some cases rendered comparison well nigh impossible. Of course a complete definition of a town would require, as was pointed out in 1921,*

“the exposition of the racial elements and industrial characteristics of the different places, the distribution and density of their inhabitants, their occupational differences, the standard of comfort as shown in their house room, their appreciation of sanitary needs and urban amenities, such as roads, lighting, gardens, municipal conveniences, etc., and finally even a reference to the policy of the State in regard to the encouragement of industries and the growth of industrial or agricultural settlements. A scientific definition of “Town” as distinct from “Country” or “Village” is a task attended with great difficulties. The passage from “Country” to “Town” may be described in general terms as the change from a condition of status to that of contract.”

Again a “country” place leads a more individualistic life, while a town has more of a communal organisation. But as individualistic tendencies belong pre-eminently to agricultural communities, “rural” has come to be associated more with a predominantly agricultural population, while “urban” is predominantly otherwise. That is the first distinction of townhood. Secondly the possession of self-governing local institutions such as municipalities distinguishes a town from a rural area. Thirdly the distinctly higher standard in living and comfort as apparent from the availability of house room per each individual person marks off a town from other places.

55. Standard Definition of a Town—The standard definition of a town laid down since 1901 shows that (1) it must include all municipalities, (2) all civil lines not included within the municipal limits, (3) all cantonments and (4) all other *continuous* collections of houses inhabited by at least 5,000 persons, which the local census authority may decide to treat as town. This last item of the definition is the cause of so much difference in interpretation since 1901. But apart from this, there has been more than once a departure from the standard definition which has caused more trouble than any other matter. In 1901, five places—below the 5,000 limit and without municipal institutions were treated as towns because they were important trade centres. In 1911, certain places were treated as towns, although they were quite small sized, because they were headquarters of mahals. But here consistency was not kept up. Atarsumba and Tilakwada were treated as towns in 1901 and 1911, as taluka headquarters, although Palsana, which was bigger, and also a taluka town, was ignored. In 1921 and 1931, the standard definition has been strictly enforced. Unava which had passed the 5,000 limit and was a continuous collection of houses, though not a municipality, was treated as a town and has been continued as such in this census. Mahuva and Dhinoj have become municipalities in the last decade and have therefore to be included in the list of towns. Only in regard to Pij, which was a

* Baroda Census Report of 1921, page 65.

KIND	No.	Population
City	1	109,639
Cantonment	1	3,221
Municipalities	43	382,600
Non-municipal Urban Areas	5	27,543

but are no longer so, have been included as towns as they had each more than 5,000 inhabitants. Thus we get the 50 towns in the State distributed according to the four parts of the standard definition. The capital is the only city. The standard definition of a city for all-India purposes requires a minimum population of 100,000 persons. But in this State, the capital has been always regarded as a city for census purposes.

56. Standard Definition of a Village—The reader might imagine that having defined a town, there was no need to define a village. By a process of elimination all other places could be treated as villages. But the point was where to set the limit of a village. Should we take each separate collection of houses—each unit of residential area—as a village or should the census boundary of a village coincide with the limits of a revenue village? Before 1921, the census list of villages was not identical with the revenue *moje* (*mauja*), although the Census Code since 1911 treated all hamlets within the area of a revenue village as parts of that village. In 1901, the definition of a village was different: all hamlets more than a mile away from the parent village were treated as distinct villages. But in 1911 although the revenue village was taken formally as the unit, no less than 179 hamlets which should have been included as parts of their parent villages were counted as independent villages. Thus if the definition had been strictly adhered to in 1911, there should have been only 2,875 villages shown, instead of 3,054. In 1921 and 1931, the definition has been strictly adhered to: only revenue villages have been taken as the unit, as the boundaries are distinct and well defined and the people themselves recognise the territorial limits of a revenue village as real and significant. As the Imperial Census Code points out, there are two difficulties about taking a residential area as the census unit, first because

“it is often difficult in practice to say what is a hamlet and what is a village and secondly in the case of a small outlying group of houses, there is always the danger that the enumerators of the villages on the opposite sides of it (especially when they belong to different circles) may omit to deal with it, each thinking it to be his neighbour's business.”

The hamlets have therefore been included within the parent village; their

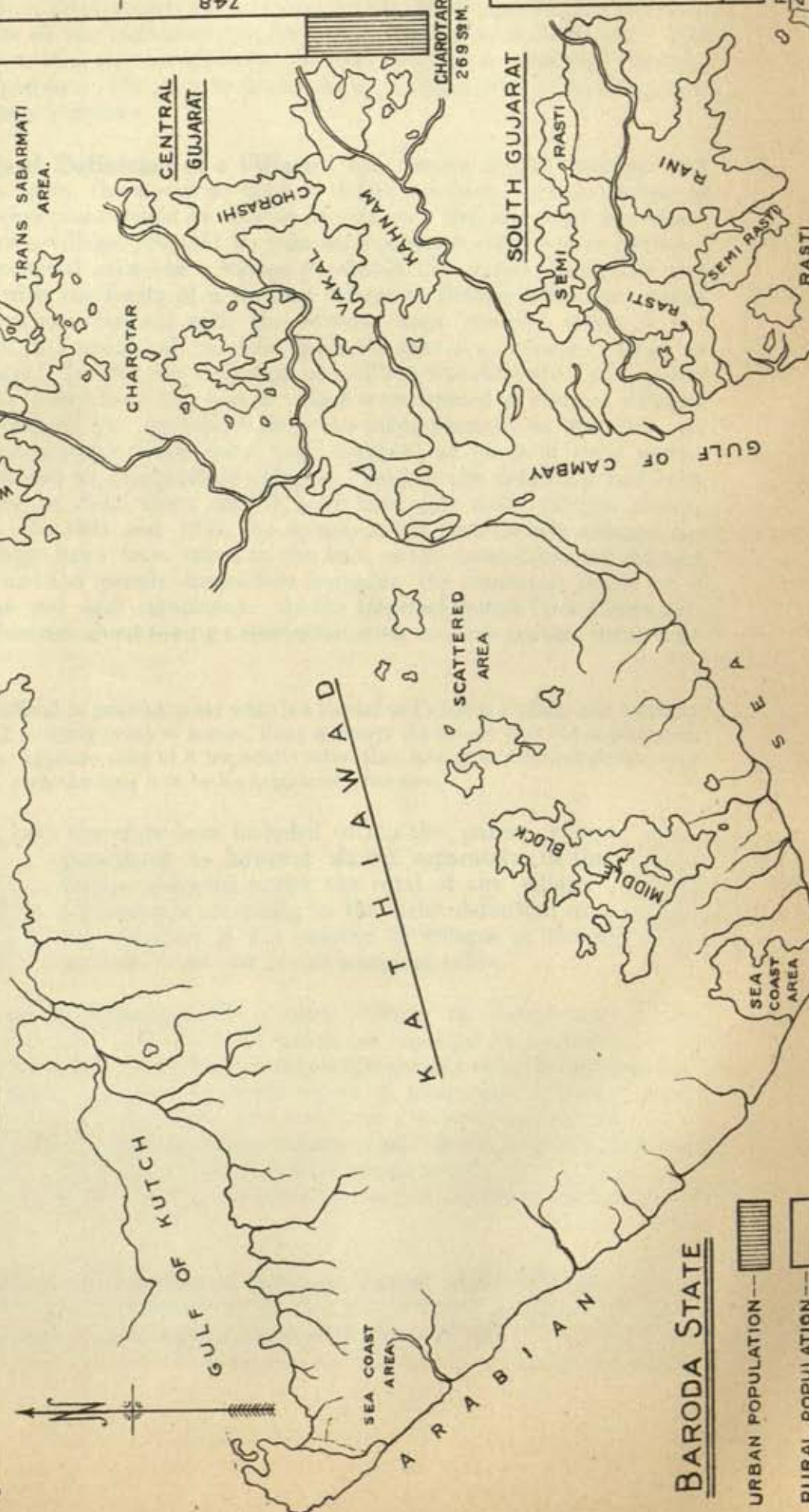
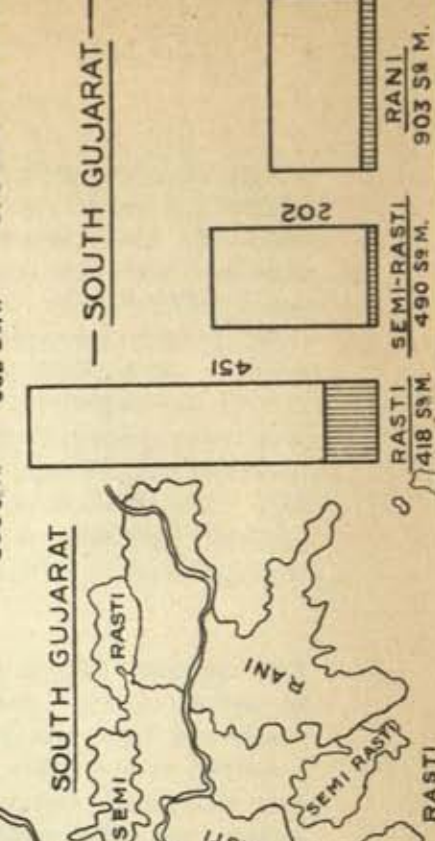
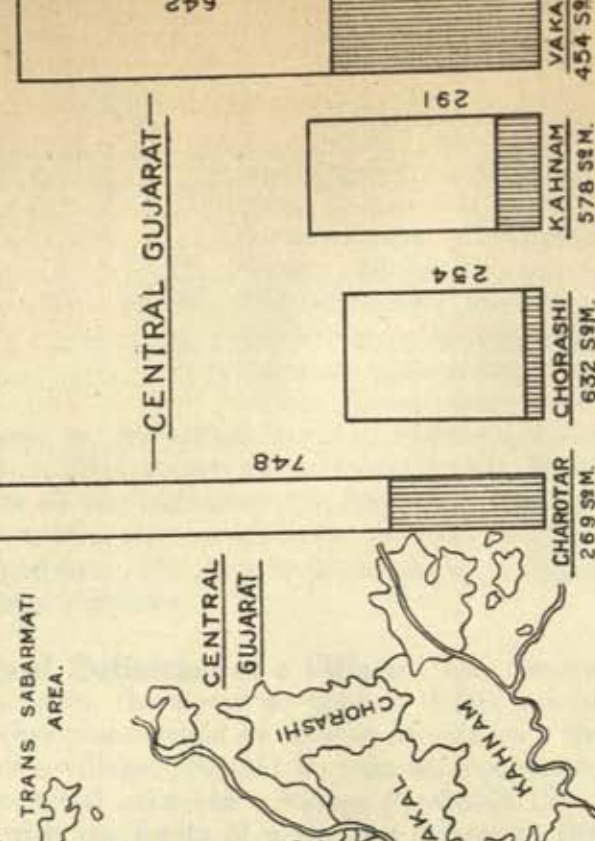
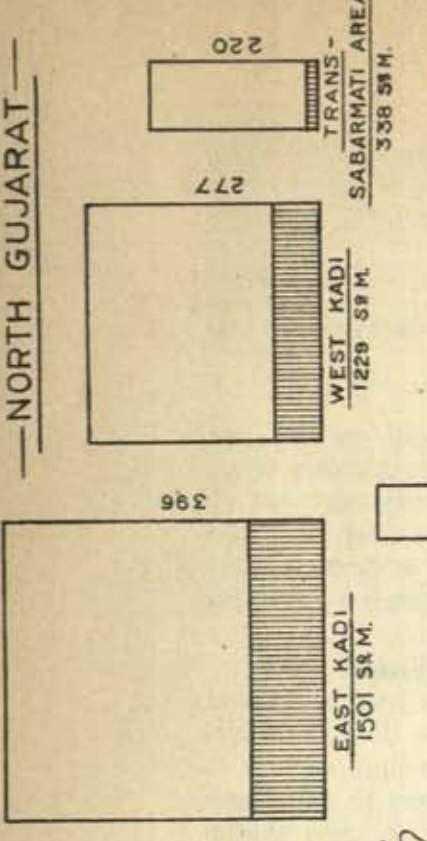
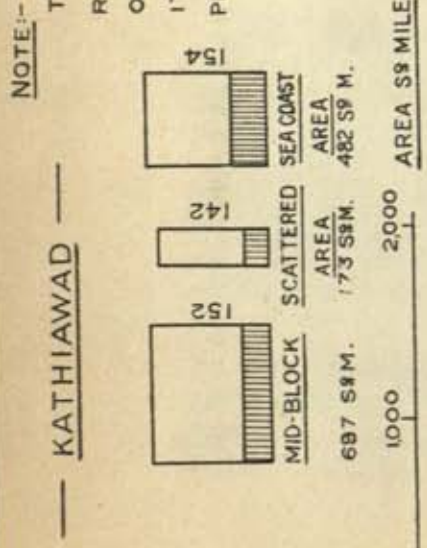
YEAR	No. of villages
1911 ..	2,875
1921 ..	2,902
1931 ..	2,920

population is however shown separately in the Village Tables (*dehzada*) under the total of the village. Making adjustments according to the strict definition of a village, the variation in the number of villages in the last three censuses is set out in the marginal table.

57. Reference to Statistics—The figures relating to towns are shown in Imperial Tables IV and V. In Table IV towns are classified by population with variations since 1881. In Table V, they are shown territorially with their population distributed by religion. Imperial Table III shows all towns and villages classed by population. The Age-Constitution, Sex and Civil Condition of selected towns are given in State Table V. Special literacy figures of all towns are collected in Part E of State Table VI. The results of the tenement census in the City are detailed in five parts of State Table X—which are summarised in five subsidiary tables at the end of this chapter.

58. Distribution of Population between Towns and Villages—There are altogether 2,970 inhabited places in the Raj not including hamlets and other residential areas, which were counted as part of revenue villages. These are divided into one city, 49 towns and 2,920 villages as against one city, 47 towns and 2,902

DENSITY PER SQ. MILE.



BARODA STATE

URBAN POPULATION —

RURAL POPULATION —

villages shown in 1921. Out of a total population of 2,443,007, 21 per cent or 523,003 reside in the city and 49 towns, and the remainder 79 per cent reside in villages. The average size of a town is 10,460 as against 9,184 in 1921 and that of a village is 658 as against 581, ten years ago. The average size of a town varies from 31,136 in Vakal to 1,729 in Semi-Rasti. But if the city is excluded from Vakal, the largest sized towns are met with in West Kadi and Middle Block. The most urbanised area in the State is, of course, Vakal (in Central Gujarat) which includes the City: 43 per cent of its population is town-dwelling. Next to Vakal is Charotar, where there are 8 towns and the proportion is as high as 33 per cent. The least urban area is the Trans-Sabarmati where only 9 per cent of the population is found in the two towns contained in it. The accompanying map illustrates by suitable rectangles the extent of urbanisation in the different natural areas. For details the reader is referred to the following Table :—

SUBSIDIARY TABLE I

DISTRIBUTION OF POPULATION BETWEEN TOWNS AND VILLAGES

NATURAL DIVISION.	Average Population per		Number per mille residing in		Number per mille of Urban population residing in towns with a population of				Number per mille of rural population residing in villages with a population of			
	Towns	Villages	Towns	Villages	20,000 and over	10,000 to 20,000	5,000 to 10,000	Under 5,000	5,000 and over	2,000 to 5,000	500 to 2,000	Under 500
1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State	10,460	658	214	786	391	240	273	96	5	206	580	209
<i>Central Gujarat including City</i>	<i>12,489</i>	<i>713</i>	<i>288</i>	<i>712</i>	<i>462</i>	<i>246</i>	<i>182</i>	<i>110</i>	<i>9</i>	<i>222</i>	<i>578</i>	<i>191</i>
Charotar	8,352	1,400	332	668	..	447	486	67	38	413	510	39
Chorashi	4,348	489	108	892	..	..	293	707	..	115	543	342
Kanam	9,514	606	167	833	..	638	196	168	..	82	675	243
Vakal	31,136	839	427	573	880	83	..	37	..	280	582	138
<i>Kathiawad</i>	<i>8,063</i>	<i>549</i>	<i>237</i>	<i>763</i>	<i>417</i>	<i>..</i>	<i>421</i>	<i>162</i>	<i>..</i>	<i>81</i>	<i>637</i>	<i>282</i>
Mid block	12,761	553	242	758	791	..	209	..	..	98	646	256
Scattered Area	3,979	604	162	838	..	..	..	1,000	..	..	758	242
Sea Coast Area	6,292	526	255	745	..	..	796	204	..	86	580	334
<i>North Gujarat</i>	<i>11,047</i>	<i>804</i>	<i>175</i>	<i>825</i>	<i>284</i>	<i>351</i>	<i>295</i>	<i>40</i>	<i>..</i>	<i>265</i>	<i>584</i>	<i>148</i>
East Kadi	11,172	1,007	188	812	183	482	335	..	..	376	529	95
West Kadi	14,247	693	168	832	523	236	157	84	..	129	668	203
Trans-Sabarmati Area	4,018	517	94	906	..	..	729	271	..	88	641	271
<i>South Gujarat</i>	<i>6,732</i>	<i>443</i>	<i>150</i>	<i>850</i>	<i>403</i>	<i>..</i>	<i>444</i>	<i>153</i>	<i>15</i>	<i>83</i>	<i>548</i>	<i>354</i>
Rasti	8,405	661	267	733	484	..	410	106	..	130	631	239
Semi-Rasti	1,729	489	17	983	..	..	..	1,000	54	68	558	310
Rani	4,215	295	72	928	..	..	734	266	..	38	422	540

59. Towns by Size—The above Table indicates that with the exception of the City, Baroda towns are not large-sized. 39 per cent of the urban population reside in towns containing 20,000 persons and over ; 24 per cent in towns of medium size (10,000—20,000) and the remainder (37 per cent) in small towns below 10,000. There are only four towns with a population of 20,000 and over—Patan (29,830), Navsari (24,397), Sidhpur (20,468) and Amreli (20,186). Of the nine towns in Class IV, two belong to Charotar, five belong to East Kadi, one to Vakal and one to Kanam. The bulk of Class V towns belong to Charotar (5 towns), East Kadi (5) and Rasti (3). Vakal does not contribute any to this class showing that if the City figures,

TOWNS BY SIZE		Number	Population	Proportion
Class I.	100,000 and over ..	1	109,639	21
Class II.	50,000—100,000 ..	..	..	..
Class III.	20,000—50,000 ..	4	94,881	18
Class IV.	10,000—20,000 ..	9	125,723	24
Class V.	5,000—10,000 ..	21	142,583	27
Class VI.	Under 5,000 ..	15	50,177	10
Total ..		50	523,003	100

are omitted, Vakal becomes one of the least urbanised areas with only 6.5 per cent living in towns. The last class has towns from all the areas excluding East Kadi and Middle Block. Another map is attached here to show the position of towns whose size is indicated by distinctive marks against each.

60. Villages by Size—Imperial Table III gives the number and population of villages and towns classified according to size. Subsidiary Table I above gives the main proportional figures. The element of floating population (persons enumerated in boats, railway trains, platforms, etc.) is so small in this State that the figures have been included in the total of the village or town in whose charge the enumeration took place. As the census is of the *de facto* population there is no reason why this floating population should be excluded from the population

Classed as at 1931		
CLASS OF VILLAGE	Number	Population
I Largest Size (5,000 and over) ..	2	10,410
II Large Size (2,000-5,000) ..	144	395,536
III Average Size (500-2,000) ..	1,194	1,113,480
IV Small Size (Under 500) ..	1,580	400,578

of the respective towns and villages to which they have been assigned.* In the margin the number of villages is distributed by size into four classes, the largest size (5,000 and over) containing only two villages and the smallest size containing the largest number of villages. But the bulk of the rural population (*i.e.*, 58 per cent) lives in the villages of average size. The large villages absorb 21 per cent of it, but they are concentrated mainly in Charotar, East Kadi and Vakal. The small villages, although forming the largest number, have only 21 per cent of the rural population. This type of village is least in evidence in Charotar and East Kadi, while it absorbs more than half of the rural strength of Rani. The two villages of the largest size—Naldhara in Semi-Rasti with 5,149 and Kasar in Charotar with 5,261, owe their place in this class to the *hijratis* who formed over 12 per cent of the enumerated population of these two villages.

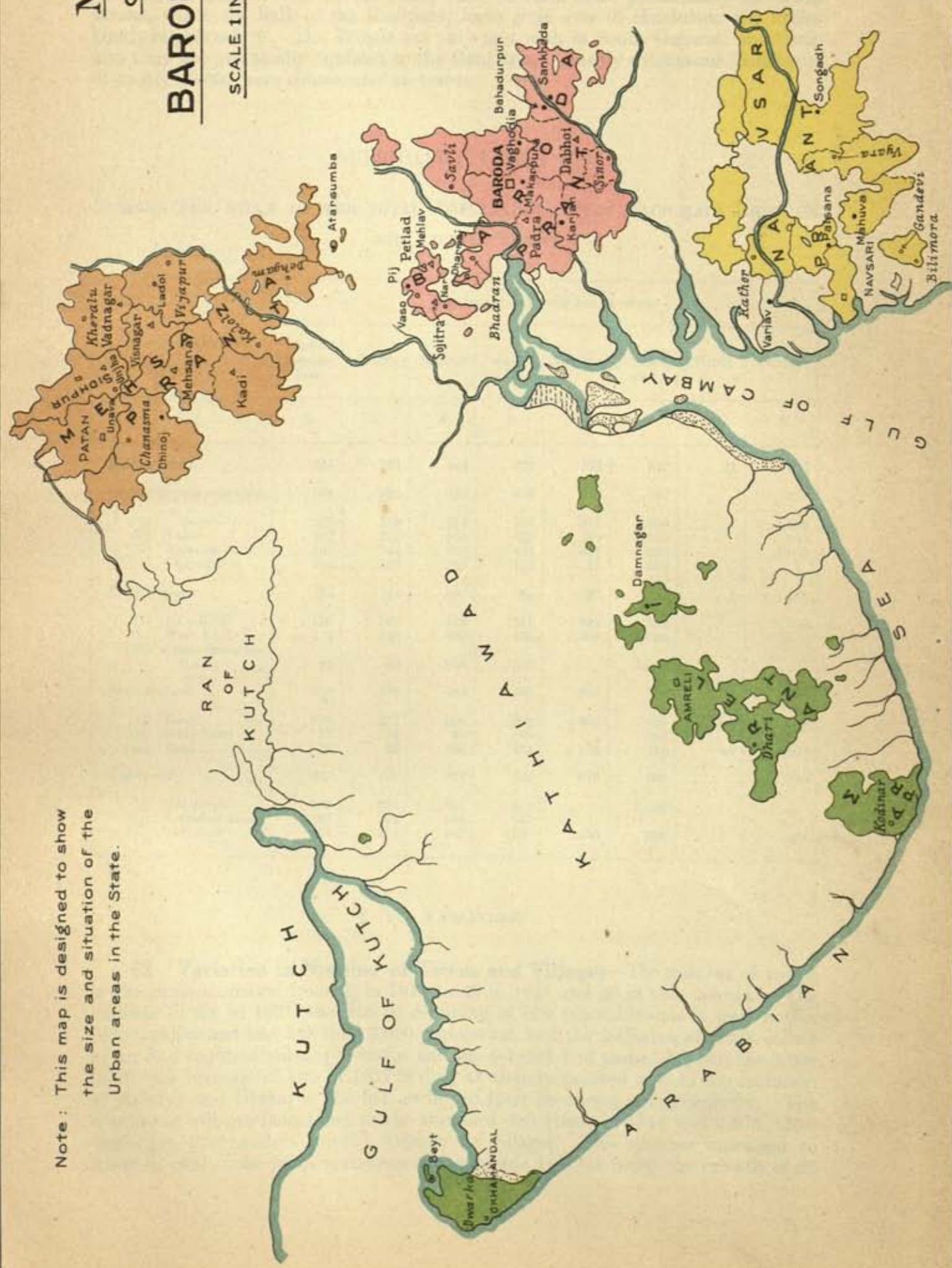
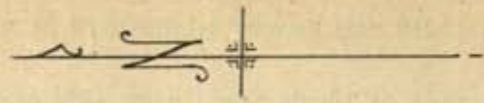
61. Religion of Urban Population: Subsidiary Table II—Before we come to the discussion of variation, it is as well to analyse the religious composition of the urban population. We give below Subsidiary Table II for details. The general ratio of 21 per cent which is the extent of urbanisation in the State does not indicate how the followers of the different religions spread themselves between town and country. The Hindu total in this census includes the bulk of the forest tribes, hitherto classed as Animist or "Tribal"; and that explains why only 19 per cent of Hindus are found to be town-dwellers as against 20 in 1921, but even if forest tribes are entirely excluded from the Hindu total, the followers of other religions, particularly Parsis, Muslims and Jains will be found far more addicted to town dwelling than the Hindus. 81 per cent of Parsis, 44 of Muslims and 42 of Jains are found in urban areas. The bulk of Parsis are found in trade or learned professions, and these are pre-eminently urban callings. The few Parsis found in agriculture are limited to South Gujarat in Semi-Rasti and Rani tracts, and there the few scattered families residing in villages combine farming with the occupation of liquor shop-keeping. The Baroda State Muslims are broadly divided into three groups (*i*) traders, (*ii*) artisans and (*iii*) cultivators. The last reside mostly in villages, while the first two are town-bred. But even amongst Muslims there are great variations. The Mid-Block Muslims are mostly Khojas: that is why the urban ratio of their people in that area is as high as 65 per cent. The Vakal Muslims include the large Muslim community in the city and the urban ratio therefore is 66 per cent. The bulk of Charotar Muslims are similarly concentrated in Petlad town and so half of the total pursuing the faith of Islam in that area are found in towns. But in Semi-Rasti, the Muslim urban ratio is reduced to only 2 per cent in its one town. Jains are also a predominantly trading com-

* The floating population numbers 3,539, of which 1,120 belongs to the City of Baroda, 210 to Port Okha in Okhamandal and 809 in 10 principal Railway stations. In none of these areas, the exclusion of the floating population affects their class.

Note: This map is designed to show the size and situation of the Urban areas in the State.

MAP OF THE BARODA STATE

SCALE 1 INCH = 32 MILES



REFERENCES	TOWNS OF
□	100,000 AND OVER
◻	20,000 TO 50,000
△	10,000 TO 20,000
•	5,000 TO 10,000
•	BELOW 5,000

munity, but they often combine with great profit to themselves money lending with land and that is why many Jains are found in large villages, besides towns. In North Gujarat, particularly in West Kadi, is this the case, where only 31 per cent of them are town dwellers, although the town of Patan is full of them, and is the traditional home of their great commercial houses. The mean Hindu ratio of 19 per cent is similarly made up of great contrasts. In Charotar, the Hindus are most urbanised with 31 per cent, while in Rani area, particularly in Vyara taluka, where the bulk of the Raniparaj have gone over to Hinduism, the urban Hindu ratio is only 9. The Tribals are only met with in South Gujarat, and there also they are practically confined to the Rani area. Hardly a thousand Tribals out of nearly 45,000 were enumerated in towns.

SUBSIDIARY TABLE II

NUMBER PER MILLE OF THE TOTAL POPULATION AND OF EACH MAIN RELIGION WHO LIVE IN TOWNS

NATURAL DIVISION	Number per mille who live in towns							
	Total Population	Hindu	Muslim	Jain	Christian	Zoroastrian	Tribal	Other
1	2	3	4	5	6	7	8	9
Baroda State	214	191	444	421	372	812	21	887
<i>Central Gujarat with City</i>	288	262	483	530	375	957	..	977
(i) Charotar ..	332	312	512	527	314	1,000	..	1,000
(ii) Vakil ..	427	392	664	619	517	980	..	994
(iii) Kahanam ..	167	144	295	434	617	937	..	1,000
(iv) Chorashi ..	108	100	250	175	20	559	..	..
<i>North Gujarat</i>	<i>175</i>	<i>154</i>	<i>405</i>	<i>365</i>	<i>821</i>	<i>959</i>	<i>..</i>	<i>720</i>
(i) East Kadi ..	188	167	429	311	839	952	..	750
(ii) West Kadi ..	173	148	390	475	1,000	1,000	..	..
(iii) Trans-Sabarmati area ..	94	83	239	253	..	1,000	..	..
<i>South Gujarat</i>	<i>150</i>	<i>134</i>	<i>363</i>	<i>462</i>	<i>266</i>	<i>796</i>	<i>21</i>	<i>667</i>
(i) Rasti ..	267	217	501	604	840	925	579	500
(ii) Semi-Rasti ..	17	14	24	149	..	246	..	..
(iii) Rani ..	72	92	753	431	173	214	18	1,000
<i>Kathianwad</i>	<i>237</i>	<i>198</i>	<i>523</i>	<i>434</i>	<i>240</i>	<i>760</i>	<i>..</i>	<i>138</i>
(i) Mid-Block ..	242	201	651	421	..	1,000	..	..
(ii) Scattered area ..	162	132	464	547	..	..	..	..
(iii) Sea coast ..	255	218	443	140	240	600	..	148

§ 2. VARIATIONS

62. Variation in Number of Towns and Villages—The number of towns in the State increased from 42 in 1911 to 48 in 1921 and 50 in this census. The increase of six in 1921 was due to dropping of one place because it was not a municipality and had less than 5,000 population, and the inclusion of seven others as six had acquired municipal status and the seventh had passed beyond the 5,000 limit; the increase of two in 1931 is due, as already pointed out, to the inclusion of Mahuva and Dhinoj in the list, owing to their becoming municipalities. The number of villages (according to the standard definition) in 1911 was 2,875, after deducting 179 hamlets treated wrongly as villages. This number increased to 2,902 in 1921,—the main variations in the decade 1911-21 being the growth of 25

new villages (or uninhabited places becoming inhabited). From the 2,902 villages as shown in 1921, twelve have gone out of the class of villages (7 becoming depopulated, 3 getting amalgamated with neighbouring villages and 2 turned into towns); and no less than 30 have to be added to the list of 1921. These thirty are made up of (i) 17 uninhabited places becoming populous, (ii) 3 new villages being established, and (iii) 10 hamlets acquiring the status of independent villages in the decade.

63. Variation of Population in Urban and Rural Areas—The total population of 1931 consisted of 523,003 in urban and 1,920,004 in rural areas. Of the 26,755

NATURAL AREAS	Variation since 1921 in	
	Urban Areas	Rural Areas
The State	18.1	12.5
Charotar	21.2	4.9
Vakal	18.8	16.7
Kahnam	16.6	15.4
Chorashi	8.6	13.2
East Kadi	15.9	12.6
West Kadi	21.4	11.1
Trans-Sabarmati	17.6	8.2
Rasti	21.7	10.4
Semi-Rasti	17.16	19.5
Rani	20.3	15.0
Middle Block	15.8	13.0
Scattered areas	15.3	4.5
Sea coast	2.7	26.5

hijratis 2,422 were enumerated in towns and 24,333 in rural areas. These will have to be first deducted before the variations are considered. The net variations in the last two censuses in the urban and rural populations are worked out in the margin per each of the natural areas, as they stood at each census. No adjustments on account of change in class from village to town have been made. We see that the urban population has grown faster than the rural almost everywhere except in the Sea-coast area and Chorashi. But as pointed out already while discussing the movement of population in Kathiawad (para 42 above) the large rate of increase in rural population of the Sea-coast area is only apparent, as it is due to the increase of population in Port Okha, still regarded technically as a village. The large increase in the Chorashi rural population is on account of extension of cultivation. Charotar and Rasti towns show the highest rates of growth due to the opening of new cotton mills in Petlad, Navsari and Billimora. In Semi-Rasti, there was no town in 1921, and in 1931 Mahuva has come from the class of village and become an urban area. Similarly the apparently large increase in West Kadi is due to the coming up of Dhinoj into the class of towns in this census. The other three towns in this area together show an increase of 11.4 per cent only. The increase in Scattered areas is almost entirely confined to Damnagar town, the only urbanised place in the whole region. In 1901, as the immediate result of the famine, the urban areas showed a smaller rate of decline than the country side, as the refugees from the villages, crowded into the towns. In the decade that followed, there happened a reverse movement, as conditions turned towards the normal and the people flocked back to the country. In 1911, therefore, although the general census showed an increase of 80,106, the urban areas declined by 36,173. In 1921, there was a swing back to the towns. Agriculture became increasingly unprofitable, and insecurity of life in the villages grew worse on account of economic distress. Stragglers who got no openings in the agricultural labour attempted "to seek livelihood in untried fields of industrial labour." The industrial boom after the war encouraged this movement. Particularly the Kathiawad towns showed increase while the general population had remained stationary. In 1921-1931, the census shows that this movement became intensified. The 169 industrial establishments, that were working at the time of 1921 Census, employed only 11,403 persons. In 1931, 275 establishments, working about the census date, absorbed 22,323 workers. As all these factories are concentrated in towns and large villages, the industrial labour force must have contributed nearly 10,000 out of the net increase of 73,242 in urban areas since 1921. Taking the whole urban population as it stood in each census, we give in

YEAR	Per mille of 1901
1901 ..	1,000
1911 ..	864
1921 ..	940
1931 ..	1,110

the inset comparative ratios since 1901. The State is now more urbanised (to the extent of 11 per cent) than in 1901. These ratios can be accepted as the index of urbanisation on the assumption that the number of places treated as towns in each census has been correctly chosen according to the standard definition.

64. Variation in Towns which are Continuously Urban—We have now dealt with variations in the population considered urban in each census. The disconcerting changes in class of town from decade to decade, and in the definition of "town" itself, are so frequent that no proper comparison with previous censuses is possible, unless we take into account only such towns as have been treated continuously as urban since 1881. Such towns are 29 in number distributed according to districts as in the marginal table. The margin also shows how the proportion of "continuously urban"

compares with that of the population considered as urban in 1931. Over four-fifths of the population of these towns are confined to Central and North Gujarat. The variations in these 29 towns since 1881 are useful to show the rate of increase in the definitely urbanised areas that have withstood the vagaries of classification and continued as towns in the last 50 years. The marginal table gives the total population of continuously urban areas since 1881. There was an increase of 7 per cent in 1891, since which date the decline was continuous for two censuses. The 1921 figures showed a rise, but in 1931 the highest increase was recorded, the total rise since 1881 being 10.3 per cent. Since 1921 the increase in this type of population has been shared by all the towns comprised in it, with the exception of Dwarka and Beyt which have declined. The variations in the different divisions in this type of towns since 1891, are shown in another table in the margin, from which it will be seen that Kathiawad and South Gujarat towns have alone made progress, while the North Gujarat towns have actually declined. The Central Gujarat towns show a very slight increase since 1891, but even this is illusory as the *hijrat*is are responsible for the whole of it. The absolute figures of population per town of these continuously urban places for the last six censuses are given in Subsidiary Table X appended at the end of this chapter.

DIVISION	Number	Population in 1931	Percentage of continuously urban	Percentage to total population of	
				Continuously urban	Urban in 1931
State	29	435,880	100	18	21
Central Gujarat ..	11	202,140	46	25	29
North Gujarat ..	12	158,481	36	16	18
South Gujarat ..	3	40,057	9	10	15
Kathiawad ..	3	35,202	9	17	24

The absolute figures of population per town of these continuously urban places for the last six censuses are given in Subsidiary Table X appended at the end of this chapter.

Year	Population of places continuously treated as towns	Proportion per mille with 1881 as index
1881 ..	396,160	1,000
1891 ..	424,614	1,072
1901 ..	392,507	991
1911 ..	360,813	918
1921 ..	372,582	940
1931 ..	435,880	1,103

65. Variation in Towns classified by Population: Subsidiary Table III—There is a third way in which the population figures of towns can be studied from census to census; that

is by taking the variation in the population of towns as classified in the previous census. As for example, we can take the urban figures of 1921 only and classify them according to their size and see how far increases or otherwise have happened in 1931, in each class of 1921. For this purpose, places newly raised to towns in 1931 will have to be neglected, as also all changes in class. In this manner we can work up the proportions for all the previous censuses. Thus on the basis of the urban classification of 1921, there is an increase of 17.2 per cent. Six classes have been standardised according to size of population: commencing with Class I: 100,000 and over, and ending with Class VI: under 5,000. Baroda City is now restored to Class I, but as it was below the 100,000 limit in 1921, it belonged to Class II, and therefore the increase in the City is credited to that class. Similarly

Variations in continuously urban areas in				
YEAR	Central Gujarat	North Gujarat	South Gujarat	Kathiawad
1891	100	100	100	100
1901	90	90	107	110
1911	83	81	103	103
1921	84	84	108	110
1931	100.3	97	133	120

in 1921, only Patan used to belong to Class III—20,000–50,000 ; so that the variation in that class should be the same as that for Patan itself, although three other towns have come up to that class now. Class III therefore as a result of these accessions shows an increase of 190 per cent on the corresponding class of 1881. The next class—10,000–20,000 has lost three and gained one town in this census. These three towns now promoted to Class III are Navsari, Amreli and Sidhpur. Padra has now come up from Class V. Nearly a fourth of the urban population is found in this class of towns. Class IV of 1921 shows an increase of 10.4 per cent in this census : because of these changes in class, the population of these fourth class towns (as classed in 1931) shows a decline of 18.3 per cent as compared to Class IV of 1881. Class V now consists of 21 towns and absorbs more than a fourth of the urban population. Variations per size of towns are not however very illuminating ; we shall therefore have to examine variations in individual towns grouped according to their character. We give in the meanwhile Subsidiary Table III contenting ourselves with the remark that it is somewhat artificial and academic.

SUBSIDIARY TABLE III

TOWNS CLASSIFIED BY POPULATION

CLASS OF TOWN	Number of towns of each class in 1931	Proportion to total urban population	Number of females per 1,000 males	Increase per cent in the population of towns as classified at previous censuses					Increase per cent in urban population of each class from 1881-1931	
				1921 to 1931	1911 to 1921	1901 to 1911	1891 to 1901	1881 to 1891	(a) in towns as classed in 1881	(b) in the total of each class in 1931 as compared with corresponding total in 1881
1	2	3	4	5	6	7	8	9	10	11
Total	50	100	919	+17.2	+ 3.4	— 8.4	— 7.5	+ 8.6	+ 9.1	+24.2
I 100,000 and over	1	20.96	806	..	..	— 4.7	—10.5	+10.5	+ 7.7	+ 7.7
II 50,000 - 100,000 .. ..	..	..	..	+19.5	— 4.3	..	..	..	..	..
III 20,000 - 50,000	4	18.14	1,008	+10.4	— 4.7	—12.4	— 9.9	— 0.2	— 8.8	+190.0
IV 10,000 - 20,000	9	24.04	949	+18.4	+ 4.5	—11.6	— 2.8	+ 6.7	+13.8	— 18.3
V 5,000 - 10,000	21	27.26	937	+15.3	+10.7	— 9.8	—10.0	+10.0	+ 7.5	+ 20.1
VI Under 5,000	15	9.60	896	+17.4	+ 3.7	— 2.7	— 0.7	+ 6.1	+24.2	+255.7

66. Population of Certain Towns—We will now briefly consider the figures of certain towns with a population of 10,000 and over, and their variation per cent since 1921. Everywhere, the increases are ample as the margin shows. Seven of these 13 towns show a proportionate increase higher than the State average. Four of the remaining six have increases over 10 per cent. Only Vadnagar and Visnagar (both in East Kadi) show lower rates of increase. Previous to this census, Visnagar was one of the most consistently decaying towns in the State. Vadnagar showed a small increase in 1921, but the Censuses of 1901 and 1911 registered a sharp decline of population in that town. The large increase in Petlad is due specifically to the establishment of two new spinning mills, two printing presses and one match factory. The increase in Sojitra is partly due to

NAME OF TOWN	Population in 1931	Variation per cent since 1921 (Increase)
Patan	29,830	10.4
Navsari	24,397	25.5
Sidhpur	20,468	26.4
Amreli	20,186	13.4
Petlad	19,236	26.9
Dabhoi	18,156	14.4
Visnagar	15,050	8.6
Mehsana	14,762	24.2
Kadi	13,455	12.8
Vadnagar	12,692	8.7
Unjha	11,344	15.4
Sojitra	10,649	20.3
Padra	10,379	15.2

the *hijratīs* and without them the rate of growth is reduced in that town to nearly 18 per cent. Part of the Sidhpur increase is due to a feast of *ladus* to which Brahmans flocked from other places,—a catastrophe already alluded to in the previous chapter (*vide* para 9).

67. Variation in Types of Towns—Variations in individual towns can be best understood when they are grouped according to their character. Besides the City and the Cantonment, the towns of the State were divided in the last Census Report into five types: (i) industrial centres, (ii) market towns and railway centres, (iii) old established urban areas, (iv) temple towns and (v) agricultural and distributive towns, the last named being really overgrown villages where the movement of population is governed by factors similar to rural areas. In the present census one has to add a sixth class, *i.e.*, of new towns. We shall for the moment neglect the City and Cantonment as a separate section is devoted to them, and consider the marginal table. The variations given therein refer to the last two decades. The *hijratīs* have been excluded from the absolute figures of 1931. 28.4 per cent of the urban population are residents of agricultural towns; this class of town happens to have the smallest size of all. The largest increases in the decade have

KIND	No.	Population in 1931 excluding <i>hijratīs</i>	Proportion to total	Average population	Variation per cent	
					1931-1921	1921-1911
1	2	3	4	5	6	7
Industrial Centres ..	7	88,699	17.0	12,674	+23.6	+17.7
Market towns and Railway areas ..	6	89,863	17.2	14,977	+16.9	+ 7.7
Old established towns ..	6	65,244	12.5	10,874	+11.9	— 5
Temple towns	2	11,492	2.2	5,746	— 3.8	+17
Agricultural and Distributive	25	148,312	28.4	5,932	+14.6	+ 6.6
New towns	2	6,516	1.2	3,258	..	..

occurred in industrial towns and marketing centres. The increase in the former is even more rapid than that recorded in 1921. The only class of towns that has declined are the two temple towns which together show a decrease of 4 per cent. These two towns showed an increase of 17 per cent in 1921, which was due to the influx of pilgrims to their temples as well as of labourers to the cement factory. Part of the decrease in 1931 is due to the outflowing of labour to the newly opened Port of Okha and to the diminution of the pilgrim traffic as a result of the growing indifference of Hindus towards this aspect of their faith. The decrease in the size of the regiment at Dwarka before the census date to about half of its previous strength also contributed to the decline in population of that town.

68. Sex Ratio in Towns—One other point to note about urban population is the variation of the sex ratio in the towns of different sizes. Subsidiary Table III shows that, as is the case with towns elsewhere, males greatly outnumber females. The only exception is in respect of 3 towns in Class III (*i.e.*, in Patan, Navsari and Sidhpur) where females outnumber males. The general sex ratio for the whole State is 942 females to 1,000 males. In these three towns, the female preponderance is due to the following reasons:—

Sex ratio in towns of varying sizes			
CLASS	Number of towns	Proportion to total urban population	Number of females per 1,000 males
I. 100,000 and over ..	1	20.96	806
II. 50,000-100,000 ..	..	..	..
III. 20,000-50,000 ..	4	18.14	1,008
IV. 10,000-20,000 ..	9	24.04	949
V. 5,000-10,000 ..	21	27.26	937
VI. Under 5,000 ..	15	9.60	897
Total ..	50	100	919

- (i) Vohras in Sidhpur, Vantias in Patan and Parsis in Navsari are largely engaged in business or trade elsewhere, and their able-bodied males are therefore out of their homes ;
- (ii) Sidhpur is a place of pilgrimage also, and therefore as is natural to such places, females predominate there.

With these exceptions the masculinity is higher in towns than in the general population. It is the highest in the largest as well as in the smallest sized towns. The urban sex ratio has remained the same for the last two censuses but in 1911, the proportion of females was higher (934), pointing to gain through migration in 1921 ; the femininity in towns below 5,000 is now higher than either in 1921 or 1911, possibly because in certain of the towns in this class—Palsana, Variav, etc.,—the male proportion has declined through emigration.

69. "Revenue Village" and "Residential" Area—We have now to note a few points about rural areas, before we proceed to deal with the figures of the City census. The different sizes of villages have been already dealt with. In connection with the definition of terms in para 56 above, it was pointed out that the census village corresponded exactly with the revenue village. The unit of the revenue village is well-known and easily identifiable in Gujarat. The system of revenue administration being the *ryotwari* in the State, the unit for collection of revenue is the *moje* (or *mauza*) which is the parcel of ground marked off by the Survey and Settlement department with a definite boundary which may contain one or more continuous groups of houses surrounded as islands by a sea of cultivated fields. It is possible that some revenue villages may have no houses at all. In that case it is an uninhabited one, and a note is made of such at the end of the Village Tables prepared by the Census. The normal village is the compact type of the central inhabited nucleus situated near a pond and sheltered by trees round which cluster the farms of the peasantry ; exceptions to this general rule occur in villages where there is scope for cultivation, as a result of which new settlers from other places come and form new hamlets thereby breaking up the unity of the old village sites. Even now the vast majority of villages have only one central inhabited area, with a self-contained rural organisation. Only 386 or 13 per cent of the villages have hamlets attached to them. The most dispersed of villages are Makni (in Sankheda) which consists of 13 separate hamlets and Naldhara (in Mahuva) which has 12 residential areas included within its area. The total

NATURAL AREA	Number of villages in 1931			Number of separate hamlets in	
	Total	Compact	With hamlets	1931	1921
State	2,920	2,534	386	641	574
Charotar	96	89	7	7	5
Vakal	199	168	31	53	30
Kahnam	235	220	15	33	37
Chorashi	293	166	127	226	247
East Kadi	480	402	78	114	59
West Kadi	408	351	57	62	57
Trans-Sabarmati	149	112	37	90	77
Rasti	209	204	5	8	9
Semi-Rasti	199	186	13	23	14
Rani	368	368	..	..	20
Middle Block	145	136	9	14	9
Sea Coast	105	100	5	1	1
Scattered	34	32	2	10	9

number of separate hamlets is 641 as against 574 in 1921 and 431 in 1911. Fissiparous tendencies in the rural economy may be therefore said to be on the increase. These are particularly in evidence in Vakal, Trans-Sabarmati and East and West Kadi. In Chorashi, the disintegration which went the farthest in 1921 is now stemmed, while in Mehsana *prant*, where the movement from neighbouring territory is still active, these hamlets or

paras are on the increase. The average population per inhabited village is 658 ; per residential area it is 539 ; in Chorashi, the average per residential area is only 276, while the average per village there is 489. In East Kadi, the averages per village and residential area are respectively 1,007 and 812.

- (i) Vohras in Sidhpur, Vantias in Patan and Parsis in Navsari are largely engaged in business or trade elsewhere, and their able-bodied males are therefore out of their homes ;
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Rani	368	368	20
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BARRON CITY

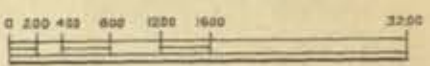
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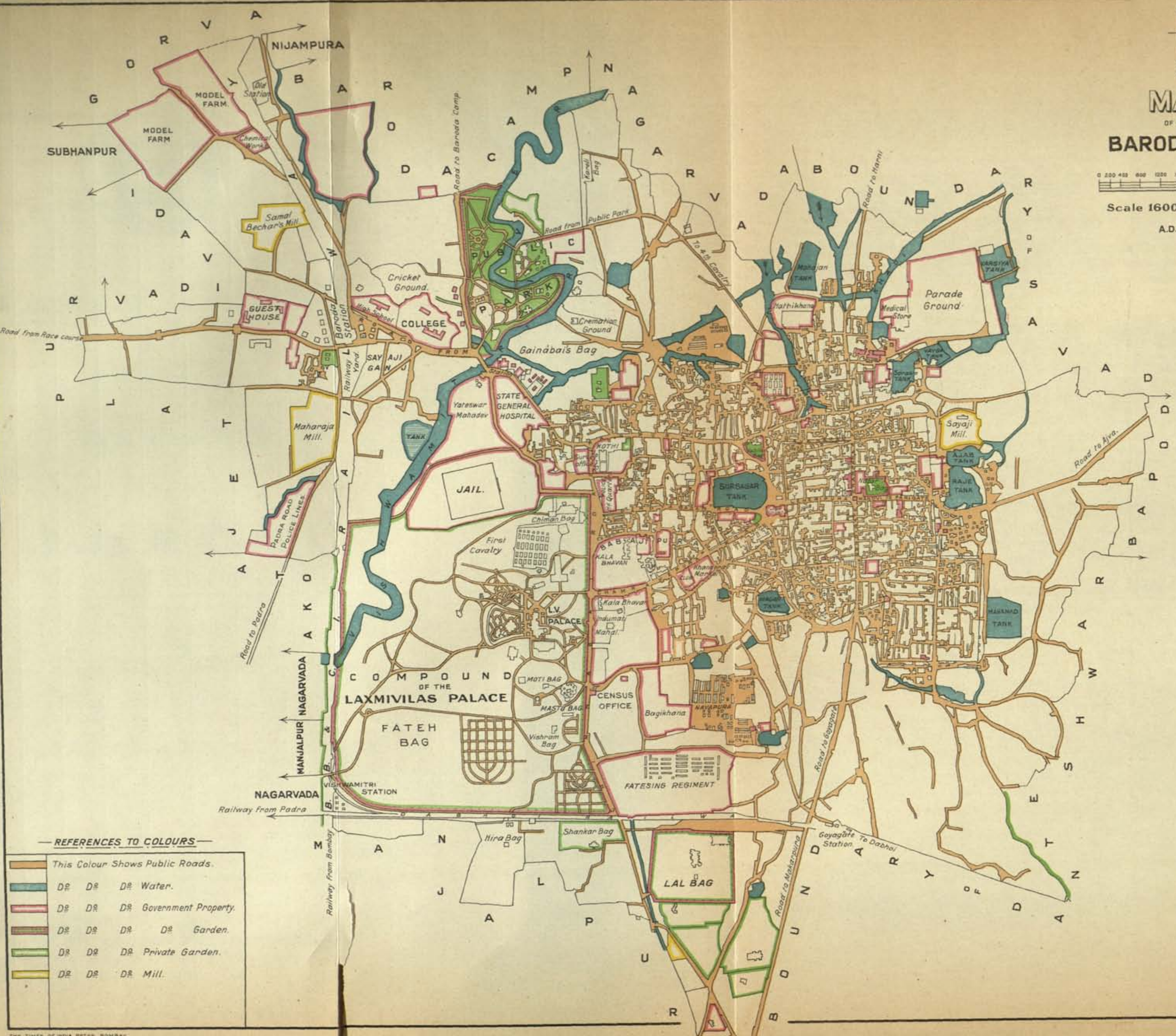


MAP OF THE BARODA CITY



Scale 1600 Feet = 1 Inch.

A.D. 1931.



— REFERENCES TO COLOURS —

- This Colour Shows Public Roads.
- D. D. D. Water.
- D. D. D. Government Property.
- D. D. D. D. Garden.
- D. D. D. Private Garden.
- D. D. D. Mill.

Apart from these "revenue" villages, the census had to deal with inhabited areas within the reserved forests, where fiscal demarcation of the ordinary type was not possible. In the Umarpada and Vajpur ranges 33 such settlements were recorded with a population of 2,121. These settlements had no permanency about them. The bulk belonged to individual timber contractors who were working in the different coupes and they travelled from place to place, according as their work required them. In 1921, such settlements in the reserved forests numbered 18 with an enumerated population of 775.

70. Port Okha—Finally a brief reference may be made to Port Okha. During the last decade, Baroda has come into prominence in international trade by the opening of a modern port in 1926. Port Okha is situated on the north-west corner of Kathiawad 18 miles by rail from Dwarka. It is on the direct sea route between Bombay and Karachi, and as an all-weather port with a safe harbour where two steamers of 27 feet draft can safely berth alongside the pier, it is fitted to have a place amongst future Indian ports. The pier was specially designed and constructed for the purpose of a large volume of trade. The port is served by a metre-gauge line connected with Delhi and the North, besides Central India, Gujarat, Rajputana and the United Provinces. It has a jetty 400 feet long, connected with the shore by an approach viaduct 500 feet long. The port is provided with good cargo-handling equipment and warehouses, banking and other facilities. Besides the port area, the civil station has been well laid out. In five years the little fishing village of Adatra (with only 78 inhabitants in 1921) has grown into a town of 1,497 people. Since its opening, the tonnage handled, and the number of steamers calling have progressively increased from year to year as the following figures will show. The last year only registers a slight set-back owing to political causes and outside factors :—

YEAR	No. of ocean-going steamers	Cargo handled in tons		
		Import	Export	Total
1929-30	59	54,588	18,520	73,108
1928-29	58	60,586	19,941	80,527
1927-28	48	37,843	13,692	51,535
1926-27	17	14,160	2,035	16,195

§ 3. THE CITY OF BARODA

71. Area of the City—The results of the census in the City deserve to be dealt with in a separate section. The area of the City including the Camp has now been definitely ascertained to be 10.93 or 11 square miles, distributed as in the margin in the different parts. The municipal area consists of five wards of which the largest in area is Raopura (3 square miles). The other four are (with the area in square miles noted in brackets after each) Babajipura (2.25), Wadi (1.75), Fatehpura (1.0) and the City (0.25). The last named is a highly congested area, as shown in the map attached to this page, and it is enclosed by the four walls and entered by the four gates. Raopura is on the north of the main high road from the Baroda Central Railway Station and extends towards the cantonment limits on the north and the Race Course on the west. It includes many open spaces, such as the public park, the college compound and the environs of the Bahucharaji temple. The Babajipura district on the south includes

Name of Ward or Area	Area in square miles
City Municipal area ..	8.25
State Military area ..	1.00
Camp	1.00
Railway area ..	0.68
Total	10.93

the immense Lakshmi Villas Palace compound, the public offices and the old regimental parade grounds, but between these it contains some of the most congested quarters of the City. The Fatehpura on the north-east contains the poorest quarters, has few open streets but borders on a chain of lakes and open grounds towards the east. The Wadi ward flanks round the walled City proper on its east and south. It is the oldest part of Baroda and used to be formerly the seat of the gentry, whose abodes are now dilapidated, giving place to a new industrial site which is fast growing up with miscellaneous factories near the Railway Workshops on the south-east.

72. General Results of the Census—The population of the City, according to the Census of 1931, is 112,860 (62,744 males and 50,116 females). This population includes the Cantonment or the Camp, the Railway areas, and the State Military area. The following Subsidiary Table gives the main figures:—

SUBSIDIARY TABLE IV

BARODA CITY

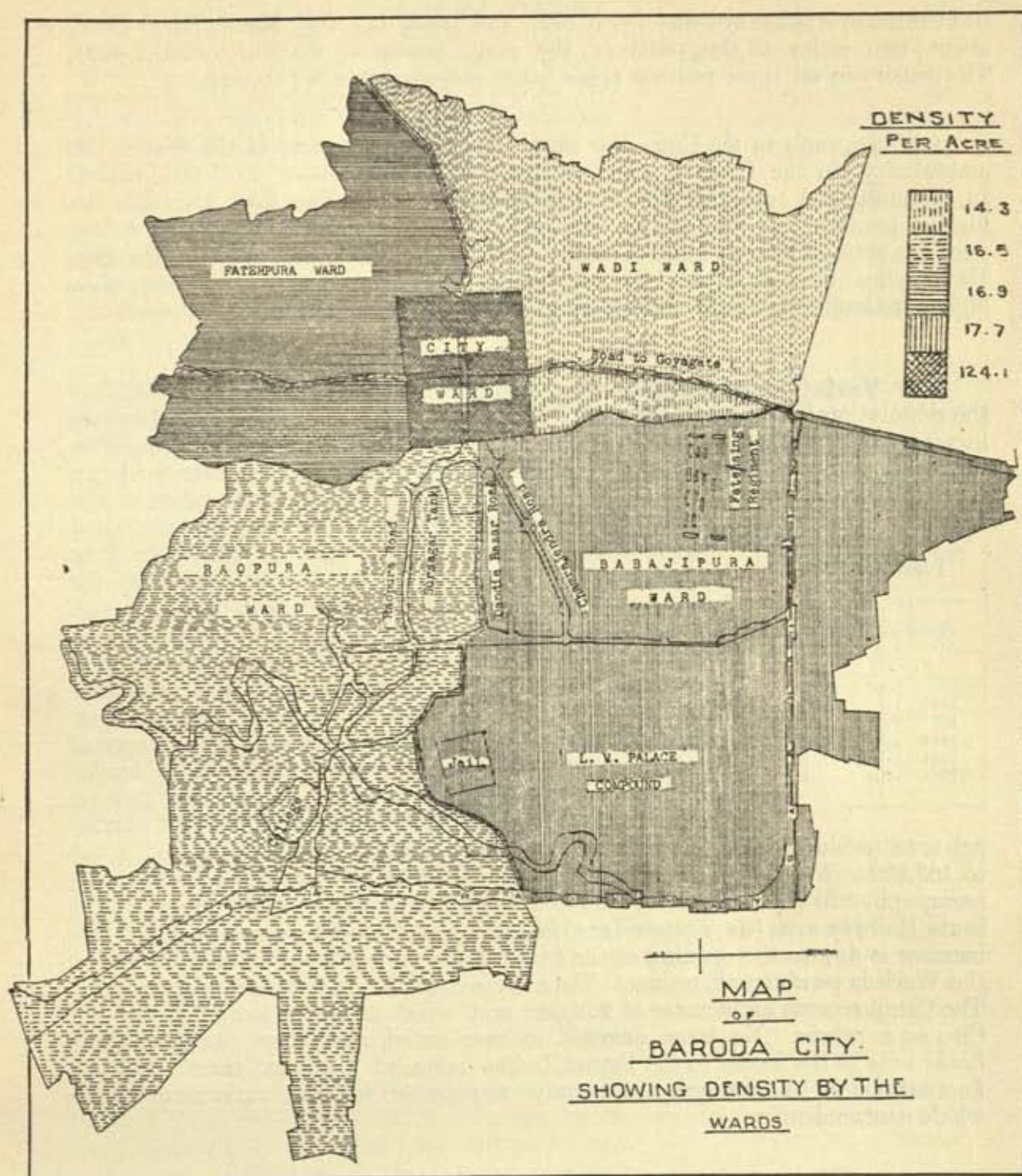
CITY	Population in 1931	Number of persons per square mile	Number of females to 1,000 males	Proportion of foreign born per mille	Percentage of Variation					
					1921 to 1931	1911 to 1921	1901 to 1911	1891 to 1901	1881 to 1891	Total 1881 to 1931
1	2	3	4	5	6	7	8	9	10	11
Baroda City (with Cantonment)	112,860	10,954	799	278	+ 19.2	- 4.66	- 4.28	- 10.84	+ 9.30	+ 5.96
1. <i>City Municipal Area</i>	103,892	12,593	825	248	+ 18.6	..	The figures are not available.			
i. City Ward ..	19,856	79,424	889	163	+ 17.57	1.17				
ii. Fatehpura ..	10,788	10,788	848	260	+ 8.4	5.4				
iii. Wadi ..	16,013	9,150	873	160	+ 18.69	..				
iv. Raopura ..	31,609	10,536	766	331	+ 25.21	1.3				
v. Babajipura ..	25,626	11,345	820	263	+ 16.55	..				
2. <i>State Military Area</i> ..	2,403	2,403	482	526	+ 41.69	..	The figures are not available.			
3. <i>Railway Areas</i> ..	3,344	4,918	499	420	+ 32.75	284.58				
4. <i>Baroda Camp</i>	3,221	3,221	594	455	+ 9.8	- 15.6				
							+ .99	- 19.9	- 15.9	- 31.38

NOTE.—“Foreign born” means the persons born outside the State.

73. Distribution of the Population—(i) *The City Municipal Area*—Within this district, the City's population is most unevenly distributed. The density per square mile is 12,593 or 19.7 per acre. The City ward with only a quarter of a square mile in extent has an appalling density of 124 persons to the acre. Fatehpura has 17, and Wadi 14.3 to the acre. Babajipura and Raopura which together constitute nearly two-thirds of the total municipal area, have a density of 18 and 17 respectively per acre. But the large open spaces, already referred to, which are included in these districts have to be excluded for an idea of the overcrowding. The area of these open spaces is about

WARD	Gross areas in acres	Thickly inhabited area (acres)	Density per acre of column 3
1	2	3	4
City ..	156	143	138
Raopura ..	1,922	472	67
Babajipura ..	1,440	372	69
Wadi ..	1,120	193	83
Fatehpura ..	762	199	54

2.5 square miles including 980 acres for gardens and parks. There are 100 miles of public roads. These together with vacant unbuilt spaces and cultivated lands, if excluded from the total area of the City leave only 1,279 acres as the space for “residential” or thickly inhabited area. The density calculated on this congested area is shown in the inset. The City ward density shows even greater congestion than by the former calculation. In



the two wards of Raopura and Babajipura where the middle class and the small shop-keepers congregate, the density is about half of the City. The quarters of the poorest classes are in the least congested part of the City.

(ii) *The Camp* has a large parade ground and golf links. The cantonment bazar consists of a few acres and is very congested. The military population numbers 636, while the civil area has 2,585 inhabitants. Together, there is a density of 5 to the acre here.

(iii) *The State Military Area* has a density of only 4 per acre. It has extensive parade grounds bordering on the village of Tarsali.

(iv) *The Railway Areas* are in the four distinct parts of the town : (a) the Goyagate colony being the headquarters of the Gaekwad's narrow-gauge railway system with 515 inhabitants, (b) the B. B. and C. I. Passenger Station area including the floating population counted on the platform and in trains (with 1,142), (c) the Vishwamitri station which is the junction between the broad-gauge

and the narrow gauge systems (with 192), and lastly (d) the Marshalling Yard, about two miles to the north of the main passenger station, (with 1,495). The density in all these railway areas taken collectively is 8 per acre.

(v) *Sex ratio in the City*—Far more than the other parts of the State, the masculinity in the City is high, there being 799 females to 1,000 males. In the municipal area, this ratio is slightly higher (825). The City ward has the highest feminine ratio of 89 per cent of males. The Baroda Camp has a low feminine ratio of 594 per mille of males, but in the civil area it becomes 761. These ratios are important to remember while considering variations, as a higher masculinity would presuppose gain through immigration from abroad.

74. Variation in the City Population—Subsidiary Table IV shows that the population increased in the City by 19.2 per cent since 1921. There was an increase of 9.3 per cent in the normal decade of 1881-1891, but since 1891, the City figures were continuously on the down grade until this year, when they made up most of the lost ground. Even now it is 3 per cent below the 1891 figure as the

Population of City	
YEAR	Variation since 1891
1891 ..	100
1901 ..	89
1911 ..	85
1921 ..	81
1931 ..	97

inset shows. Subsidiary Table IV reckons the total increase since 1881 at 6 per cent. In 1921, the City municipal area suffered a net loss of 6,067 (including the State military area in the totals of both the censuses). This decline was explained by (i) a loss of 5,500 on account of natural causes and (ii) the adverse balance of migration and (iii) street improvements which cleared the slums and sent the de-housed people to the surrounding villages. In 1911, the decline was ascribed to the going away of stragglers who had swollen the City figures in the famine census of 1901. In the present census the increase recorded is 18,148. Within the limits of the City municipal

area (excluding the State Military), the population has increased by 16,329 to 103,892. We shall consider in detail the elements of this increase in the next paragraph. In the meanwhile, the other areas do not call for much remark. The State Railway area (Goyagate colony) has increased from 28 persons to 515. The increase is due to the opening of the State Railway headquarters in 1922 and of the Workshops about that time. The increases in other railway areas are normal. The Camp records an increase of 9.8 per cent which is about half that for the City as a whole. No large increase is ever anticipated there, as the Camp bazar acts as the feeder to the British Indian regiment stationed there; and the fluctuations in its strength are mainly responsible for the variations in the whole cantonment.

75. The Elements of the Census Increase in the City Municipal Area—

Of the total increase in the City's population (18,148), the City municipal area claims 16,329. The recorded surplus of births over deaths in the decade is only 2,926. The recorded deaths are 30,611. The registration of deaths is fairly accurate in the City; so the volume of deaths in the City in the decade cannot have been more than 31,000. The annual average of registered births in the City is 3,354. The mean population aged 0-1 of the decade (based on the census returns) is 3,108: but this figure is not smoothed nor does it refer to the City municipal area. Taking the return of persons aged 0-1 from the compilation registers of 1931 for that area and smoothing on the basis of the general population we estimate that 3,390 is the corrected figure for that age. Making similar calculations for 1921, our estimate for that year is 2,951. The mean corrected figure for the decade is 3,170. By the method described in Appendix I already, the volume of births in the decade amounts to 36,466. This gives a natural increase of 6,466 or 7.4 per cent on 87,563 the City municipal population of 1921. The remainder 9,863 is the increase gained through immigration. The persons born in the City have increased from 61,292 to 69,632 or by 13.6 per cent. But those born outside the City have increased by 9,808 from 33,420 in 1921 or 29.3 per cent. Calculating

by the Longstaff method, we estimate the number of immigrants during the decade at 19,389. Deducting the balance of migration above calculated from this figure, we get 9,526 as the number of persons who had left the City during the decade. This is a larger volume of migration than in any other previous decade. The marginal table is prepared from the birthplace figures available according to the Longstaff method and gives the estimates of migration as far as possible for the last four decades. The flow of migration in the last decade is, according to our estimate, double that of the previous one.

DECADE	Volume estimated of	
	Immigra- tion	Emigra- tion
1891—1901 ..	4,165	Not available
1901—1911 ..	11,880	"
1911—1921 ..	8,380	7,333
1921—1931 ..	19,389	9,526

76. Elements of the Foreign Born in the City's Population—The number of persons born outside the City but enumerated therein in 1931 was 43,228. These are distributed as in the margin. The other parts of the State contribute more than a quarter of the outsider's total. Of the rest, the immigrants from Gujarat and Kathiawad (both British districts and states) form rather less than one-seventh of the City's population. In 1921, their number was 12,272 (including 3,749 from the states). Thus the Gujarat and Kathiawad has grown largely during the last 10 years particularly the latter. The chief elements of the immigration from

IMMIGRANTS	Figures of 1931	Variation since 1921	Percentage to total	
			1931	1921
From other parts of the State	11,895	+ 33	27.5	26.9
From British Gujarat ..	10,026	+ 18	23.2	25.5
From Gujarat and Kathiawad States ..	5,510	+ 47	12.7	11.2
From other parts of India	15,485	+ 28	35.9	36.2
From outside India ..	312	+295	0.7	0.1
Total ..	43,228	..	100	100

outside Gujarat and Kathiawad are the Deccanis, the Hindustanis and the immigrants from Rajputana. Their proportion shows a small decline since 1921 but their numbers show a large increase of over 28 per cent. The "Outside India" increase is entirely due to the influx of Gurkhas in the army, as they are from Nepal. The other parts of the State are contributing in the last two censuses, a larger share in the total of the "foreign born" in the City than before. Excluding these from the calculations, as they belong to the State the proportion of the "Outside State" born is 278 per mille. Within the City municipal area, this proportion is 248. We have already calculated in the previous paragraph, that 19,389 immigrants have come to the City since 1921. Of these the different parts must have contributed in the manner shown in the margin, which is prepared according to the Longstaff method. The largest contribution to the City's growth has come from parts other than Gujarat and Kathiawad. Thus this migration constitutes more than 35 per cent of the total number of in-comers. The Deccanis have declined but the others have come in much larger numbers than before.

Immigrants in the Decade	
From	Number
Other parts of the State ..	5,525
Gujarat and Kathiawad ..	6,740
Other parts of India ..	6,846
The Rest	278
Total	19,389

77. Occupations of Immigrants to City—An interesting question arises how far these immigrants have been requisitioned to meet the demands of the new industrial establishments which have been added during the decade. The industrial statistics collected for the whole State in this census show (*vide* State Table XIII-B) that 37 factories and mills, working on the census date, employed 5,125 factory workers as against 32 with 2,772 in 1921. Special statistics were compiled regarding the age and occupations of immigrants from certain selected districts since 1921. These were the British Gujarat districts and the Kathiawad, Rewa and Mahi Kantha States. These contributed 11,404 immigrants in 1921,

of whom only 55 were factory workers. In 1931, the number of immigrants from these areas was 15,090 of whom only 274 were factory workers. Thus the bulk of the increase in this direction was not met from these sources. Two specific sources indicate where this increased demand must have been met. The immigrants from United Provinces and Rajputana have increased from 2,715 to 4,878. The Railway Workshops in the City have absorbed a large number of labourers from these parts.

As to other occupations, the immigrants from these selected areas are now contributing much less largely to the State service than before. In 1921, 1,039 earners in the service of the State were recorded as having come from the contiguous areas. In 1931, the corresponding figure was only 847.

78. The Tenement Census—We now come to the results of the City Tenement Census. A census of tenements is taken in the City (municipal area only) along with the general census ever since 1911. In 1921, the enquiry was made more elaborate, and tables based on the Bombay City Tenement Census were devised. These were further improved and revised in this census. Altogether five tables have been prepared and are herewith appended :—

- (i) Classification of structures (Subsidiary Table V),
- (ii) Classification of buildings by floors (Subsidiary Table VI),
- (iii) Showing number of families by buildings (Subsidiary Table VII),
- (iv) Classification of buildings by number of occupants (Subsidiary Table VIII), and
- (v) Classification of structures by number of rooms and distribution of families by rooms (Subsidiary Table IX).

In this enquiry, the census definition of "house" as the abode of a commensal family, was combined with the structural definition. The enquiry was undertaken about the time of house numbering so that there is no correspondence between the number of families as found then, with that of occupied houses at the time of the census. The number of families whose details were recorded in this census was 28,054 while the number of inhabited houses in the City municipal area at the time of the general census was 27,574. These tables are summarised below.

(i) *Classification of Structures according to Kind*—The enquiry disclosed a total of 24,579 structures of which 2,202 were *kutch*a and 22,377 *pucca*. Private buildings and bungalows numbered 15,769; and with other dwelling houses, including government residences, shops and temples combined with residences, etc., the total of occupied structures was 18,658. In 1921 the total number of structures was 22,787, of which *kutch*a ones numbered 4,226. The decline in *kutch*a structures in 1931 shows the effect of the disastrous floods of 1927. The purely private dwelling houses that were inhabited increased by only .7 per cent to 15,769. Thus accommodation has not grown *pari passu* with the increase in population. Shops increased from 1,124 to 1,311 by 16.6 per cent.

(ii) *Classification of Buildings by Floors*.—The marginal table gives the comparative figures of the two censuses. It is significant that the number of high structures has declined, while the lower ones have increased showing that the standards of house rooms have deteriorated and the additional population has been housed in an inferior accommodation.

Kind of Structure having	1931	1921
Ground floor only ..	10,653	9,788
Two floors only ..	10,227	9,677
Three floors only ..	3,545	3,159
Four floors and above.	154	163

(iii) *Inhabited Structures by Number of Families*—In this statement the number of families has been correlated with the

number of occupied buildings. 28,054 families were found to reside in

18,658 buildings. 14,521 buildings contained only one family each, i.e., in such cases, the social definition of the "House" coincided with the structural. As to the other families the inset table gives the main figures. The buildings containing 5 families and over are evidence of overcrowding, which problem is, however, more closely studied, in the next table. Such buildings, it is noteworthy, have increased from 295 in 1921 to 536 in this census. Lastly, it is found that of a total of 28,054 families only 12,239 or 43.6 per cent resided in buildings owned by them, and the rest resided as tenants. The "owner" families have only increased by 454 or 3.8 per cent in the last ten years.

Number of buildings containing		
One family	14,521	
Two families	2,643	
Three families	655	
Four families	303	
Five families and over ..	536	

(iv) *Inhabited Structures by Number of Occupants*—The marginal table sets out the comparative figures. Probably owing to dearth of houses, the buildings containing 10 persons and over now form rather more than 10 per cent of the total, while they only formed a little over 7 per cent in 1921. The number of occupants per inhabited structure is now 5.6 as against 5.4 in 1921, taking the censused population in the municipal area in each case and adding 500 to the total of inhabited structures (for official quarters and residences).

Number of occupied buildings containing	1931	1921
5 Persons and under ..	12,908	11,696
6 to 9 persons ..	3,840	2,848
10 to 19 persons ..	1,515	943
20 persons and over ..	395	172

(v) *Inhabited Structures by Number of Rooms and Families and Distribution of Families by Number of Rooms*—This elaborate table seeks to find out the distribution of tenements by number of rooms. The inset table gives the proportionate figures of the different kinds of tenements for the two censuses. In the poorer class of tenements—the one and two-roomed ones—there is a large proportionate increase, while there is a decline in the better classes of houses. Similar conditions are observable in respect of the number of families residing in the different kinds of tenements. The number of families residing in one-roomed tenements has increased from 6,825 in 1921 to 10,996 in 1931. Such families now form 39.2 per cent while they were only 28 per cent of the total in 1921. There are two reasons for this increasing tendency of the population in the City to herd in inferior types of tenements. One is the special cause of the floods of 1927. The houses of the poorer classes were generally demolished, and they have very little chance or means of rebuilding their old homes on the old scale. Secondly, the growing industrialisation of the City as shown in the increase in mills and factories has developed the one-roomed chawl system so familiar to social observers in the Bombay and Ahmedabad mill areas.

Type of tenement	Proportion to total in	
	1931	1921
One room Tenement ..	24.1	16.3
Two rooms	27.8	20.0
Three	10.6	12.5
Four	14.6	16.4
Five	5.1	10.2
Six and above ..	17.8	24.6

ADDITIONAL SUBSIDIARY TABLES

SUBSIDIARY TABLE V

TENEMENT CENSUS—CLASSIFICATION OF STRUCTURES

NAME OF SECTION	Private Bungalows and Dwelling houses	Dwelling houses and shops combined	Dwelling houses and Stable combined	Dwelling houses with Mosques and Temples	Government occupied structures	Total number of occupied structures	Shops and godowns	Mosques and Temples	Schools
1	2	3	4	5	6	7	8	9	10
Baroda City ..	15,769	1,311	393	139	1,046	18,658	1,281	284	25
Babajipura Ward	3,535	253	68	34	180	4,070	210	81	8
City Ward ..	3,714	305	113	33	46	4,211	375	70	4
Fatehpura Ward	1,667	172	29	25	611	2,504	141	30	2
Raopura Ward..	3,610	365	133	21	194	4,323	360	47	9
Wadi Ward ..	3,243	216	50	26	15	3,550	195	56	2
NAME OF SECTION	Dispensaries	Stables	Factories and Mill Buildings	Government offices including Police Stations and government vacant buildings	Other vacant structures	Total number of structures	Kutcha structures	Pucca structures	
1	11	12	13	14	15	16	17	18	
Baroda City ..	17	442	43	573	3,256	24,579	2,202	22,377	
Babajipura Ward	4	98	6	208	705	5,390	426	4,964	
City Ward ..	1	87	1	87	790	5,626	96	5,530	
Fatehpura Ward	..	28	..	132	300	3,137	256	2,881	
Raopura Ward ..	9	155	24	142	784	5,853	935	4,918	
Wadi Ward ..	3	74	12	4	677	4,573	489	4,084	

SUBSIDIARY TABLE VI

TENEMENT CENSUS—CLASSIFICATION OF BUILDINGS BY FLOORS

NAME OF SECTION	NUMBER OF STRUCTURES WITH					
	Ground floor only	Two floors only	Three floors only	Four floors only	Five floors and above	TOTAL NUMBER OF STRUCTURES
1	2	3	4	5	6	7
Baroda City	10,653	10,227	3,545	149	5	24,579
Babajipura Ward ..	2,875	2,097	413	4	1	5,390
City Ward	1,086	2,364	2,051	123	2	5,626
Fatehpura Ward ..	1,933	1,099	105	....	....	3,137
Raopura Ward	2,778	2,409	647	17	2	5,853
Wadi Ward	1,981	2,258	329	5	....	4,573

SUBSIDIARY TABLE VII

TENEMENT CENSUS—SHOWING NUMBER OF FAMILIES IN BUILDINGS

NAME OF SECTION	NUMBER OF BUILDINGS CONTAINING						TOTAL NUMBER OF FAMILIES		
	One family	Two families	Three families	Four families	Five families and over	Total	Total	Residing in houses owned by them	Residing as tenants
1	2	3	4	5	6	7	8	9	10
Baroda City	14,521	2,643	655	303	536	18,658	28,054	12,239	15,815
Babajipura Ward ..	3,146	599	121	63	141	4,070	6,376	2,751	3,625
City Ward	3,357	647	129	43	35	4,211	5,440	3,123	2,317
Fatehpura Ward ..	2,153	213	65	35	38	2,504	3,228	1,451	1,777
Raopura Ward ..	2,921	758	246	116	282	4,323	8,415	2,579	5,836
Wadi Ward	2,944	426	94	46	40	3,550	4,595	2,335	2,260

SUBSIDIARY TABLE VIII

TENEMENTS CENSUS—CLASSIFICATION OF BUILDINGS BY NUMBER OF OCCUPANTS

NAME OF SECTION	NUMBER OF OCCUPIED BUILDINGS CONTAINING				TOTAL NUMBER OF OCCUPIED BUILDINGS
	5 persons and under	6 persons to 9 persons	10 persons to 19 persons	20 persons and over	
1	2	3	4	5	6
Baroda City	12,908	3,840	1,515	395	18,658
Babajipura Ward ..	2,612	939	401	118	4,070
City Ward	3,151	821	219	20	4,211
Fatehpura Ward ..	2,045	333	95	31	2,504
Raopura Ward ..	2,504	1,038	580	201	4,323
Wadi Ward	2,596	709	220	25	3,550

SUBSIDIARY TABLE IX

TENEMENT CENSUS—CLASSIFICATION OF STRUCTURES BY NUMBER OF ROOMS AND DISTRIBUTION OF FAMILIES BY ROOMS

NAME OF SECTION	Structures		Percentage of each class of structures to total	Number of families occupying		Percentage of each class of families to total
	Kind	Number		Kind	Number	
1	2	3	4	5	6	7
Baroda City	Total ..	18,658	100.00	Total ..	28,054	100.00
	One Room ..	4,490	24.06	One Room ..	10,996	39.19
	Two Rooms.	5,188	27.81	Two Rooms.	9,004	32.10
	Three Rooms.	1,985	10.64	Three Rooms.	2,936	10.47
	Four Rooms.	2,731	14.64	Four Rooms.	2,668	9.51
	Five Rooms.	954	5.11	Five Rooms.	671	2.39
	Six Rooms and over.	3,310	17.74	Six Rooms and over.	1,779	6.34

SUBSIDIARY TABLE X

CONTINUOUS URBAN POPULATION SINCE 1881

Town	Population in 1931	Population in 1921	Population in 1911	Population in 1901	Population in 1891	Population in 1881
1	2	3	4	5	6	7
Baroda State	435,880	372,582	360,813	392,507	424,614	396,160
<i>Central Gujarat</i>	<i>202,140</i>	<i>169,760</i>	<i>167,925</i>	<i>181,432</i>	<i>201,461</i>	<i>188,595</i>
1 Baroda City proper	109,639	91,778	95,867	100,628	112,471	101,818
2 Baroda Cantonment	3,221	2,934	3,478	3,162	3,949	4,694
3 Petlad	19,236	15,159	14,863	15,282	15,528	14,418
4 Dabhoi	18,156	15,870	9,117	14,034	14,539	14,925
5 Sojitra	10,649	8,851	9,315	10,578	11,412	10,253
6 Padra	10,379	9,006	7,853	8,289	8,415	7,668
7 Vaso	8,712	5,986	7,508	8,765	10,271	10,208
8 Nar	6,481	5,856	5,722	6,525	7,921	7,328
9 Sinor	5,595	5,068	5,636	5,186	5,309	6,047
10 Savli	5,089	4,650	3,620	4,687	6,551	6,275
11 Sankheda	4,983	4,602	4,946	4,296	5,095	4,661
<i>North Gujarat</i>	<i>158,481</i>	<i>138,143</i>	<i>131,896</i>	<i>146,808</i>	<i>163,814</i>	<i>155,099</i>
12 Patan	29,820	27,017	28,339	31,402	32,646	32,712
13 Sidhpur	20,468	16,187	15,447	14,743	16,224	13,688
14 Visnagar	15,050	13,855	14,137	17,268	21,376	19,602
15 Mehsana	14,762	11,888	10,141	9,393	9,985	8,791
16 Kadi	13,455	11,919	11,556	13,070	16,331	16,689
17 Vadnagar	12,692	11,671	11,228	13,716	15,941	15,424
18 Unjha	11,344	9,832	9,258	9,800	11,287	10,512
19 Vijapur	9,481	8,306	6,408	8,510	9,716	10,081
20 Kalol	9,364	7,259	6,376	6,465	6,805	5,859
21 Chanasma	8,918	7,940	7,003	8,183	8,560	7,452
22 Kheralu	7,290	6,866	6,574	7,617	8,905	8,528
23 Ladol	5,827	5,403	5,429	6,641	6,038	5,761
<i>South Gujarat</i>	<i>40,057</i>	<i>32,479</i>	<i>30,926</i>	<i>32,071</i>	<i>30,110</i>	<i>26,742</i>
24 Navsari	24,397	19,437	17,982	21,451	16,276	14,920
25 Bilimora	9,318	7,321	6,462	4,693	5,915	4,787
26 Gandevi	6,342	5,721	6,482	5,927	7,919	7,035
<i>Kathiawad</i>	<i>35,202</i>	<i>32,200</i>	<i>30,066</i>	<i>32,196</i>	<i>29,229</i>	<i>26,024</i>
27 Amreli	20,186	17,793	17,443	17,997	15,653	13,642
28 Kodinar	7,384	6,430	6,075	6,664	7,447	6,542
29 Dwarka	7,632	7,977	6,548	7,535	6,129	5,840

CHAPTER III

BIRTHPLACE AND MIGRATION

§ 1. GENERAL

79. Introduction—This chapter is primarily concerned with the statistics of the birthplaces of the censused population. Column 13 of the census schedule enquired into the birthplace of the person returned, and in that connection, the rule was to enter the birth district of the person concerned. If the person belonged to British India, the birth district together with the name of the Presidency or Province was to be shown. If he belonged to one of the principal Indian states, like Hyderabad, Mysore, Kashmir, Gwalior, etc., an endeavour was made to make a reciprocal arrangement whereby we undertook to enter the district of such state in which the details of our *prants* were shown. For the City of Baroda, those born in the City had to specify that fact and those born outside the City but within the State had to indicate the taluka of their birth. For the few persons counted in the State, who were born out of India, the name of their native country was reckoned to be enough. The Bombay Presidency was asked, as in 1921, to show the *prants* of the State for the birthplace figures of the Baroda-born enumerated within the limits of that Province. This was at first agreed to, but from motives of economy the details were subsequently withheld. We however agreed to give details of districts for all British Indian provinces and the larger Indian states; and as it will appear from the margin, the State census organisation endeavoured to discharge its responsibilities in this regard to the best of its ability. Our largest population exchanges are with our big neighbour, the Bombay Presidency, and the network of states in Gujarat and Kathiawad. There the number under "Bombay unspecified" was only 197 or .07 per cent of the total number of immigrants from Bombay. The ratio of "unspecified" grows with the remoteness of the province dealt with. Every endeavour however was made to teach the enumerating staff the details of Indian geography in the instruction classes, and informative booklets giving details of names of countries and of districts and chief towns of provinces and important Indian states were distributed broadcast. The birthplace returns are compiled in Imperial Table VI, in which the district details of the Bombay Presidency alone are published and as to other units only the provincial totals are shown. But the district details of other provinces and states were supplied in manuscript to individual Census Superintendents of Provinces and States belonging to the All-India Census organisation. State Table XVIII gives additional details in three parts of (a) immigrants by age periods, (b) immigrants from selected areas by age and occupation for the City of Baroda, and (c) the comparative literacy in local and immigrant population aged 10 and over of Baroda City by wards. The last named was prepared from a special sort of slips by birthplace and age correlated with literacy.

BORN IN	ENUMERATED IN THE STATE	
	Total	Number returned with districts of birthplace unspecified
1	2	3
Bombay Presidency and adjacent States	299,088	197
United Provinces and States	7,012	298
Rajputana	8,973	401
The Punjab and States ..	1,692	691
Madras and States	578	69
Central Provinces and States	651	179
Burma	265	95

The figures of age therefore do not exactly correspond to the age-returns compiled after the smoothing process to be explained in the next chapter, for the City of Baroda.

80. Scope of the Chapter—The main concern of this chapter is to find out from the birthplaces of the enumerated population the *extent* of the movements of the people, whither it moves, how much of it moves and why it moves at all. In the absence of any organisation for the registration of migrants the birthplace is the only clue for finding out whether a person is an immigrant or not. The question of migration has been already anticipated in the general discussion of the variations in the population figures in the first chapter and an attempt has also been made, by the use of certain simple mathematical formulæ, to measure the volume of migration from decade to decade. In this chapter we will give further details of this movement, its variations from place to place, its kind, sex ratio and other particulars.

81. Accuracy of the Return—That these instructions were effective in bringing about greater accuracy in the results is seen in the progressive decline of "District unspecified figures" in the birthplace returns of persons counted here who were born somewhere in Bombay Presidency and Sind. This decline is striking in this census compared to the previous two enumerations.

IMMIGRANTS FROM	Number of 'District unspecified'		
	1931	1921	1911
Bombay Presidency ..	197	5,259	5,650
Sind	587	907	440

82. Limitations of the Birthplace Return—The census takes the birthplace as the sole test of the enumerated person's normal residence and assumes that he has immigrated to the place of enumeration from his place of birth. How unsatisfactory this test is may be realised from a few instances of anomalies. For example, a family of semi-permanent settlers have been counted in an area, in one census; they have children born in that place who are counted in the next census as part of the native born population, although they are really not so. Again a genuine resident, whose mother may have been born elsewhere and gone there for her confinement when he was born, has to show a different birthplace in the returns of the place of which he is to all intents and purposes a native, and thereby becomes an 'immigrant.' Again any calculation of the volume of genuine immigration is vitiated, because casual visitors, railway passengers or stragglers from beyond the State are counted on the census date or thereby included under immigrants. Even if they are genuine immigrants, the mere record of their birthplace is no guide to their real domicile. Thus a soldier born in Malta, and counted in Baroda is compiled as a native of Malta, although he is a genuine native of England. A Japanese may have been born in Baroda, and, returning to his native country soon after, may have come back later in life to his place of birth on business and counted on the census date. He thus becomes a "Barodian" and part of the State's natural population! The birthplace return is full of these anomalies, and it is hoped future censuses will seek to improve upon it by adding clauses in the schedule about nationality and race, and correlating these facts with nativity and occupation. But this means overcharging the questionnaire, and cannot be undertaken unless it is relieved by omitting certain details, *e.g.*, Infirmities or (if we may suggest this, taking courage with both hands) Religion. In view of the defectiveness of these returns of birthplace, it is usual not to examine them in conjunction with any other factor. Subsidiary Tables given at the end of this chapter are merely concerned with dealing out absolute figures and are prepared by merely arranging Imperial Table VI in a certain way and collating similar figures of the Baroda-born enumerated elsewhere, supplied by other provinces and states.

83. Types of Migrants—Defective as they are, the birthplace figures are usually accepted as a rough index of the source of migration in the hope that in dealing with large figures on both sides (*i.e.*, of immigration and emigration), these

anomalies will tend to cancel out. Apart from these anomalies, the figures however tend to arrange themselves in a particular manner, and these particularities repeat themselves from census to census with the regularity of laws. Thus a certain type of migration tends to have a predominance of females and this sex feature persists constantly from decade to decade. Again, masculinity, it is noticed, rises with the distance of the place of birth of immigrants. The more remote the area from which they come, the less likely are they to have parity of sex ratio. Further, the proportion of the sexes tends to vary with the nature of the migrations. These tendencies are found associated with particular types of migration, of which the Indian census recognises five kinds. These main forms are :

“(i) *casual*, which comprise minor movements between neighbouring villages, which may be of a permanent or temporary character and come into our records only when the persons crossed the borders of two birthplace units; (ii) *temporary*, due usually to the migration of coolies to meet the demand for labour on canals, railways and so forth and to journeys on business or in connection with pilgrimages, marriage ceremonies and the like; (iii) *periodic*, due to seasonal demands for labour generally for the harvests*; (iv) *semi-permanent*, where the inhabitants of one place earn their living in another but maintain connection with their own homes and ultimately return there; (v) *permanent*, usually in the nature of colonisation. While it is naturally impossible to isolate the statistics of these various classes of migration some estimate is possible as to their respective importance from (a) the distance between the places of enumeration and birthplace, (b) the proportion of the sexes among the migrants and (c) our general knowledge of the chief territorial movements in different parts of India and the statistical information regarding them which is obtainable from various independent sources.”†

84. Nature of Casual and Short Distance Movements—It is important to understand the nature of the first type of these movements, as they relate to the movement in contiguous areas, which absorb the bulk of our migrants. These are misnamed “casual,” for the greater portion of migrants of this kind are brides married in a village other than their own or children of such brides born in the native village of their mothers. These occur as migrants only when villages belong to different districts. Migrations of this kind are permanent forms of short-distance movements, in which the sex ratio will depend on the nature of the exchange. Some areas give more brides than they take, but on the whole, there is always a deficiency of males in this form of movement. Further, a frequent type of casual movements is the number of pilgrims, the majority of whom are women, who flock to temple places or other seats of religion: e.g., Dwarka, Beyt, Karnali, Unawa, Bechraji, etc. Other varieties of short-distance movements are of the temporary kind, and of these the most conspicuous was the *hijrat* movement, of which full details have been given in the first chapter.

§ 2. MAIN RESULTS

85. Main Figures of Immigration—The general results of the birthplace returns will be stated here. The census records a total of 324,579 persons, who have returned birthplaces outside the State. These birthplaces may be grouped under five heads :

(a) *Contiguous areas* : which include the five districts of British Gujarat, the districts of Khandesh and Nasik that border on the Southern division of the State, the different states, large and small, of Gujarat and Kathiawad and the little island of Diu on the Kathiawad coast belonging to Portugal;

(b) *Fairly near areas* : made up of the remainder of Bombay Presidency and States including Bombay City, the Deccan and Sind, Portuguese India, Rajputana with Ajmere-Merwara, Central India Agency and Gwalior State;

(c) *Remote* : which include the provinces of Delhi, Punjab, United Provinces, Bihar and Orissa and Central Provinces (with their respective states), and the Indian State of Hyderabad;

* Instances of seasonal migration in other parts of the world are the Italian workers who before the war used to leave their native land for short periods for seasonal employment in Central Europe, South America and elsewhere, the Irish harvesters who came to Great Britain each year, the Aberdeen fisher-girls who came to Yarmouth for herring packing, and the great influx of labour into Kent for the hop-picking.

† *The Census Report of India, 1921*, para 63.

(d) *Very remote*: comprising the rest of India, such as Assam, Bengal, Burma, etc.;

(e) *Outside India*: from countries other than India, of Asia, Europe and the rest of the world,—Nepal and Ceylon being counted as outside India.

Under these five heads the sex ratio of immigrants is shown in the margin. There are

KIND OF AREA	Persons	Males	Females	Females per 100 males	Proportion to total immigrants
Total ..	324,579	132,505	192,074	145	100
Contiguous Area ..	288,255	109,259	178,996	164	89
Fairly Near ..	22,622	13,134	9,488	72	7
Remote ..	10,155	7,801	2,354	30	3
Very Remote ..	2,045	1,422	623	44	} 1
Outside India ..	1,502	889	613	68	

145 females to 100 amongst immigrants. The ratio for females decreases as the area of their birth gets more remote but for very remote areas and countries beyond India, for special reasons which will be given presently, the ratio of females

is greater. The bulk of the immigrants are from continuous areas.

86. Mobility of the Population—The extent of the mobility of the population is shown by the following proportions of the actual enumerated population according to their birthplace. This table is based on Subsidiary Table IV given at the end of this chapter.

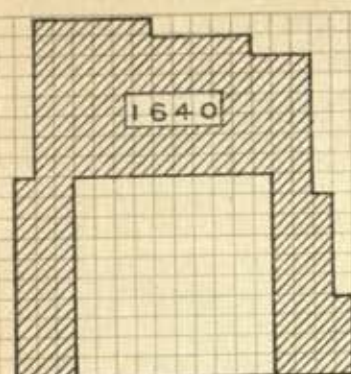
SUBSIDIARY TABLE I

PROPORTIONS OF THE ENUMERATED ACCORDING TO THEIR BIRTHPLACE

Proportion per mille of actual population born in	ENUMERATED IN				
	State	Central Gujarat	North Gujarat	South Gujarat	Kathiawad
District of enumeration	857	807	926	816	798
Other parts of the State	10	23	2	7	6
Contiguous areas	118	143	65	165	184
Non-Contiguous areas	14	26	7	11	11
Outside India	1	1	....	1	1
Total ..	1,000	1,000	1,000	1,000	1,000

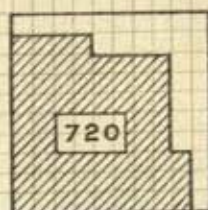
The above table shows that 86 per cent of the State population were born within their district of enumeration; only one per cent came from other districts of the State, 12 from adjacent parts of British and other State territory and the rest from everywhere else. The very small part which the districts of the State play in the migration figures is the result of its dispersed character, on which emphasis has been laid in the introductory paragraphs of this Report. Where districts are more compact than others, there its population is more native to the soil. Thus the Kathiawad division is riddled with "foreign" territory and contiguous areas contribute no less than 18 per cent of its population in this census. The Northern on the other hand is the most compact division, and has 93 per cent of its inhabitants born within its limits. The proportions for Central and South Gujarat are affected by the presence of the *hijratīs* on the census date. If these are omitted (less those amongst them who were born within the State),

SEX INDEX AND BALANCE OF MIGRATION

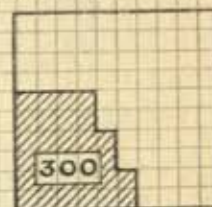


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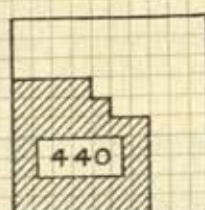
FEMALE RATIO PER 1,000 MALE IMMIGRANTS



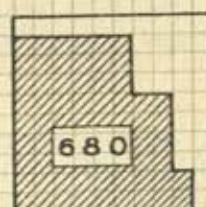
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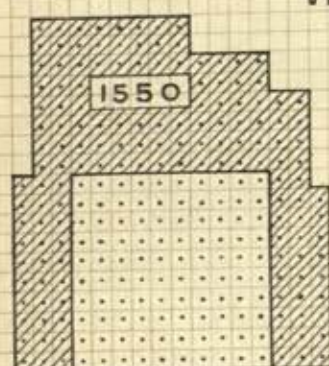
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OUTSIDE INDIA

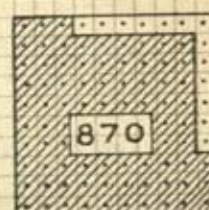


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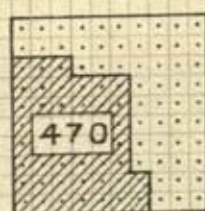
FEMALE RATIO PER 1,000 MALE EMIGRANTS



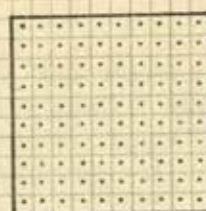
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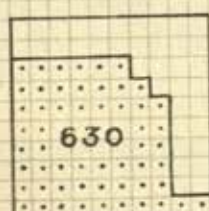


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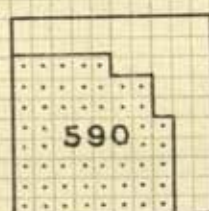


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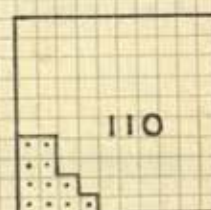
BALANCE OF MIGRATION



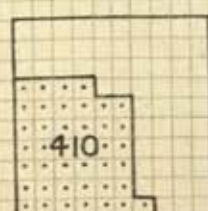
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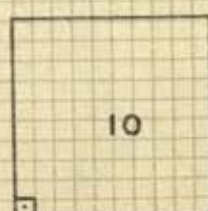
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OUTSIDE INDIA



IMMIGRANTS



FEMALES



EMIGRANTS

the proportions are altered as in the margin. The total number of *hijratis*, found in these two divisions, who were born outside the State, was 24,166. Excluding these from the census population of these two districts and also from the immigrants total from contiguous areas, we find the proportion of immigrants from contiguous areas to Central

Proportion per mille of actual population (less <i>hijratis</i> born outside the State) born in	Central Gujarat	South Gujarat
District of enumeration ..	824	836
Other parts of the State ..	24	7
Contiguous areas	124	143
Elsewhere	28	14

to South Gujarat is reduced from 143 to 124 and to South Gujarat from 165 to 143. The non-contiguous areas bulk most largely in the Central Gujarat as in the City, the Deccani population is concentrated and its factories offer the greatest scope of industrial labour from Rajputana and the United Provinces. "Outside India" forms only 1 per mille of the population of the State with 1,502 persons of whom a fifth were found in the City, 91 were counted in Okhamandal, the bulk belonging to the ships which had touched Port Okha on the census day.

87. Main Figures of Emigration—The general total of the Baroda-born counted elsewhere must necessarily be incomplete. The figures from other provinces and states have now arrived, but not one has acceded to my request to give details by districts. Portuguese and French India returns are not available and only figures from Ceylon and Rhodesia have been furnished by the Census Commissioner. These census returns give a total of 195,456 persons born in Baroda State enumerated elsewhere so far as they are available. The marginal table divides these

emigrants according to the distance they have travelled from their homes and the sex ratio amongst each class of emigrants. Here the immobility of the State population is even more strikingly

EMIGRANTS TO	Persons	Males	Females	Females to 100 males	Proportion to total emigrants
Total ..	195,456	79,735	115,721	145	100
Contiguous Area ..	180,178	70,578	109,600	155	92
Fairly Near Area ..	13,067	7,814	5,253	67	7
Remote Area ..	1,143	611	532	87	1
Very Remote Area ..	1,058	722	336	47	
Outside India ..	10	10	..	..

illustrated than in the corresponding table regarding immigrants. The State receives far more than it gives, even if we exclude the temporary factor of the *hijratis*. The "Outside India" emigrant from Baroda is a much larger factor than the above figures show. Special statistics were collected regarding these and details, will be discussed in a subsequent paragraph.

88. Mobility according to Emigration Figures—As with immigrants, we give a corresponding table for emigrants, showing proportions per mille of the natural population who were enumerated in the different census areas grouped according to degree of remoteness. This table is based on Subsidiary Table V given at the end of this chapter.

SUBSIDIARY TABLE II

PROPORTIONS OF THE BARODA-BORN ACCORDING TO AREA OF ENUMERATION

Proportion per mille of natural population enumerated in	BORN IN				
	State	Central Gujarat	North Gujarat	South Gujarat	Kathiawad
District of Birth	909	894	920	917	897
Other parts of State	6	5	6	5	17
Contiguous areas	71	87	61	63	71
Non-contiguous areas	14	14	13	15	15
Outside India .. .. .	....	....	....	....	....
Total ..	1,000	1,000	1,000	1,000	1,000

Only nine per cent of the natural population were found outside the district of their birth in this census in the different parts of India, and such other parts of the world from which census returns were available : but the immobility of the population would be found to be even greater when we deduct out of this nine per cent, eight for contiguous areas and the districts of the State. Hardly more than one per cent would seem from the census figures to venture out to remote areas. But this is not entirely correct. Africa, Europe and even Japan are countries which furnish evidence of the enterprise of "Barodians" who have gone and settled there of whom mere census returns of birthplace can show no trace. Of the different divisions of the State, the most self-sufficing in this census as well as in 1921 was the Northern district, 92 per cent of whose natural population were counted there at the census. As emigration figures are not received by districts, the above table (as well as Subsidiary Table V) has been prepared by distributing emigrants of contiguous areas according to the *prant* nearest to the British district or Indian state in which they were counted : while the emigrants in other areas were distributed *pro rata* according to population strength of these divisions of the State.

89. Variation in Migration—Having considered the actual state of things as disclosed in the census, we shall discuss now the general variations in the figures

MIGRANTS	Number in 1931	Variation since 1921	Percentage of Migrants in	
			1931	1921
Immigrants	324,579	+39.6	13	11
Emigrants	195,456	-11.6	9	10

of migrants since 1921. In the margin, a small table is given showing the variation per cent amongst the migrants and in the proportion per cent in the last two censuses. The ratios for the immigrants are calculated on the total

actual population censused in the two years, while these for the emigrants are based on the total natural population as found for the last two censuses. The increase amongst immigrants is more than double the rate of growth in the general population, while emigrants have declined by nearly 12 per cent. If we exclude the *hijratīs* born outside the State, the increase amongst immigrants is reduced to 28.8 per cent. Thus the volume of immigrations has largely increased and the balance due to migration has turned decidedly in favour of the State.

90. Variation in Migrants by Divisions—(a) *Immigration*—We will now note variations amongst immigrants by divisions. The margin shows the number and proportion of the foreign born in each division and the City of Baroda.

Division of enumeration	Number of foreign born	PERCENTAGE OF FOREIGN BORN IN	
		1931	1921
Baroda State	324,579	13	11
Baroda City	31,333	28	26
Central Gujarat excluding City ..	108,515	15	12
North Gujarat	73,163	7	6
South Gujarat	71,608	18	14
Kathiawad	39,960	20	19

The smallest proportion of outsiders is in North Gujarat as usual and the City returns similarly show a considerable proportion of outsiders. The extraordinary factor of *hijratīs* accounts for the comparatively high proportion of outsiders in Central and South Gujarat. If the *hijratīs* are excluded the proportion becomes only 13 and 15.5 respectively. The

increase in the number of outsiders in the City is mostly due to the opening of the railway workshops and the textile mills attracting foreign born labour. The increase in South Gujarat, apart from the *hijratīs*, is more apparent than real. It is mainly due to the return of the repatriated South African born Indians, whose homes are in Navsari *prant*.

(b) *Emigration*.—The figures of emigrants can only be estimated, as details for districts are not supplied from other places. But taking only the emigrants to other parts of India, the distribution is shown as in the margin. Everywhere the proportionate figures show decline since 1921, particularly in Central Gujarat, where there are now four emigrants less per hundred of the natural population.

DIVISION OF BIRTH	Number enumerated elsewhere	Proportion of emigrants to natural population in	
		1931	1921
Baroda State ..	195,446	9	10
Central Gujarat ..	80,528	11	15
North Gujarat ..	81,070	8	9
South Gujarat ..	29,730	8	10
Kathiawad ..	18,709	10	9

91. Inter-Divisional Migration

We shall now consider the various types of migration a little more in detail. First the largest type, concerned with contiguous or short distance movements may be taken up. In para 90 above, two marginal tables have been given, in which it will be noticed that the totals of the migrants of individual districts exceed the all-State figures of immigrants and emigrants by 14,591. This figure represents the net result of exchange of populations between the different divisions: that is to say, Subsidiary Tables IV and V give details of distribution of these migrants in the different natural divisions. The geographical situation prevents any large migration but it appears that this interchange is increasing gradually year by year. In 1911, the total inter-divisional migrant figure was 10,540. In 1921, this figure rose to 12,778. Now it has increased by 1,813. The most remarkable feature of this migration is that

INTER-DIVISIONAL MIGRATION						
NATURAL DIVISION	Receives from other divisions			Gives to other divisions		
	1931	1921	Variation or	1931	1921	Variation or
Central Gujarat ..	8,702	6,685	+2,017	3,923	4,500	— 577
North Gujarat ..	2,287	3,549	—1,262	5,820	4,401	+1,419
South Gujarat ..	2,782	1,708	+1,074	1,789	1,696	+ 93
Kathiawad ..	820	836	— 16	3,059	2,181	+ 878

Kathiawad, a remote and not well-favoured part of the State, always gives more to other divisions of the State than it receives from them. But, as pointed out already while discussing variations in the first chapter, this division is a gainer in migration as against the other states of Kathiawad. How these gains and losses are distributed is seen from the following Subsidiary Table :—

SUBSIDIARY TABLE III
MIGRATION BETWEEN NATURAL DIVISIONS
(ACTUAL FIGURES COMPARED WITH 1921)

NATURAL DIVISION IN WHICH BORN						NUMBER ENUMERATED IN NATURAL DIVISION			
						Central Gujarat	Kathiawad	North Gujarat	South Gujarat
1						2	3	4	5
Central Gujarat	..	..	..	..	..	{ 1931 675,791 1921 604,769	558 350	1,701 2,893	1,664 1,257
Kathiawad	..	..	..	..	..	{ 1931 2,169 1921 1,494	163,502 143,130	462 473	428 214
North Gujarat	..	..	..	..	..	{ 1931 4,925 1921 3,741	205 423	934,557 840,965	690 237
South Gujarat	..	..	..	..	..	{ 1931 1,608 1921 1,450	57 63	124 183	329,987 292,386

The above table shows that the City and Baroda division are the largest recipients of immigrants from other divisions; as being the capital and centre of adminis-

YEAR	Females per 100 males
1911	74
1921	82
1931	78

tration and business activity this area offers the most of what little scope there is for employment or enterprise in the State. That this migration is genuine, in search for livelihood, and more or less semi-permanent in character is indicated by the fairly constant high female ratio amongst these migrants persisting in the last three censuses. The bulk of it is not certainly of the casual type of "marriage migrant," although taking of brides from Kathiawad Patidars has become increasingly common of late years.

92. Variation in Volume of Migration—We shall now take up the chief items of the extra-State migration. Some general figures of the volume of migration must first be given. In the first chapter we have already estimated in addition to the *hijrat*is that immigrants and emigrants in the last ten years numbered 131,010 and 31,900 respectively. Calculating separately for males and females, these estimates are divided into 47,500 males and 83,510 females for the former and 13,821 males and 18,079 females for the latter type of movement. In 1921, the respective estimates for migration were 100,593 and 79,385. The very large drop in the emigration figures requires an explanation; as each type of migration is taken up this particular phenomenon will be analysed and attempts will be made to assign reasons. In the meanwhile the general reason may be suggested that the true Baroda-born emigrant, working in outside areas must have returned to his home during the decade and contributed to the general census increase in the population. It appears to be the general impression that the industrial crisis in Bombay and other places of opportunity for Baroda enterprise has resulted in driving many people back to their homes and relations within the State to stay on till the crisis passes away and better times return. One indication of this is found in the fact already stated that the increase in occupied houses has not been *pari passu* with the general increase in population. Another indication is that the number of persons born in the State and enumerated within it has risen from 1,894,028 to 2,118,428 or by nearly 12 per cent, while the natural rate of increase is only 9 per cent. Thus it is permissible to infer that if this natural rate of increase were applicable to this item of variation, the number of the Baroda-born counted within the State in 1931 would have been only 2,064,491; thus the excess of 53,937 may be almost entirely credited to this account of returned emigrants.

§ 3. DETAILED STUDY BY AREAS

93. Contiguous Areas—We now come to the largest item of our migration statistics. 288,255 out of a total of 324,579 immigrants from beyond the State (or 89 per cent) come from the adjacent districts of British Gujarat and neighbouring states of Gujarat and Kathiawad. These are broadly of three types: (a) *hijrat*is born outside the State but within the British limits 25,093, in number or 14.8 per cent, (b) marriage migrants or children born of such, an indeterminate number, but remaining fairly constant from decade to decade, (c) casual visitors of the temporary type, pilgrims, floating population, etc., and (d) real genuine migrants, who have been moved to travel out of their homes, for settlement, search for livelihood or enterprise. Emigrants numbering 180,138 also belong to the above types with the exception of (a) which was only a political immigration caused by special reasons. The number under (b) of emigrants is difficult to estimate. There is a frequent interchange of wives between Baroda *prant* and Kaira and Broach villages. Certain of the British villages in Charotar form with others in our territory an endogamous *göl* (circle) for *kulin* Patidars. Kadwa Kanbis of South Gujarat form a similar *göl* of their own. The Rewa Kantha and Palanpur agencies similarly have exchanges with our Baroda and Mehsana *prants*. Considering that the population of the State is only about a quarter of its contiguous area, it should give one-fourth of marriage migrants to what it receives, but in practice the quota does not work out to that extent. Female immigrants from contiguous areas number

166,328 (less *hijratīs*) while the emigrants to similar areas is only 109,600, so that we give much less in these bridal exchanges presumably than we receive. All immigrants have been compiled by age, but separate age-returns of *hijratīs* are not available. Assuming that 80 per cent *hijrati* females are aged 15 and over, and deducting these *hijrati* females, we get 70,884 females aged 15 and over from British districts of Gujarat. (State Table XVIII-A gives the absolute figures of immigrants by age). In 1921, female immigrants (15 and over) numbered 56,430. Neglecting the slight error involved in the difference in grouping of ages in the two censuses by taking a mean of their two figures, and using the Longstaff method, we calculate that 30,368 women aged 15 and over must have come to the State during the last ten years. Exactly how many of these were "marriage migrants" it is not possible to tell. But the mean number of children aged 0-15, among these immigrants, making the necessary reductions on account of *hijratīs* for these five districts, was 13,738. Applying a 20 per cent mortality we would estimate that some 9,800 children must have been born in their homes and come to the State with their mothers during the decade. Thus we will not be far wrong in assuming that 20,000 women of marriageable ages and over came to the State in the decade as "bridal" immigrants. As the decade's marriage total is well over 150,000 this supposition is not excessive.

94. Estimate of Volume of Immigration from Contiguous Areas—Now the total volume of immigration during the decade from contiguous areas can be calculated if we split the immigrant total of 1931 into contiguous British areas and Indian states. The margin does this and compares the absolute figures of two censuses. The difference between the two censuses in British districts is reduced from 57,227 to 32,134, by eliminating the *hijrati* factor. From the marginal figures and using the Longstaff method we arrive at the following estimates of kinds of immigrants that must have come to the State during the last ten years:—

MIGRATION FROM AND TO CONTIGUOUS AREAS				
PROVINCE OR STATE	Year	Gives to Baroda	Receives from Baroda	Gain (+) or Loss (—) to Baroda
British Territory .. {	1931	168,734	102,983	+65,751
	1921	111,507	125,837	—14,330
Variation ..		+57,227	—22,854	
Indian States and Foreign Territory {	1931	119,521	77,195	+42,326
	1921	87,396	76,173	+11,223
Variation ..		+32,125	+ 1,022	

- (1) *Contiguous areas*.—*hijratīs*, 25,093 of whom 9,864 must have been females aged 15 and over ;
- (2) 64,028 other immigrants of whom 30,368 must have been adult women aged at least 15 and over. Of these, at least 20,000 should have been women, and 9,800 children. The genuine type of immigrants must have numbered about 34,200 or nearly half the total estimate for these areas.

95. Estimate of Emigration to Contiguous Areas—The emigration during the decade can be similarly estimated for British territory and Indian states separately. For British territory, the number of emigrants during the decade according to the method followed was 5,748 as against 36,072 in 1911-21. For Indian states, the respective figures of emigrants for the two decades are 20,068 and 22,807. Evidently the tide of movement outside to short distance areas has receded; the decline in Indian states is slight and due to normal fluctuations. The movement here is mostly confined to marriage exchanges. In British contiguous territory, the decline is serious. We have estimated the number of "marriage-immigrants" to be about 20,000 in the last ten years. This is a fairly constant factor. Of this figure, about a quarter must be assigned on the basis of population to the Indian

states adjacent to our Raj. The remaining 15,000 must have gone out of the State as brides to British territory. But the net volume of emigration is only 5,748. The discrepancy is therefore to be explained in the following three ways :—

- (a) Some returned as wives of *hijratis* and got counted in our census. Of the 26,755 *hijratis*, 1,662 were born in our State, including 1,339 women, the bulk of whom were married.
- (b) Large numbers of emigrants returned to our territory, owing to agricultural and industrial depression and also as labourers for our new mills and factories. The greater part of the increase in Charotar towns is due to this last named reason.
- (c) There was a real decline in the movement to contiguous areas, as to other areas within India generally. Inducements were less strong, the scope for expansion within the limits of the State had not yet exhausted itself, and the wherewithal for enterprise outside seemed to diminish appreciably.

96. Fairly Near Areas: (a) Immigrants—These areas gave 22,622 to Baroda

UNITS	Immigrants from		Emigrants to	
	1931	1921	1931	1921
Total	22,622	26,266	13,067	16,561
Non-contiguous Bombay Presidency and States ..	11,339	17,283	10,139	13,145
Rajputana and Ajmer ..	9,502	7,583	816	1,096
Merwara	974	744	1,620	1,741
Central India Agency ..	491	377	492	579
Gwalior	297	272	..	..
Portuguese India	19	7	..	..
Aden .. ..	..	..	..	..

and received from the State 13,067 persons. The margin specifies the details per area included. Under Portuguese India, no emigrants are noted, but it may be mentioned here that Diu is contiguous to Kodinar and must contain as many Baroda-born persons as we have recorded natives of that island; but no figures have so far been furnished of these details. With

non-contiguous parts of the Bombay Presidency and States, our exchanges recorded in this census are about equal; with Gwalior, the same is the case, while we give nearly double of what we receive from Central India Agency. On the other hand, we receive nearly 12 times from Rajputana the number that we send to that territory. This migration exchanges with fairly near areas is almost entirely of the true type of semi-permanent or permanent nature and variations do throw a very helpful light on the economic conditions of the people. From Bombay non-contiguous districts and areas, the largest contingent is from Ratnagiri, Colaba and Bombay City. Poona district and Kolhapur state are other important contributors. Immigrants from Rajputana have largely increased in this census particularly in North Gujarat, Baroda City and *prant*. The greater part of these immigrants are Hindus—Brahmans and Vantias and a few Bhils. The Musalmans from Rajputana are mostly from Ajmere. These immigrants are the most important contingent, outside of Bombay Presidency, in the State “foreign born” population and have shown consistent increase since 1911.

(b) *Emigrants*—Emigrants to this class of territory have declined since 1921 by over 21 per cent. More than 54 per cent are found in Bombay City alone, and emigrants of this type are mostly educated and middle class. Emigrants to this city of opportunity increased from 450 in 1911 to 9,757 in 1921 but since then have declined to 6,938 in 1931. This fall is attributable to economic causes, and accentuates the feature of the returned emigrants to which reference has been already made. Thana and Poona districts come long after the Bombay City in point of number of emigrants; the Poona owes mostly Vantias and artisans who are long settled there. In Thana, the emigrants are mostly Kolis working on salt pans and other labour, on a seasonal basis, which explains why so many of them have their wives and children behind.

97. Remote and Very Remote Areas—Migration between this State and these areas is not large, and the figures need not detain us long. The remote areas give 10,155 persons and receive 1,143 (or nearly one ninth). The very remote areas give 2,045 and receive 1,058. The former class includes the United Provinces and States which furnish the largest contingent of immigrants (7,012). Next to these are Punjab and Delhi, and Central Provinces. The immigrants from the last named are mostly limited to Marathi Speakers—Decani Brahmans and Marathas who have intermarried with local residents. The most remarkable feature of the variations is the large increase of immigrants from the United Provinces in the State, particularly in the City, where their number is now more than double. They have also come more into evidence in the country-side, where the tall gaunt Bhaiya is quite an occasional figure as protector of the farmers' fields. The State has not encouraged Sindhis and Makranis for this purpose, as they are a lawless and turbulent lot. That is why these Bhaiyas are more favoured.

CHIEF AREAS	GIVE		RECEIVE	
	1931	1921	1931	1921
United Provinces and States ..	7,012	3,932	326	183
Punjab and Delhi with States ..	2,042	904	208	119
Central Provinces	647	565	509	376

98. Sex Ratio of Migrants from Remote and Very Remote Areas—Ordinarily one would expect that as the distance of places with which migrants are concerned grows more remote, so the female ratio declines. This is however modified by the circumstance that if the migration is of a permanent or semi-permanent nature then the ratio approaches parity. Thus European officers in this country are immigrants of a semi-permanent nature and they have frequently their families with them. The sex ratio amongst them would be higher than amongst labourers from United Provinces and Rajputana. Immigrants from very remote areas show femininity to the extent of 44 per cent, while remote areas have only 30. This is due mainly to the fact that immigrants with birthplaces in Burma and Madras are of a semi-permanent nature and come here accompanied by their families. In remote areas, the immigrants from United Provinces are of the labouring class and have a low female ratio and as they are the most numerous, they help to bring the average for the whole class down.

99. Overseas Migration: (a) *Immigrants*—Coming to the last class, we find that the State contains 1,502 persons from countries outside India; of these 460 belong to Asia, 88 to Europe, 938 to Africa, 15 to America and 1 to New Zealand. Of the 460 Asiatics 239 are Nepalese and 122 Afghans. 44 Japanese were also recorded of whom 38 belonged to a ship which halted at Port Okha on the census date. The 88 persons from Europe include 77 from United Kingdom. The largest item of the African born is "Africa unspecified" (540). 230 are from South Africa. Abyssinia claims 27. In 1921, only 614 persons from outside India were recorded: thus the influx from this quarter would seem to have multiplied. But the increase is more apparent than real. The increase under Asia is due to the presence of Gurkhas in the employ of the State Forces. The Asiatic immigrants are largely of the temporary kind, one in five of them being female. The Europeans have slightly increased, but this is almost entirely due to the presence of a ship at Port Okha. The Americans have declined, because of economy in the missionary organisation. The very large increase under Africa is however not due to any influx of genuine natives of Africa, but to the return of repatriated

COUNTRY	GIVES TO BARODA	
	1931	1921
Africa	938	371
Asia	460	158
Europe	88	64
America and Australia	15	21

Indians, many of whom were born and domiciled in Africa, but all belonging by ancestry to this State. The female ratio of these immigrants is high being nearly 68 per cent but if we except the African born element, the ratio is only 25.

(b) *Overseas Emigrants*—Emigrants to countries outside India cannot be estimated from census data. Only 10 persons have been so far reported by the Census Commissioner for India as having been counted in Ceylon and Rhodesia. But the overseas item of the Baroda emigration is very much larger, in fact it is an important feature of Baroda migration statistics. Since 1911, therefore, the census authorities of the State have attempted to supplement the enumeration figures which local enquiries and figures furnished by the Political office of passports

BARODA SUBJECTS RESIDING OUTSIDE INDIA			
Natural Division	1931	1921	1911
Central Gujarat ..	2,471	844	94
North Gujarat ..	325	387	810
South Gujarat ..	6,687	3,802	2,499
Kathiawad ..	1,007	377	152
Total ..	10,490	5,410	3,555

issued during the decade. Taluka Vahivatdars were asked to furnish statements of persons and families belonging to their charges, who were known to reside abroad. As the facts were supposed to be well-known to village officials, the statement may be accepted as accurate. A comparative inset table is given above which shows the variations in the strength of these overseas emigrants since 1911. The number has progressively increased, showing a net growth of 195 per cent in the last 20 years. This increase is shared by all divisions except North Gujarat. Four tables (Subsidiary Tables VII-X) are given at the end of this chapter showing (i) emigrants by country of residence, (ii) emigrants by period of absence from the state, (iii) emigrants by occupation and (iv) emigrants by caste. From these tables the following summary results are

COUNTRY	Number of emigrants from Baroda	
	1931	1921
South Africa ..	3,459	1,233
East Africa ..	1,528	317
Abyssinia ..	100	3,214
Rest of Africa ..	4,400	
Mauritius ..	128	
America ..	71	4
Europe ..	320	34
Fiji ..	197	608
Other countries ..	287	

given. There are 5,284 families of "Barodians" found abroad, consisting of 7,967 males and 2,523 females. These emigrants are distributed in the principal countries of the world as in the margin, with corresponding figures for 1921. If these are to be believed, in spite of the vigorous pursuit of the policy of repatriation there, the number of Baroda emigrants has increased in South Africa. The East Africa emigration also became important during the decade. The increase in Europe includes an extraordinary item of 198 Barodians in Spain, which on enquiry proves to be a fact. Vohras from Kamrej taluka have been carrying on business there for years, especially in two towns, Bilboa and Malaga.

(c) *Overseas Emigrants by Caste and Occupation*—The main castes represented amongst emigrants are Patidars (2,532), Kolis (650), Brahmans (450), Luhanas (315), Mochis (232) and Vankars (230) amongst Hindus; and Vohras (3,216) and Memons (150) amongst Muslims. Hindus number 5,777 or 55 per cent; Muslim are 4,705 or 45 per cent. There are besides 6 Parsis and two Anglo-Indians (presumably Christians). In view of their proportion to the general population, the Muslims contribute much more than their share to this overseas migration. The majority of these Muslim emigrants are traders, who are daring *entrepreneurs* and have contributed largely to the building up of the wealth of such places as Transvaal, Natal and Abyssinia. By occupation these emigrants are divided as follows: 4,923 are engaged in trade: 4,360 in private service, largely connected with trade, 221 are hairdressers, 160 are tailors, and 148 makers of boots and shoes, 189 are engaged in the washing industry

while only 28 are teachers, 21 engaged in agriculture and 16 in government service. Lastly 26 are unemployed.

(d) *Volume of Overseas Emigration*—Finally we shall try and estimate the volume of this emigration during the last 10 years. There are three ways in which this can be done. First there is the Longstaff method or the similar but more elaborate formula advocated in this Report. We have already estimated the volume of emigration according to this method. The figure arrived at is 6,670 (*vide* para 34, Chapter I). The second clue in this matter is furnished by Subsidiary Table VIII in which the emigrants are classified according to the length of residence. This is at best unsatisfactory, as the mahal data are only based on guess work. As the margin shows, on the mahal estimates of periods of absence from the village, 8,465 emigrants have been away from the State within ten years, so that this figure may be taken as the estimate of overseas emigrants who left the State during the last 10 years. The second estimate is higher because it includes children etc., of families of emigrants who are born in the places in which they reside.

Period of residence	NUMBER
Below one year	996
Between 1 and 3 years ..	2,406
Between 3 and 5 years ..	2,038
Between 5 and 10 years ..	3,025
Below ten years	8,465

ADDITIONAL SUBSIDIARY TABLES

SUBSIDIARY TABLE IV
IMMIGRATION (ACTUAL FIGURES)

Natural Division where enumerated	BORN IN					
	Division of enumeration			Other parts of the State		
	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7
Baroda State	2,103,837	1,117,114	986,723	14,591	8,198	6,393
Central Gujarat	675,791	370,842	304,949	8,702	4,979	3,723
Kathiawad	163,502	90,212	73,290	820	444	376
North Gujarat	934,557	487,326	447,231	2,287	1,142	1,145
South Gujarat	329,987	168,734	161,253	2,782	1,633	1,149

Natural Division where enumerated	BORN IN								
	Contiguous parts of other provinces			Non-contiguous parts of other provinces			Outside India		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	8	9	10	11	12	13	14	15	16
Baroda State	288,255	109,259	178,996	34,822	22,357	12,465	1,502	889	613
Central Gujarat	118,143	47,597	70,546	21,068	13,804	7,264	637	406	231
Kathiawad	37,489	12,271	25,218	2,265	1,528	737	206	145	61
North Gujarat	65,807	19,526	46,281	7,239	4,337	2,902	117	90	27
South Gujarat	66,816	29,865	36,951	4,250	2,688	1,562	542	248	294

SUBSIDIARY TABLE V
EMIGRATION (ACTUAL FIGURES)

NATURAL DIVISION OF BIRTH	Natural population (State-born but enumerated anywhere in India)			ENUMERATED IN					
				Natural Division of Birth			Other parts of the State		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8	9	10
Baroda State	2,313,874	1,205,037	1,108,837	2,103,837	1,117,114	986,723	14,591	8,198	6,393
Central Gujarat	756,319	402,298	354,021	675,791	370,842	304,949	3,923	2,094	1,829
North Gujarat	1,015,627	522,759	492,868	934,557	487,326	447,231	5,820	3,671	2,149
South Gujarat	359,717	182,045	177,672	329,987	168,734	161,253	1,789	939	850
Kathiawad	182,211	97,935	84,276	163,502	90,212	73,290	3,059	1,494	1,565

NATURAL DIVISION OF BIRTH	ENUMERATED IN								
	Contiguous parts of other provinces			Non-contiguous parts of other provinces			Outside India		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	11	12	13	14	15	16	17	18	19
Baroda State	180,178	70,578	103,600	15,268	9,147	6,121	10	10	..
Central Gujarat	71,208	25,959	45,249	5,397	3,403	1,994	10	10	..
North Gujarat	71,155	29,301	41,854	4,095	2,461	1,634	..	..	..
South Gujarat	22,787	9,509	13,278	5,154	2,863	2,291	..	..	..
Kathiawad	15,028	5,809	9,219	622	420	202	..	..	..

SUBSIDIARY TABLE VI

MIGRATION BETWEEN THE BARODA STATE AND OTHER PARTS OF INDIA

PROVINCES AND STATES	Immigrants to the Baroda State			Emigrants from the Baroda State			Excess (+) or deficiency (—) of immigration over emigration	
	1931	1921	Variation	1931	1921	Variation	1931	1921
1	2	3	4	5	6	7	8	9
Total ..	323,077	231,880	+ 91,197	195,446	221,206	— 52,760	+ 127,631	+ 10,674
<i>British Provinces ..</i>	<i>191,190</i>	<i>134,169</i>	<i>+ 57,021</i>	<i>113,978</i>	<i>141,228</i>	<i>— 27,250</i>	<i>+ 77,212</i>	<i>— 7,059</i>
Ajmer-Merwara ..	529	110	+ 419	71	234	— 163	+ 458	— 124
Andamans and Nicobars	1	2	— 1	19	16	+ 3	— 18	— 14
Assam ..	11	2	+ 9	232	125	+ 107	— 221	— 123
Baluchistan ..	..	..	..	22	12	+ 10	— 22	— 12
Bengal ..	393	257	+ 136	350	199	+ 151	+ 43	+ 58
Bihar and Orissa ..	110	42	+ 68	47	107	— 60	+ 63	— 65
Bombay ..	179,435	128,022	+ 51,413	111,846	138,838	— 26,992	+ 67,589	— 10,816
Burma ..	265	88	+ 177	342	661	— 319	— 77	— 573
Central Provinces and Berar ..	647	565	+ 82	509	376	+ 133	+ 138	+ 189
Coorg ..	..	..	..	..	..	..	..	..
Madras ..	555	264	+ 291	..	130	— 130	+ 555	+ 134
North-West Frontier Province ..	338	65	+ 273	8	228	— 220	+ 330	— 163
Punjab and Delhi ..	1,906	873	+ 1,033	208	119	+ 89	+ 1,698	+ 754
United Provinces ..	7,000	3,879	+ 3,121	324	183	+ 141	+ 6,676	+ 3,696
<i>Indian States and Agencies ..</i>	<i>131,887</i>	<i>97,711</i>	<i>+ 34,176</i>	<i>81,468</i>	<i>79,978</i>	<i>+ 1,490</i>	<i>+ 50,419</i>	<i>+ 17,733</i>
Baluchistan Agency ..	200	232	— 32	..	..	..	+ 200	+ 232
Bengal States ..	..	..	..	..	..	..	..	..
Bihar and Orissa States	3	..	+ 3	16	46	— 30	— 13	— 46
Bombay States ..	119,653	87,816	+ 31,837	78,471	7,443	+ 2,028	+ 41,182	+ 11,373
Burma States ..	..	..	..	..	1	— 1	..	1
Central India Agency ..	974	744	+ 230	1,620	1,741	— 121	— 646	— 997
Central Provinces States	4	..	+ 4	..	17	— 17	+ 4	— 17
Cochin State ..	14	..	+ 14	3	9	— 6	+ 11	— 9
Gwalior State ..	491	377	+ 114	492	579	— 87	— 1	— 202
Hyderabad State ..	337	267	+ 70	37	198	— 161	+ 300	+ 69
Kashmir and Jammu State ..	30	6	+ 24	22	6	+ 16	+ 8	..
Madras States ..	..	..	..	..	..	..	..	..
Mysore State ..	72	15	+ 57	51	72	— 21	+ 21	— 57
North-West Frontier Province States ..	3	..	+ 3	..	..	..	+ 3	..
Punjab States ..	136	31	+ 105	..	..	..	+ 136	+ 31
Rajputana Agency ..	8,973	7,473	+ 1,500	745	862	— 117	+ 8,228	+ 6,611
Sikkim State ..	..	..	..	..	..	..	..	..
Travancore State ..	9	..	+ 9	9	4	+ 5	..	— 4
United Provinces States	12	53	— 41	2	..	+ 2	+ 10	+ 53
India Unspecified ..	152	72	+ 80	..	..	..	+ 152	+ 72
Foreign Settlements ..	824	625	+ 199	..	..	..	+ 824	+ 625

SUBSIDIARY TABLE VI-A
SHOWING THE NUMBER OF IMMIGRANTS AND EMIGRANTS FROM AND TO THE
BOMBAY PRESIDENCY

DISTRICT OR STATE	GIVES TO BARODA		RECEIVES FROM BARODA		GAIN (+) OR LOSS (—) TO BARODA		
	Males	Females	Males	Females	Males	Females	Total
1	2	3	4	5	6	7	8
Bombay Presidency	115,240*	183,829*	76,969*	113,408*	+ 38,331	+ 70,421	+ 108,752
(i) <i>British Territory</i>	<i>71,932</i>	<i>107,287</i>	<i>48,439</i>	<i>63,407</i>	<i>+ 23,493</i>	<i>+ 43,880</i>	<i>+ 67,373</i>
(a) <i>Contiguous Districts</i>	<i>66,294</i>	<i>102,440</i>	<i>42,916</i>	<i>60,067</i>	<i>+ 23,378</i>	<i>+ 42,373</i>	<i>+ 65,751</i>
Ahmedabad	7,805	17,744	21,493	23,261	— 13,688	— 5,517	— 19,205
Broach	6,302	8,661	5,068	8,326	+ 1,234	+ 335	+ 1,569
Kaira	23,928	37,587	5,654	15,126	+ 18,274	+ 22,461	+ 40,735
Khandesh (West)	1,618	1,425	318	319	+ 1,300	+ 1,106	+ 2,406
Nasik	525	531	171	140	+ 354	+ 391	+ 745
Panch Mahals	2,876	6,405	3,102	3,517	— 226	+ 2,888	+ 2,662
Surat	23,240	30,087	7,110	9,378	+ 16,130	+ 20,709	+ 36,839
(b) <i>Non-contiguous Districts</i>	<i>5,272</i>	<i>4,626</i>	<i>5,503</i>	<i>3,330</i>	<i>— 231</i>	<i>+ 1,296</i>	<i>+ 1,065</i>
Ahmednagar	163	155	53	42	+ 110	+ 113	+ 223
Belgaum	43	38	19	7	+ 24	+ 31	+ 55
Bijapur	36	20	5	1	+ 31	+ 19	+ 50
Bombay City (Including Suburban Districts)	879	1,285	4,454	2,484	— 3,575	— 1,199	— 4,774
Colaba	1,209	588	74	47	+ 1,135	+ 541	+ 1,676
Dharwar	54	29	10	16	+ 44	+ 13	+ 57
Kanara	16	18	2	1	+ 14	+ 17	+ 31
Khandesh (East) .. ..	..	..	60	163	— 60	— 163	— 223
Poona	668	678	268	285	+ 400	+ 393	+ 793
Ratnagiri	1,343	1,122	28	28	+ 1,315	+ 1,094	+ 2,409
Satara	397	259	50	63	+ 347	+ 196	+ 543
Sholapur	177	123	50	26	+ 127	+ 97	+ 224
Thana	287	311	430	167	— 143	+ 144	+ 1
(c) <i>Sind</i>	<i>366</i>	<i>221</i>	<i>20</i>	<i>10</i>	<i>+ 346</i>	<i>+ 211</i>	<i>+ 557</i>
(ii) <i>Indian States</i>	<i>43,206</i>	<i>76,447</i>	<i>28,470</i>	<i>50,001</i>	<i>+ 14,736</i>	<i>+ 26,446</i>	<i>+ 41,182</i>
(a) <i>Contiguous</i>	<i>42,777</i>	<i>76,219</i>	<i>27,662</i>	<i>49,533</i>	<i>+ 15,115</i>	<i>+ 26,686</i>	<i>+ 41,801</i>
(1) <i>Bombay States</i>	<i>12,482</i>	<i>28,085</i>	<i>18,558</i>	<i>33,678</i>	<i>— 6,076</i>	<i>— 5,593</i>	<i>— 11,669</i>
Cambay	1,033	2,630	2,668	2,912	— 1,635	— 282	— 1,917
Mahikantlia Agency	3,494	13,078	4,513	12,957	— 1,019	+ 121	— 898
Idar	619	2,133	1,001	1,716	— 382	+ 417	+ 35
Other States	2,875	10,945	3,512	11,241	— 637	— 296	— 933
Rewakantlia Agency	6,456	10,513	9,467	15,368	— 3,011	— 4,855	— 7,866
Chhotia Udepur	674	1,227	1,815	2,002	— 1,141	— 775	— 1,916
Lunawada	358	114	84	124	+ 274	— 10	+ 264
Rajpipla	2,658	4,509	3,875	6,309	— 1,217	— 1,800	— 3,017
Other States	2,766	4,663	3,683	6,933	— 917	— 2,270	— 3,187
Surat Agency	1,499	1,864	1,910	2,441	— 411	— 577	— 988
Bansda	863	1,128	1,236	1,359	— 373	— 231	— 604
Dharampur	343	225	126	113	+ 217	+ 112	+ 329
Sachin	293	511	548	969	— 255	— 458	— 713
(2) <i>Western India States</i>	<i>30,295</i>	<i>48,134</i>	<i>9,104</i>	<i>15,855</i>	<i>+ 21,191</i>	<i>+ 32,279</i>	<i>+ 53,470</i>
Bhavnagar	6,557	10,479	..	..	+ 6,557	+ 10,479	+ 17,036
Cutch	777	651	93	68	+ 684	+ 583	+ 1,267
Gondal	432	856	702	697	— 270	+ 159	+ 111
Junagadh	2,693	4,973	2,718	3,645	— 25	+ 1,328	+ 1,303
Nawanagar	1,369	2,204	..	..	+ 1,369	+ 2,204	+ 3,573
Palanpur	5,551	8,464	787	2,254	+ 4,764	+ 6,210	+ 10,974
Porbander	133	223	281	293	— 148	— 70	— 218
Radhanpur	698	951	383	666	+ 315	+ 285	+ 600
Other States	12,085	19,333	4,140	8,232	+ 7,945	+ 11,101	+ 19,046
(b) <i>Non-Contiguous</i>	<i>429</i>	<i>228</i>	<i>808</i>	<i>468</i>	<i>— 379</i>	<i>— 240</i>	<i>— 619</i>
Bhor	18	16	..	..	+ 18	+ 16	+ 34
Kolhapur	150	86	54	63	+ 96	+ 23	+ 119
Savantwadi	62	39	27	10	+ 35	+ 29	+ 64
Southern Maratha Country States	44	38	127	37	— 83	+ 1	— 82
(a) Sangli .. ..	..	..	17	20	— 17	— 20	— 37
(b) Other States	44	38	110	117	— 66	— 79	— 145
Other States in the Presidency proper	155	49	600	358	— 445	— 309	— 754
(iii) <i>Bombay Unspecified</i>	<i>102</i>	<i>95</i>	<i>..</i>	<i>..</i>	<i>+ 102</i>	<i>+ 95</i>	<i>+ 197</i>

* These figures are exclusive of immigrants and emigrants of Aden.

SUBSIDIARY TABLE VII

DISTRIBUTION OF OVERSEAS EMIGRANTS BY COUNTRY OF RESIDENCE

NAME OF COUNTRY	Baroda State	Baroda City	Amreli Division	Baroda Division	Mehsana Division	Navsari Division	Okhamandal
	Persons	Persons	Persons	Persons	Persons	Persons	Persons
1	2	3	4	5	6	7	8
Grand Total	10,490	38	849	2,433	325	6,687	158
<i>Africa</i>	<i>9,663</i>	<i>6</i>	<i>788</i>	<i>2,351</i>	<i>213</i>	<i>6,147</i>	<i>158</i>
South Africa	3,459	..	16	93	..	3,335	15
East Africa	1,528	6	238	534	75	581	94
West Africa	26	..	..	..	..	26	..
Abyssinia	100	..	9	1	49	41	..
Mauritius	128	..	..	..	1	127	..
Madagascar	48	..	1	..	..	47	..
Other and Unspecified ..	4,374	..	524	1,723	88	1,990	49
<i>Asia</i>	<i>422</i>	<i>19</i>	<i>53</i>	<i>43</i>	<i>98</i>	<i>209</i>	<i>..</i>
Arabia	146	4	41	12	82	7	..
Ceylon	12	5	7	..	..	..	..
Fiji Island	197	..	1	20	..	176	..
China	8	..	..	5	..	3	..
Other and Unspecified ..	59	10	4	6	16	23	..
<i>Europe</i>	<i>320</i>	<i>12</i>	<i>8</i>	<i>33</i>	<i>10</i>	<i>257</i>	<i>..</i>
United Kingdom	38	10	8	3	1	16	..
Spain	198	..	..	..	..	198	..
France	28	..	..	17	5	6	..
Other and Unspecified ..	56	2	..	13	4	37	..
<i>Rest</i>	<i>85</i>	<i>1</i>	<i>..</i>	<i>6</i>	<i>4</i>	<i>74</i>	<i>..</i>

SUBSIDIARY TABLE VIII

OVERSEAS EMIGRANTS BY PERIOD OF ABSENCE FROM THE STATE

DIVISION OF BIRTH	Families	Persons	Males	Females	PERIOD OF ABSENCE FROM THE STATE					
					Below one year	1—3 years	3—5 years	5—10 years	10—20 years	20 years and above
1	2	3	4	5	6	7	8	9	10	11
Baroda State ..	5,284	10,490	7,967	2,523	996	2,406	2,038	3,025	1,546	479
Baroda City ..	28	38	29	9	15	8	4	4	7	..
Amreli	315	849	614	235	28	99	147	267	233	75
Baroda	1,390	2,433	1,654	779	179	581	543	879	232	19
Mehsana	288	325	288	37	62	143	43	64	8	5
Navsari	3,178	6,687	5,270	1,417	697	1,557	1,263	1,733	1,057	380
Okhamandal ..	85	158	112	46	15	18	38	78	9	..

SUBSIDIARY TABLE IX

OCCUPATION OF OVERSEAS EMIGRANTS

PERSONS SUPPORTED BY	Baroda State	Baroda City	Amreli Division	Baroda Division	Mehsana Division	Navsari Division	Okha-mandal
1	2	3	4	5	6	7	8
<i>Agriculture</i>	21	..	..	3	3	15	..
<i>Trade</i>	4,923	13	640	546	119	3,483	122
<i>Service</i>							
Private	4,360	15	52	1,822	69	2,374	28
Government	16	4	..	11	..	1	..
<i>Industry</i>							
Blacksmith	6	..	..	..	1	..	5
Carpenter	147	..	..	4	33	109	1
Hairdressing	221	..	27	3	86	105	..
Shoemaking	148	..	..	..	..	148	..
Tailoring	160	..	2	1	5	150	2
Washing	189	..	120	..	..	69	..
Other	11	..	6	..	..	5	..
<i>General Labour</i>	196	..	..	..	8	188	..
<i>Other Occupations</i>	42	..	1	13	..	28	..
Total	10,440	32	848	2,403	324	6,675	158
Study	24	6	1	4	1	12	..
Unemployed	26	..	..	26	..	..	..
Grand Total	10,490	38	849	2,433	325	6,687	158

SUBSIDIARY TABLE X

EMIGRANTS BY CASTE

CASTE	Baroda State	Baroda City	Amreli Division	Baroda Division	Mehsana Division	Navsari Division	Okha-mandal
1	2	3	4	5	6	7	8
<i>Hindu</i>	5,777	23	667	2,309	211	2,524	43
Brahman	450	2	45	199	41	163	..
Patidar	2,532	9	2	2,020	21	480	..
Luhana	315	..	281	..	..	..	34
Koli	650	..	..	3	1	646	..
Mochi	232	..	4	2	..	226	..
Valand	228	..	25	11	86	106	..
Vankar (Dhed)	230	..	..	4	..	226	..
Other	1,140	12	310	70	62	677	9
<i>Musalman</i>	4,705	13	182	124	114	4,157	115
Khoja	103	..	103	..	..	..	..
Memon	150	..	32	..	3	..	115
Vohra	3,216	13	38	107	108	2,950	..
Other	1,236	..	9	17	3	1,207	..
<i>Parsi</i>	6	..	..	..	..	6	..
<i>Anglo-Indian</i>	2	2	..	..	..	..	..
Total	10,490	38	849	2,433	325	6,687	158

CHAPTER IV

AGE

PART I

GENERAL OBSERVATIONS

§ 1. GENERAL ANALYSIS OF THE RETURNS

100. Scope of Part I—This chapter is concerned with the analysis of the age-returns. It has two parts. Part II contains the actuarial analysis of the age-returns, after they are carefully corrected and graduated by elaborate mathematical formulæ. Since 1921, a Life Table with deductions of birth and death rates and expectation of life in the different age-groups has formed a special feature of the Census Report of the State. For the present census, Professor Mukherji of the Baroda College has prepared this Life Table with a report on it which forms Part II of this chapter. In Part I therefore it is unnecessary to deal with the age-figures from this or any other technical aspect. Our main concern will be to take the figures of this census, subject them to such ordinary smoothing as is prescribed for all India and deduce general conclusions regarding the distribution and variation of the age-constitution, correlating them finally with such of the vital statistics as are worth consideration. In the opening chapter we have already shown the value of these registration figures and the extent of their reliability. The bearings of these returns (in their broad groups) on the general movement of population have been also briefly dealt with there. We shall here attempt a little closer analysis of these figures always remembering that the inaccuracy of the age-record in the Indian Census has passed into a proverb.

101. Reference to Statistics—The statistics regarding age, sex and civil condition of the population distributed by religion and administrative divisions are contained in the three parts of Imperial Table VII. The details of these matters in selected towns are given in State Table V. These Tables give the figures generally in groups of ages. The three parts of the Imperial Table give figures for individual ages up to 5 and then for each religion for the whole State in quinary groups up to 70, collecting the rest under the last group of 70 and over. For the different divisions, the groupings after the age of 20 are of ten years ending at 60 after which there is a final grouping of 60 and over. For the age-returns of towns, the groupings are as follows: 0-6, 7-13, 14-16, 17-23, 24-33 and 34 and over. Sex enters into all combinations of figures from the very first and appears in all Tables. Age and sex form part also of the Caste and Infirmary Tables (Imperial Tables VIII and IX-C) for which purpose castes have been selected on a uniform basis of strength and grouped according to a literacy percentage scale. The Infirmary figures of caste will be discussed in Chapter VII. But the caste figures of age, sex and civil condition are dealt with in this and the two succeeding chapters. Age again is a very important factor in the statistics regarding literacy, and its value is appraised in Chapter IX. Here we shall take up only the general age-returns irrespective of the reactions on them of civil condition and other factors. The special problems connected with sex we shall leave to the next chapter, limiting ourselves to occasional references to it where inevitable. The absolute figures

are reduced to proportions and correlated with the vitality returns in the following Subsidiary Tables printed at the end of this part :—

Subsidiary Table I—Age distribution of 10,000 of each sex in the State and each natural division.

„	„	II—Age distribution of 10,000 of each sex in each main religion.
„	„	III—Age distribution of 1,000 of each sex in certain castes.
„	„	IV—Proportion of children under 14 and of persons over 43 to those aged 14-43 in certain castes : also of married females aged 14-43 per 100 females.
„	„	V—Proportion of children under 10 and of persons aged 60 and over to those aged 15-40 : also of married females aged 15-40 per 100 females.
„	„	V-A—Proportion in certain religions of children under 10 and of persons aged 60 and over to those aged 15-40 ; also of married females aged 15-40 per 100 females.
„	„	VI—Variation in population at certain age-periods.
„	„	VII—Reported birth rate by sex and natural divisions.
„	„	VIII—Reported death rate by sex and natural divisions.
„	„	IX—Reported death rate by sex and age in decade and in selected years per mille living at same age based on the figures of the Censuses of 1921 and 1931.
„	„	X—Reported deaths from certain diseases per mille of each sex.
„	„	XI—Infantile mortality.

102. Change in the Nature of Question asked—The above list does appear to be formidable but it shows the importance attached to the returns of age in their bearing on demological discussions, and it is necessary therefore to know exactly what they mean and how they were collected, and to remember in that connection that the nature of the question asked in this census differed from previous occasions. We were required this time to ask people to return their ages nearest their birthdays. The instructions on the cover in this census specifically enjoined the census staff to write

(i) the record of age only in years, and not to enter months and days ;

(ii) in the case of infants below one year, for such as were below six months, the age to be recorded was 0, for those aged over six months but below one year and six months, one year and so on. Those who had passed more than six months after their last birthday, should have *one year added to their already completed years of age* ;

(iii) for those who did not know their age, their memory should be assisted by reference to well-known events such as dates of famines, *e.g. tetrisa* (or the memorable famine year of *samvat* 1933) or *chhapaniya* (the equally notable year of *samvat* 1956). Where even such devices failed, the age, from one's face and appearance, should be guessed and recorded.

These instructions marked a change from previous occasions, when only the completed number of years, *i.e.*, “age last birthday” was required to be returned. Thus, the age of a person who is 11 years 9 months would under the old definition

be shown as 11 in 1921 and under the new, as 12 in 1931. This change in the method of record was justified on the ground that returns of completed years were not correct and gave quinary groups, which were wholly unreliable for any actuarial purposes. On the present occasion, the age periods actually returned were $0\frac{1}{2}$, $\frac{1}{2}$ - $1\frac{1}{2}$, $1\frac{1}{2}$ - $2\frac{1}{2}$ and so on. Thus we see that if we add to the lower group half from the next higher group, we approach the definition of age of previous censuses. This new definition enabled us to have a first grouping into ternary and septenary groups (*i.e.*, 0-3, 4-6, 7-13, 14-16, 17-23, etc.) which could be readjusted by taking half of the last and adding it to the next lower group to form quinary age-periods. Imperial Table VII has been prepared in quinary groups in this way. We have also compiled a table of annual age-returns as actually returned by divisions and religions, which will be of use to the educationists in the preparation of primary school censuses (*vide* State Table XVI in two parts). Imperial Table VII of 1931 prepared on the basis of ternary and septenary groupings of age and later adjusted to quinary age-periods, thus approaches the age definition of 1921, but claims to be a correcter representation of the actual age-distribution than any previous record.

103. Mean Age—The first corrections to which the age-returns were subjected at the time of compilation were helpful in serving the same purpose, as the other modes of correction pursued at other censuses. It is not necessary to refer to these methods as previous Census Reports describe them in detail and Part II of this chapter explains and appraises them. The value of the method of Columnar differencing in particular has been discussed and compared with the process pursued on the present occasion by Professor Mukherji who has analysed the inaccuracies of the return, the types of mistakes often found and how they are to be corrected in order to arrive at a fair view of what actually was the age-distribution of the population on the census date. Having got the corrected data the first use that is made of them is to find out the mean age in different parts of the State, and amongst different religions and classes of people. The "mean age" is simply the average age of the living and is not to be confused with the mean expectation of life, which is calculated after elaborate graduation of figures of persons living at each age. The method hitherto followed of finding out the mean age was simply to take the corrected figures for each age, multiply them by the years of that age and the sum of these results divided by the total population gave the mean age for that year. As census figures are generally compiled by quinary and decennial groups, an approximation used to be attempted, by which the corrected population at the end of each quinary group was first determined, *viz.* total of persons 5 years and over, 10 years and over and so on. "The sum of these totals multiplied by 5, the difference of the age-divisions, and raised by $2\frac{1}{2}$ times the number of persons dealt with (*i.e.*, in this case the total population) gave the number of years lived. The mean age was obtained by dividing this last number by the number of persons dealt with."*

104. Mean Age how calculated—On the present occasion, the method of calculating the mean age was slightly varied under orders of the Census Commissioner for India (*vide* No. 24-Rept. dated the 21st September 1931). The method consists in taking the quinary groups of age recorded, taking a middle point in the age-groups, multiplying the absolute figures of each age-group by the deviation number of that group from the middle group, summing up the products in two sets (the minus and the plus products separately) and then taking the difference between these two sums, dividing it by the total of figures of all ages. The result of this division is then multiplied by 5, the difference of years of the class intervals and the product is subtracted (or added, if the difference is a positive result) from the middle point of age taken, and thus the mean age is obtained. The above sounds complicated but will be easily understood from the following example. The total number for all ages is 8,442; and the last age-group returned is 61-65.

* *Vide* India Administration Volume 1901, page 390, and Bengal Census Report, 1911.

Age-groups (class-intervals)	Mid-values of the class-intervals	Persons (frequency distribution)	Deviation from arbitrary value	Products (3×4)
1	2	3	4	5
1-5	3	219	— 6	— 1,314
6-10	8	175	— 5	— 875
11-15	13	63	— 4	— 252
16-20	18	374	— 3	— 1,122
21-25	23	4,295	— 2	— 8,590
26-30	28	1,739	— 1	— 1,739
31-35	33	740	0	— 13,892
36-40	38	464	1	464
41-45	43	189	2	378
46-50	48	119	3	357
51-55	53	43	4	172
56-60	58	15	5	75
61-65	63	7	6	42
Total ..		8,442		1,488

$$1,488 - 13,892 = -12,404$$

$\frac{-12,404}{8,442} = -1.47$. Multiplying -1.47 by 5 we get -7.35 which, subtracted from 33, the mid-year of the middle age-group gives 25.65 as the mean age. It must be remembered that -1.47 in the above example gives the value in class-intervals and must not be directly added to or subtracted from the arbitrary middle value, —i.e., 31-35 in this case—unless the interval is also a unit. In the present illustration the class-interval is 5 units and accordingly the quotient is multiplied by 5 in order to obtain an answer in units.

105. Mean Age by Divisions and Religions—The mean ages for the different groups have been calculated on this basis. As we have age returns for individual ages for divisions and religions, the mean ages have been reckoned on the basis of individual ages smoothed on the same basis as in Imperial Table VII; that is to say half of the numbers in the higher age is added to the lower age and so on. The interval being a unit, the final quotient is at once subtracted from the middle year chosen without any further multiplication. In the margin are

Religion and Sex		1931	1921	1911	1901
State	Males	23.69	23.96	22.71	23.56
„	Females	23.63	24.04	22.77	23.76
Hindu	Males	23.66	23.99	22.86	23.70
„	Females	23.60	24.14	22.94	24.66
Tribal	Males	22.61	22.27	20.59	22.52
„	Females	20.83	21.84	19.92	22.12
Muslim	Males	23.95	24.87	23.42	23.80
„	Females	23.90	24.85	23.47	25.26
Jain	Males	25.23	25.89	24.65	25.34
„	Females	25.75	26.44	25.31	26.33

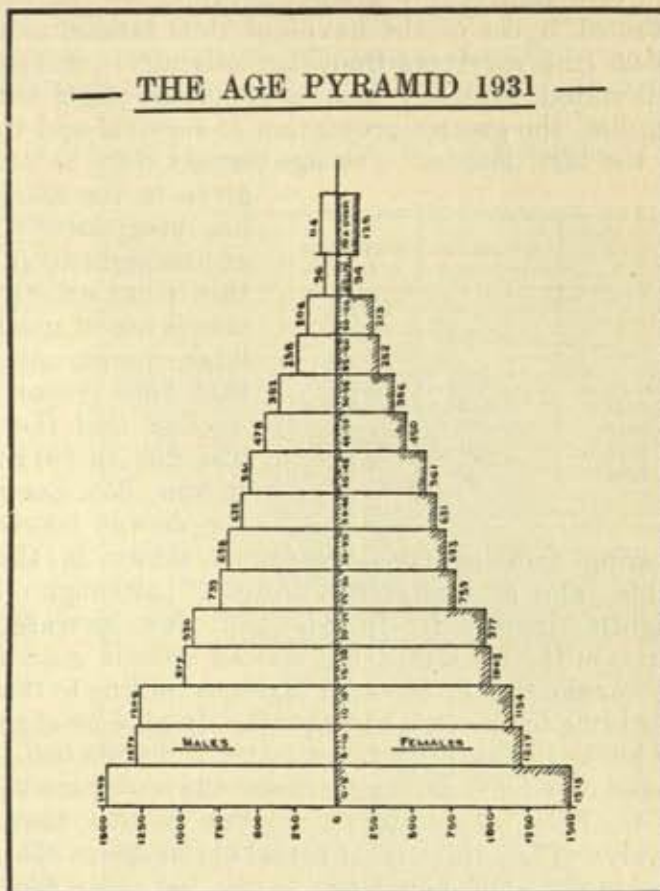
collected (from Subsidiary Table II) the mean ages as reckoned for the last four censuses by sex and the main religions. The detailed figures for administrative divisions are given in Subsidiary Table I. We have no room for them here, nor is detailed analysis necessary, for the difference in methods of calculation, coupled with the fact that smoothing of ages has also differed from census to census, vitiates the figures and renders any intelligible comparison impossible. The India Census Report of 1921, for this reason, declined to discuss the different mean ages on the ground that—

(1) “I am not satisfied that the calculations on which they are based (including methods of smoothing the crude figures) are sufficiently uniform at different censuses to admit of any trustworthy comparison of the resulting figures and (2) because the differences in the mean age are in any case merely the result of factors which have already been discussed in this chapter.”

Generally it may be said that the Jains have the highest mean age, and the Tribal aborigines the lowest. Baroda City has the highest average age of the living (24.77), and Kathiawad and South Gujarat share the lowest place in this respect. A high mean age is associated with communities or regions with the most civilised standards of life and the most settled conditions. A low mean age

would mean either a high birth rate or a high rate of survival or a shrinkage in the old population, whose ranks may have been thinned by epidemics or other calamities that select adversely against old age. A high mean age may on the other hand mean an "unprogressive" population with a low birth rate but with healthy conditions resulting in a larger proportion of the old and the adult. Generally women are seen in the above table with a lower mean age than men because the female of child population is bigger than male. A slight decrease in the Hindu mean age in this census may be also due to the fact that large numbers of the aborigines have passed into Hinduism.

106. General Results of Age Returns—We can now take a general review of the age returns. Subsidiary Table I gives the age-distribution for four censuses. The following summary shows the general distribution of 10,000 of each sex in the State for the two censuses. A diagram is also given showing the age pyramid by quinquennial groups.



AGE GROUPS	1931		1921	
	Male	Female	Male	Female
0— 1	352	364	308	331
1— 5	1,107	1,151	934	1,016
5—10	1,272	1,217	1,411	1,360
10—15	1,208	1,154	1,229	1,171
15—20	977	1,003	847	751
20—25	930	977	723	786
25—30	739	759	842	843
30—35	698	693	813	837
35—40	622	631	701	668
40—45	561	561	628	681
45—50	478	450	435	410
50—55	382	356	484	476
55—60	258	252	210	172
60—65	206	213	242	288
65—70	96	94	81	77
70 and over	114	125	112	133
All Ages	10,000	10,000	10,000	10,000

107. Study of the Age Pyramid—It will be observed that from the 1931 figures a remarkably graded pyramid can be built; while the 1921 figures still retained traces of the havoc of 1900 famine in the dip observable in age-group 20-25 (the survivors from that calamity); in 1931 this dip is almost completely obliterated, probably on account of the larger number of births in the succeeding decades, the greater proportion of survival and the larger balance from migration in the last decade. The age-periods 0-10 in successive censuses since 1901 are

YEAR	Age period 0-10 proportioned to 10,000 of population	Proportion of females 15-45 (to 10,000)
1931	2,731	4,624
1921	2,680	4,566
1911	2,641	5,106
1901	2,254	5,084

given in the margin. The proportion of children has progressively increased since 1901, pointing at first sight to an increase in the birth rate. But this is not exactly the case. The registered birth rate is not of much use as a guide, because of the large margin of error involved. But assuming that this proportion of error is fairly constant, we find that the registered birth rate in 1901-11 was 203, in 1911-21, 279 and in the last decade it was 255, per mille of the mean population of the decade concerned. The proportion of child-bearing females (aged 15-45) as shown in the last column of the marginal table above tends to decrease although in the latest census it has slightly increased. In view of this increase, one would have expected a rise in the birth rate, but instead there is a decline in the registered birth rate. If we take the corrected birth rate according to the formula favoured in this Report, the same tendency is observable. In para 59 of the last Census Report, the volume of births in 1911-21 was estimated to be 898,060. In the last decade, our estimate based on similar principles is 890,620 (*vide* para 35 *supra*). Proportioned to 10,000 of the mean populations of the two decades, they come to 4,318 and 3,816 respectively. Thus there is an actual shrinkage in the real birth rate. The progressive rise in the child population in the last three decades is, therefore, due not to any rise in fertility or birth rate, but to a greater degree of survival. Owing to healthier conditions of living, the multiplication of facilities of rural medical relief and the more enlightened attitude of the people in respect of the care of their young, a larger

YEAR	Proportion of children below 10, to 100	
	Persons aged 15-40	Married women aged 15-40
1901	50	135
1911	60	145
1921	69	167
1931	68	157

number of children have been rescued from death and prepared for the adult ages in this decade than in the previous one. Subsidiary Table V compares the proportion of children below 10 (i) to persons aged 15-40 and (ii) married females aged 15-40 for the last three censuses for the whole State and the different divisions. In the margin the requisite ratios for four censuses are given. The proportionate increase in the child population was progressive till this census, when it has slightly declined. The fecundity rate has also shrunk in the last decade.

108. Longevity—The special phenomenon of longevity will now be taken up. The proportions of persons aged 70 and over are compared for the last three censuses in the margin. The absolute figures are also given and compared with

YEAR	70 and over						
	Proportion to 10,000 of population			Absolute figures			Variation with 1911 as 100
	Persons	Males	Females	Persons	Males	Females	
1911 ..	94	84	104	18,895	8,837	10,058	100
1921 ..	123	112	133	25,944	12,339	13,605	137
1931 ..	119	114	125	29,111	14,343	14,768	154

the figures of 1911 as 100. The results are an excellent illustration of how the age-returns are riddled with inaccuracies—some of which are of the deliberate kind. The aged contingent if figures are to be believed has increased by 54 per cent since 1911, while the general increase in the population is only 20 per cent during the same period. Obviously the figures are wrong, the return of 1911 being the most reliable in this respect. The question of pensions for old age is sometimes talked about

in this State, and aged persons must have got wind of that fact and wrote up their ages so that they might stand a chance of being benefited. The statement of age also it must be remembered, becomes increasingly inaccurate, as the person gets older; and as the old population is not relatively larger than before, this element of error has now proportionately increased.

109. Centenarians—It is always of interest to know about the centenarians. The census figures are entirely unreliable on this score however. On the present occasion, all individual claims to longevity of this degree were closely inquired into and most of them rejected. The census record was found inaccurate and in some cases out by 30 years. But the curious

Year	Persons aged 100 and over		
	Persons	Males	Females
1911 ..	181	84	97
1921 ..	321	153	168
1931 ..	311	132	179

reader may be interested in the marginal table which compares the absolute figures of persons aged 100 and over in the last three censuses. As the ages are compiled in one year periods for the whole State since 1911, the crude returns are totalled and shown above. Of these figures, the bulk (190 in 1931, 223 in 1921, and 130 in 1911) belong to the age period 100. Most of these must be credited with ages below that age-limit. In the present census 33 are returned at 105, 13 at 110 and 8 at 120. Four of these cases seemed on enquiry to be genuine and their details are given below:—

Case No. 1—Bai Jivi, Musalman widow of Kala Hasu of Karmaliyapura (in Vaghodia taluka of Baroda *prant*): age returned 120 years: blind, deaf and toothless: lives on alms: unemployed, being maintained by her son: probable age—well over 100.

Case No. 2—Bai Dhani: a Bhangi woman of Haldarwa (of Karjan taluka in Baroda *prant*), widow of Pasla Parbhu: toothless, blind and deaf: cannot work, being maintained by her grandson. Her age returned is 120, and local evidence asserts in confirmation that she is at least 118. She was 45 years of age, when the railway line was laid in the neighbourhood in *samvat* 1914 (1858 A.D.). Her grandson is now 50 years old. Old inhabitants aged 72 years in that village remember her as an old woman when they were children.

Case No. 3—Sadhu Kalyandas Ramdas, a Vairagi, belonging to Kurali village (Karjan taluka in Baroda *prant*).

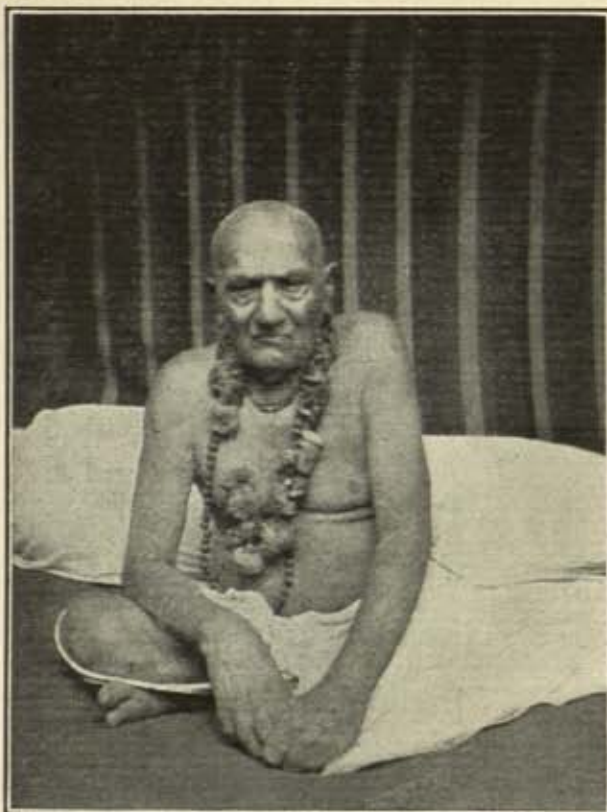


Bai Jivi : Age, well over 100.



Bai Dhani : Age, at least 118.

He is an educated person with a good memory, but now not able to read through defective eyesight: only one tooth left, but otherwise strong and healthy as his photograph shows it. He says he was



Sadhu Kalyandas: Age, over 125.

10 years old at the time of the famine of *samvat* 1869 (1813 A. D.) He remembers the fall of the last Peshwa in 1818: also to have seen Sayajirao II in his youth and the installation of Veniram as Dewan in 1828. He was born at Brahmangam (Bhadran taluka) in 1803 A. D. of Lewa Patidar parentage. This is a very genuine and interesting case. He went on pilgrimage to Badrinarayan, Jagannath, etc., on foot before the era of railways in India. He has had four *chelas*, all living to a good age and three of them predeceasing him. His hair has grown grey but he still requires three *puris*, two pounds of milk and $\frac{1}{4}$ lb. of *ghee* for daily food. He started smoking at a late age. Tea drinking is also one of his late acquirements.

Case No. 4—Garoda Hira Parshotam: returned as of 125 years of age—belonging to Masar (Padra taluka, Baroda *prant*). Very feeble, toothless, blind and deaf. His nephew maintains him. The family lives by begging. Local evidence affirms him to be well over 110 years of age.



Garoda Hira: Age, well over 110.

age returns. The age returns for 1921 and 1911 have been smoothed according to the principle of Columnar referencing by which individual ages adjoining ages

110. Sundbärg's Types of Population—

It will be of interest to study the age-returns in broad groups and see how far the population fits in to one of the Sundbärgian categories. According to M. Sundbärg, the most distinctive and constant feature of an age census is that the proportion of people between 15 and 50 is about half of the whole population, and the only changes that occur are usually in the higher and the lower age groups. On this theory, he distinguishes between three types of population—*progressive*, where the age-period 0-15 is about 40 per cent, *stationary*, where it is about 33, and *regressive*, where the first group forms only about 20 per cent and the third group (50 years and over) constitutes 30 per cent of the population. For this purpose, we have to take the corrected

Age Groups	Percentage to total population			
	1931	1921	1911	1901
0-15 ..	39	40	36	34
15-50 ..	50	51	56	57
50 and over	11	9	8	9

* The method of distribution now adopted for smoothing from age to age is to take half from the higher and add it to the lower. This introduces a small error, as Mr. Meikle admits as it makes no allowance for the continuous decrement which deaths cause in the numbers of succeeding ages in a normal population.

on this basis of corrected and adjusted age returns. We see therefrom how the rule about the middle age holds good only for the last two censuses. In 1901 and 1911, the middle age-group population was nearly 60 per cent of the total. Sundbärg's theory, therefore, does not hold good always for the State. The normal age constitution would be as shown in the Life Table Report of this State prepared in 1921,—39.5 per cent for the first age group, 52 per cent for the middle and 8.5 per cent for the last group (aged 50 and over). The reason why the European proportions do not hold good for this State is that, in spite of the high birth rate, the mortality rates here for the first and last age groups are so high compared with that operating in the middle group, that as a result, the old and young are killed off early and that those who survive into the healthy middle age are subjected to a comparatively low rate of death and, therefore, form a relatively higher proportion of the whole than the rest. These contrasts in specific death rates as shown in the margin, are not so much in evidence in European mortality experience as in Eastern countries and the Sundbärgian hypothesis cannot therefore apply in all cases, but it can be accepted as largely true.

Age Period	Normal mortality per mille per annum†
0-50	60.06
15-50	25.39
50 and over ..	76.86

§ 2. DIVISIONAL ANALYSIS

111. Age Constitution in the different divisions—In the inset table are arranged proportionate figures per age-period in the different natural divisions. Kathiawad, which has the highest proportion of children, has also the lowest proportion of middle aged persons. Central Gujarat, which is affected more largely than other divisions by immigration has, in consequence, a larger proportion of middle-aged people. The low ratio of the old in the South Gujarat population is due to the presence of the Raniparaj who are not a long-lived community. Taking the age-periods more in detail, we shall compare the data given in Subsidiary Tables I and V in the last three censuses:—

Natural Division	Age Periods		
	0-15	15-50	50 and over
Central Gujarat ..	37	52	11
North Gujarat ..	40	50	10
South Gujarat ..	41	50	9
Kathiawad	42	48	10
State	39	50	11

(i) *Central Gujarat (excluding City)*—In this division, the proportion of the aged males (60 and over) has risen from 2.6 in 1901 to 4.6 in this census. Female longevity was higher in 1901 (3.7) but this has also grown to 4.5 in the last 30 years. Famine depletes usually the two ends of life and this was the cause of the shrinkage in the old population in 1901. Similarly the child population (below 10) has progressively grown in the last four censuses: and this is due to the higher rate of survival. The proportion of married women (aged 15-40) to 100 females of all ages has increased from 34 in 1921 to 39 in this census. The age constitution of the district, taking only the males as the criterion, for the four censuses in broad groups is shown in the margin. The child population is slowly improving in its proportionate strength. The effect of the famine is seen in the diminished ratios of the old and young. 1911 showed the traces of the famine in the fact that the survivors growing into the age-

YEAR	Proportion of children below 10 per 100	
	Persons aged 15-40	Married females aged 15-40
1901	45	122
1911	56	135
1921	65	157
1931	64	147

YEAR	Age Periods		
	0-15	15-60	60 and over
1901 ..	33.8	63.6	2.6
1911 ..	33.5	62.8	3.7
1921 ..	36.7	58.7	4.6
1931 ..	37.0	58.4	4.6

†Based on Life Table of 1921.

period 10-15 were so few that even the births of the decade were not enough to recoup their strength. The 1931 figures show a more normal distribution.

YEAR	Proportion of children below 10 per 100	
	Persons aged 15-40	Married females aged 15-40
1901	39	117
1911	44	119
1921	48	132
1931	48	134

the age constitution stamps the

YEAR	Age Period		
	0-15	15-60	60 and over
1901	28.2	66.9	4.9
1911	28.9	65.3	5.8
1921	31.5	62.7	5.8
1931	32.6	63.2	4.2

in the latest enumeration.

(iii) *North Gujarat*—Going over to North Gujarat, we find a population

YEAR	Proportion of children below 10 per 100	
	Persons aged 15-40	Married females aged 15-40
1901	49	129
1911	61	145
1921	71	167
1931	70	157

of the child population is continuous since 1901, showing a striking increase,

YEAR	Age Period		
	0-15	15-60	60 and over
1901	35.7	61.5	2.8
1911	35.8	60.8	3.4
1921	39.8	55.9	4.3
1931	40.0	55.9	4.1

YEAR	Proportion of children below 10 per 100	
	Persons aged 15-40	Married females aged 15-40
1901	67	171
1911	68	158
1921	71	170
1931	72	165

longevity is low in this division, and the population has gained through migration in recent years.

YEAR	Age Period		
	0-15	15-60	60 and over
1901	39.9	56.2	3.9
1911	39.2	56.6	4.2
1921	40.2	55.4	4.4
1931	40.6	55.5	3.9

decline indicating loss through

YEAR	Proportion of children under 10 per 100	
	Persons aged 15-40	Married females aged 15-40
1901	53	181
1911	61	146
1921	75	183
1931	76	178

(ii) *The City*—The City shows an age-constitution which is in many ways distinctive. It has the lowest proportion of children in the Raj and from the point of view of married females it has the lowest fecundity rate. The age constitution is also peculiar. Taking the mean of both sexes, character of the city's population as definitely of the *accessive* kind. 1901 was of course not normal, as the City was flooded with refugees from the countryside. But since then although the middle age population has declined proportionately, it still absorbs two-thirds of the total. The decline in the aged ratio is probably due to better record

losing somewhat from decade to decade its *accessive* character. This division has progressed fairly normally through natural increase although in 1921 and 1931 it recorded some gain through migration. The proportion of the old has remained low, probably the lowest in the State. The growth but this is probably as much due to the shrinkage in the adult ages as to improving health conditions.

(iv) *South Gujarat*—Coming to South Gujarat we see that the birth rate is high. Unlike other divisions so far dealt with, the fecundity rate has fluctuated since 1901; but as the proportion of the child population has more or less remained stationary, the variations in fertility must be put down to the rise and fall in the number of married females. The middle age proportion is high in spite of the high birth rate, because migration in recent years.

(v) *Kathiawad*—Here we have the highest fecundity rate; the proportion of the child population is definitely rising, and the birth rate is similarly progressive. The adult population shows a similarly continuous migration and the incidence of diseases that select adversely against the able-bodied. Broadly speaking, Kathiawad and South Gujarat show a more progressive character than the State generally while the City indicates the greatest dependence for its increase through migration. These broad conclusions were anticipated in our general analysis

of the movement of population and are now confirmed by the age returns. The variations in proportionate figures are no indication directly of the movement of population. For a more direct measure of the cumulative trend of various factors, we must study changes in absolute figures which we do in the next paragraph.

YEAR	Age Period		
	0—15	15—60	60 and over
1901 ..	37.4	59.5	3.1
1911 ..	35.5	60.0	4.5
1921 ..	40.8	54.9	5.3
1931 ..	41.8	54.1	4.1

§ 3. VARIATION IN AGE-RETURNS

112. Variation by Age-periods (absolute figures) : Subsidiary

Table VI—Hitherto we have dealt with proportionate figures but the variations in absolute figures are a valuable index in finding out in what particular way the dominant influences of each decade asserted themselves on the different sections of the population: the young, the adolescent, the adult and the old. In the margin the variations per cent in each of the principal age groups for each of the last four decades are compared to the general rate of movement in the State. Subsidiary Table VI carries the analysis to all the divisions, but we need here only discuss the figures generally for the whole State.

YEAR GROUPS	1891 to 1901	1901 to 1911	1911 to 1921	1921 to 1931
0-10	-35.6	+22.0	+ 6.1	+17.1
10-15	+ 1.1	-28.4	+42.5	+13.1
15-40	-12.4	+ 2.2	- 7.1	+18.1
40-60	-14.7	+ 4.9	+ 8.7	+ 8.4
60 and over	-40.6	+20.9	+23.0	+ 4.5
General Rate of variation.	-19.2	+ 4.1	+ 4.6	+14.9

The first decade 1891-1901 was afflicted by the terrible famine at its end, and a little earlier by plague and cholera. The former killed off the young and old; the latter affected, but rather less severely, the adult population. In 1901, therefore, the brunt was borne by the young and old, who lost from 35 to 40 per cent. The adult lost rather less, by about 12 to 15. The adolescent escaped. In the next decade the selective influence of famines was subdued, but the havoc of 1900 left its mark in the adolescent group (10-15) who lost by 28 per cent. The old and young experienced a rebound and increased by over 20 per cent although the general increase was only 4. The third decade was scarred by famine and scarcity, and towards its end havoc was again played by influenza and plague. By this time, however, people gained in foresight; there being greater organisation to meet its onset, famine lost its sting and the old and the young were spared. But the epidemics had their toll mostly on the able-bodied. Thus the age-group 15-40 showed a decline of 7 per cent. The adolescent grew by leaps and bounds (42.5 per cent), and the old were not lagging behind. In 1931, at the end of a normal decade of fairly healthy conditions, the general increase of 14.9 per cent was shared by all age-groups except the old, who increased by only 4.5 per cent; possibly the small-pox epidemic at the close of the decade carried off a large number of these. The adult population grew by 18.1 per cent as much by immigration as by natural increase. The high survival rate enabled the child population to increase by 17 per cent. The adolescent age-categories appear also to be well-filled and provided that the next decade is not marred by any sudden sweep of disease or other calamity, an advance in the rate of growth may be expected.

113. Age Distribution by Religion and Caste : (a) *By Religion*—The age distribution in each of the main religious communities for the last four censuses is given in Subsidiary Table II and for three censuses in V-A. The Table below reproduces some of the principal statistics (for males) for the last two censuses :—

RELIGION	Year	Proportion of Males in certain age-groups				
		0-5	5-15	15-40	40-60	60 and over
Hindu	1931	15	25	39	17	4
	1921	12	26	40	18	4
Tribal	1931	17	26	39	16	2
	1921	14	29	38	16	3
Muslim	1931	14	24	40	17	5
	1921	12	26	39	18	5
Jain	1931	13	23	40	19	5
	1921	10	25	40	20	5

The figures disclose what the usual experience is of previous censuses. The Hindu proportions in this census are affected by the fact that they have now to reckon in a large proportion of the Raniparaj, who were shown under Tribal in other years. The Tribals marry late but die young—their earlier age-categories are therefore fuller, because of the high fertility. The Muslims have more or less the same age-constitution as Hindus, but the Jains show a high ratio of the adult, and less of the children than the other communities. Probably the last named have a high survival value as the death rate is low; being a trading community, economic motive perhaps rules their families to be rather smaller sized than other classes. Subsidiary Table V-A sheds further light on the birth rate and fecundity variations in the different religions. The Tribal aborigines show there the highest proportion of children below 10 to persons aged 15 and 40 and married females of similar age-limits (*vide* Subsidiary Table V-A). The Zoroastrian children show the least proportion as calculated on persons aged 15-40, but as against married females their proportion is relatively the highest, showing a very high rate of survival. Considering that marriage amongst Parsis is uniformly adult, and also that the proportion of married females to their women of all ages is only 19 (as compared to 36 for the general population), the fecundity rate or at all events the survival rate must be reckoned very high indeed. But these conclusions based as they are on the data furnished by a very limited unit like this State can be only tentative as the influence of regional factors on the age-returns cannot be eliminated so long as the birthplace returns are not correlated with age in the Indian Census.

(b) *By Caste*—The age returns of different castes may now be taken up. Subsidiary Table III and IV give the required ratios in detail. The castes selected are (i) such as formed two per mille of the population; (ii) all Brahmans and Vantias, and most of the depressed castes and the Raniparaj were also selected irrespective of their strength; besides, (iii) a few other castes of local importance, required for all-India tabulation, were also included in this Table. These castes were grouped before compilation according to a literacy percentage scale, into three classes—Advanced, Intermediate and Illiterate. The first class includes all Brahmans and Vantias, and the Lewa Patidars and Marathas among other Hindus, and the Saiyads, Vohras and other trading communities of the Muslim population. The

GROUP	Males numbering per mille aged				
	0-6	7-13	14-16	17-43	44 and over
Advanced ..	165	163	65	405	202
Intermediate ..	187	174	74	394	171
Illiterate ..	207	180	71	384	158

Intermediate group includes the rest of the agriculturists, the bulk of the artisans and of the depressed classes and a small proportion of the Raniparaj. The Illiterate comprises the labouring classes and the remainder of the depressed classes and the Raniparaj. The marginal table gives the principal

ratios for males of the three classes. The age-groups selected are not the quinary groups of other tables but the septenary and ternary groups of the crude ages as returned. These figures were not subjected to any subsequent smoothing as those for divisions and religions. That is why their reliability is open to question. But taken broadly, they confirm the conclusions that

- (i) the Illiterate sections are more "progressive" demologically than the rest of the population, but that
- (ii) they are less long-lived than the others ;
- (iii) the adult group is the most predominant amongst the Advanced castes, in which the aged also bulk most largely ; and finally
- (iv) the general increase in population is most in evidence amongst the more fertile but less intellectual strata of society.

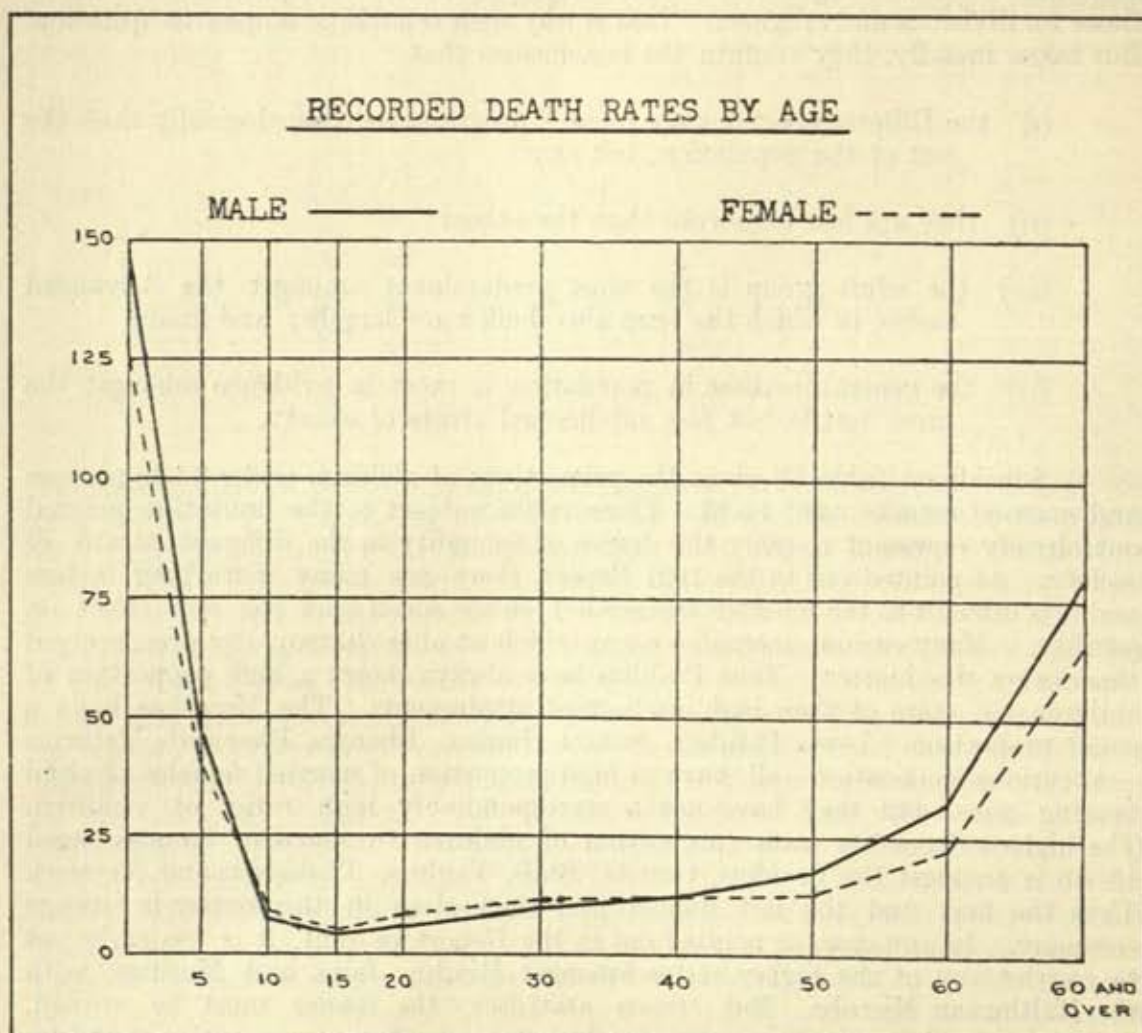
Subsidiary Table IV gives the proportions of children under 14 to persons and married females aged 14-43. These ratios subject to the limitation pointed out already represent roughly the degree of fecundity in the different strata of society. As pointed out in the 1921 Report, there are many disturbing factors and it is difficult to tell whether ascendancy in the social scale has any effect on fertility. Many curious anomalies occur which at once destroy any preconceived theories on this matter. Thus Prabhus have always shown a high proportion of children, in spite of their high intellectual attainments. The Marathas have a small proportion. Lewa Patidars, Sutars, Barias, Bhangis, Bharwads, Talavias—a curious collocation—all have a high proportion of married females of child bearing ages, but they have not a correspondingly high ratio of children. The highest fecundity rate (proportion of children to married females aged 15-40) is amongst the Prabhus, Gamits, Bhils, Vaghrijs, Thakardas and Memons. Thus the first and the last named find themselves in this matter in strange company. In any case, as pointed out in the Report of 1921, it is too early yet to convict any of the higher castes amongst Hindus, Jains and Muslims with the Malthusian Microbe. But census statistics, the reader must be warned, cannot be used for drawing any conclusions regarding comparative fertility, where figures are governed largely "by a concentrated and selective mortality, and the census only gives us, as it were, one photograph arbitrarily picked out of a continuous reel."*

§ 4. CORRELATION WITH VITALITY RETURNS

114. Vitality Returns: Births and Deaths—We now come to four subsidiary tables which give details of vital occurrences which cumulatively may be expected to throw light on the variations, both proportionate and absolute, in the age returns. The registration of births and deaths is unhappily defective. How short they are of the truth is only too painfully evident from the facts disclosed and the tests laid down in the opening chapter. It is profitless therefore to make much of them, except on the assumption that the margin of error being fairly constant, the variations in the birth and death rates point to real changes due to the interaction of natural forces. Subsidiary Tables VII and VIII need not detain us long. The highest birth rate attained during the decade was, for males in 1930, and for females in 1927. The lowest for both sexes was in 1928. The birth rate for females was almost invariably lower than for males. In individual divisions, the highest birth rate recorded was 33.9 per mille for males in 1930 in Kathiawad: the lowest (18.9) was for females in 1928 in North Gujarat. Coming to deaths, which are more accurately registered than births, we have Subsidiary Tables VIII and IX—VIII showing the death rate in the divisions for each year of the decade and IX which is a very useful table, giving the varying rates of recorded mortality for the different age-periods. A diagram is given below illustrating the

* *Vide India Census Report, 1921, page 131.*

reported death rates by age and sex. If mortality rates for individual ages could be recorded, the curve would have had a more perfect *ogee* shape than shown below.



The mean mortality rates for males and females may for the present be deferred till the next chapter. In the mean time it will suffice to point out that the mortality at both ends of life is out of all proportion to the middle ages. The lowest is in the age-group 10-15, which is usually the healthiest period; the death rate for aged 60 and over is about half of the mortality amongst infants. Even the adults aged 50-60 are healthier than children who are between 1 and 5 years of age. The greatest barrier is of course at the entrance to life, where the mean expectation is to live for only 28 years, but once that barrier is successfully crossed, the survivor expects to live for much longer. For instance at age 10, Prof. Mukherji has calculated that the mean expectation is 36 years for males and 38 years for females.

115. The Incidence of Disease—Subsidiary Table X gives the recorded incidence of certain diseases since 1921. Plague and cholera were happily scarce, but small-pox in a virulent form visited the State in 1929-30, claiming 8,616 deaths (about 4 per mille of population). North Gujarat lost 5,091 lives from this cause alone in that year. Kathiawad and Central Gujarat in varying degrees were also affected. The average annual toll of "fever" was 35,140 or 16.9 per mille, but the last two years of the decade were the most unhealthy. Pneumonia claimed 2,795 deaths annually. On the whole as pointed out more than once already, the decade's health was better than in the previous ten years—probably the best since 1891.

116. Infantile Mortality—Lastly, Subsidiary Table XI deals with the important problem of infant mortality. The subject is so bound up

intimately with the growth of population that some brief reference to it must be permitted even in a Report of this kind.

Registration however in this matter is notoriously defective. In 1921, the annual average of infant deaths for the previous ten years was shown to be 27,622 against the recorded average of 11,049. In 1931, we have estimated the annual number of infant deaths for the last decade to be 16,216 against the recorded total of 9,124. The recorded infant death rate, (*i. e.*, the proportion of deaths amongst children

DECADE	Recorded infant death-rate		Recorded infant deaths per cent of total recorded deaths (both sexes)
	Male	Female	
1911-21 ..	19.3	18.7	18.7
1921-31 ..	15.96	13.70	20.42

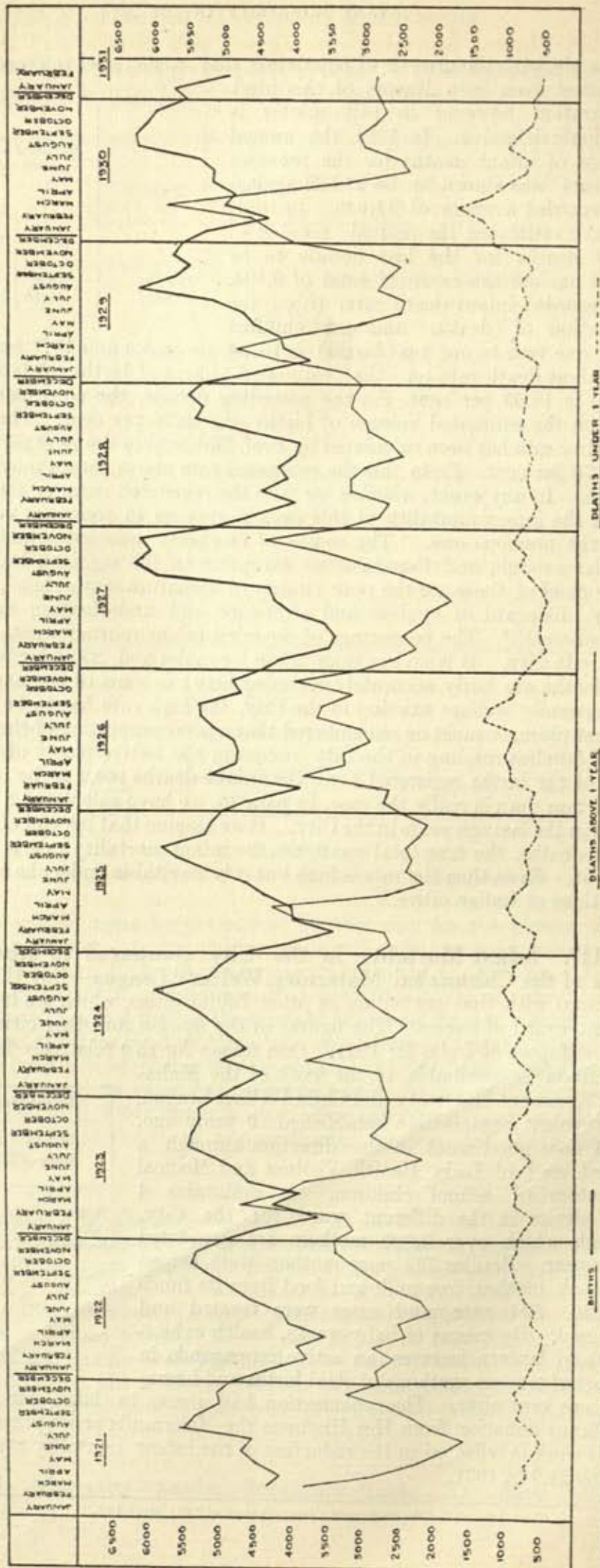
under one year to one year births) is 15.96 for males and 13.7 for females. The real infant death rate on the estimated volume of births (87,062—*vide* para 35 *supra*) is 18.63 per cent. For the preceding decade, the corresponding corrected ratio on the estimated volume of births was 30.76 per cent. The normal infant mortality rate has been calculated by Prof. Mukherji in the next part of this chapter at 25.76 per cent. From this the estimated rate above shown may be accepted as correct. In any event, whether we take the registered data, or the corrected estimates the infant mortality of this decade appears to compare very favourably with the previous one. The causes of mortality amongst infants generally are familiar enough, and Baroda is no exception to the common Indian experience. "The chief of these are the poor vitality of immature motherhood, ignorant midwifery, disregard of hygiene and after-care and underfeeding among the poor class women."* The percentage of recorded infant mortality rate is unduly high in Baroda City. It is no less than 26.38 for males and 25.91 for females. Births and deaths are fairly accurately recorded here; in view of the excellent facilities for maternity welfare existing in the City, the high rate has to be explained. In the first place, it must be remembered that a good proportion of the births of children of families residing in the City occurs in the native places of the mothers, so that, of the births registered here, the infant deaths seem to be a much greater proportion than is really the case. In para 75, we have calculated a total of 36,466 births in the last ten years in the City. If we assume that instead of 8,772 recorded infant deaths, the true total was 9,000, the infant mortality rate is reduced to 24.7 per cent. Even then the rate is high but it is inevitable under the congested urban conditions of Indian cities.

117. Infant Mortality in the City compared to other Cities: the Work of the Chimnabai Maternity Welfare League—But this rate may be compared with that prevailing in other Indian cities, which are truly described as the graveyard of babies. The figures in the margin for other cities are from the Census Report of India for 1921. One reason for this relatively favourable result in Baroda is ascribable to the work of the Maharani Chimnabai Maternity and Child Welfare League, a benevolent organisation established 9 years ago, which does good work in this direction through a trained staff of Lady Health Visitors and Medical Inspectors of school children. It maintains 4 baby clinics in the different wards of the City, through which over 3,000 mothers are benefitted every year. Besides 714 poor mothers were helped with cash, clothes, free milk and food from its funds in 1930. 594 ante-natal cases were treated and examined. By means of baby-weeks, health exhibitions and lantern lectures, an active propaganda in support of modern methods of child births and home-craft was kept alive. The organisation had access to large funds including a munificent donation from Her Highness the Maharani's privy purse. The success of this work is reflected in the reduction of the infant mortality rate from 35.2 in 1921 to 24.7 in 1931.

Infant Mortality in Cities			
Name of City			Percentage of births
Bombay	..	..	55.6
Calcutta	..	..	38.6
Rangoon	..	..	30.3
Madras	..	..	28.2
Karachi	..	..	24.3
Delhi	..	..	23.3
Baroda	..	..	24.7

*The Baroda Census Report of 1921, page 158.

BIRTHS, DEATHS & INFANTILE MORTALITY
— IN BARODA STATE —



118. Infant Mortality correlated with Births and Deaths—Finally, before closing this part, it will be interesting to compare the incidence of infant mortality with the variations in the births and deaths in the decade. In 1921, following the example of the Bengal Report of 1911, a diagram was plotted for showing the comparative curves of births and deaths in the general population, and deaths amongst infants, per each month of the previous ten years. The diagram did not succeed in its main purpose of proving that a synchrony existed between the curves of births and deaths,—partly because the decade itself was abnormal, and also because the main premises on which the synchrony was based were perhaps not applicable to this State. The Bengal Report observed that the conception curve was the steepest in the healthiest months, so that when the births occurred nine months later, they synchronised always with an unhealthy period of the year, when the death rate was also the highest. Thus the synchrony was plainly observable in the Bengal vitality returns. In this State, healthiness in climate was not the determinant cause so much in forcing up the conception curve. In the 1921 Report, I held that the main reason which influences the rise and fall of the conception curve is economic consideration. The months of highest incidence of births are as the accompanying diagram shows August, September and October. From the middle of September, the rains hold off, the mosquitoes increase and the fever season sets in. The highest death rate months are therefore November and to a less extent December. A further unhealthy season is the interval between winter and summer—February-April. The highest peak of the death curve is usually attained in March every year. Now three things appear confirmed from the experience of the last two decades :—

(a) The conceptions are most frequent in November-January when the fever prevalence begins to be virulent. From December to April the harvest of the two crops is gathered in, the surplus produce is sold in the markets, and the material condition of the people, at least with moderately successful crops, is at its best. Thus the main motive is economic.

(b) The very low level of the birth curve in February-March is possibly due to two reasons. The increasing incidence of fever and other diseases in March and April does have an inhibiting effect on conceptions in those months, judging by the quite appreciable drop in the birth curve in November and December. Secondly, May, which is in the heart of the dead season for agriculture, has the lowest point for conceptions, which is shown in the diagram by February, always marking the lowest point in births. "The subsequent months of the monsoon," as pointed out in the 1921 Census Report of the State, "with its urgency of agricultural operations, are marked by a comparative infrequency of conceptions although there is a rebound from the depression in May."

(c) Lastly, the conclusion that a high infant mortality, by shortening the the suckling period,* encourages conceptions, and therefore births later on. The peaks in infant mortality in the diagram are invariably followed by a high birth rate point, nine or ten months later.

* Newsholmes, Vital Statistics, pages 74-75.

SUBSIDIARY TABLE I

AGE DISTRIBUTION OF 10,000 OF EACH SEX IN THE STATE AND EACH NATURAL DIVISION

AGE	1931		1921		1911		1901	
	Male	Female	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8	9
Baroda State								
0—1 ..	352	364	308	331	394	416	145	156
1—2 ..	290	306	145	160	188	208	133	139
2—3 ..	269	292	240	277	316	343	205	226
3—4 ..	274	286	257	294	292	340	220	249
4—5 ..	274	267	292	285	299	302	260	286
0—5 ..	1,459	1,515	1,242	1,347	1,489	1,609	963	1,056
5—10 ..	1,272	1,217	1,411	1,360	1,141	1,044	1,254	1,236
10—15 ..	1,208	1,154	1,229	1,171	935	825	1,357	1,200
15—20 ..	977	1,003	847	751	887	818	1,036	941
20—25 ..	930	977	723	786	970	1,026	998	1,007
25—30 ..	739	759	842	843	986	1,006	978	959
30—35 ..	698	693	813	837	840	895	869	831
35—40 ..	622	631	701	668	712	656	679	653
40—45 ..	561	561	628	681	666	705	632	693
45—50 ..	478	450	435	410	406	364	380	399
50—55 ..	382	356	484	476	439	462	419	461
55—60 ..	258	252	210	172	170	150	167	190
60—65 ..	206	213	242	288	211	272	..	..
65—70 ..	96	94	81	77	64	64	268	374
70 and over ..	114	125	112	133	84	104	..	..
Mean age ..	23.69	23.63	23.96	24.04	22.71	22.77	23.56	23.76
Baroda City								
0—5 ..	1,144	1,359	921	1,133	1,078	1,255	733	877
5—10 ..	977	1,036	1,046	1,122	859	902	1,020	1,038
10—15 ..	995	1,023	1,087	986	889	787	1,091	881
15—20 ..	1,151	1,105	859	807	935	909	946	824
20—40 ..	3,764	3,354	3,703	3,342	3,860	3,531	3,843	3,613
40—60 ..	1,625	1,652	1,890	1,945	1,905	1,931	1,992	2,159
60 and over ..	344	471	494	665	474	685	375	608
Mean age ..	24.77	24.69	26.14	26.24	24.55	25.65	27.15	28.52
Central Gujarat excluding City								
0—5 ..	1,383	1,476	1,152	1,284	1,397	1,535	846	892
5—10 ..	1,198	1,166	1,348	1,308	1,084	992	1,232	1,228
10—15 ..	1,144	1,106	1,173	1,157	869	746	1,303	1,082
15—20 ..	970	998	819	716	847	768	945	830
20—40 ..	3,058	3,112	3,125	3,140	3,620	3,670	3,734	3,750
40—60 ..	1,788	1,690	1,922	1,870	1,810	1,813	1,679	1,851
60 and over ..	459	452	461	525	373	476	261	367
Mean age ..	24.58	24.16	24.95	24.81	23.61	23.77	25.06	26.05
Kathiawad								
0—5 ..	1,621	1,668	1,294	1,386	1,567	1,677	931	1,136
5—10 ..	1,352	1,295	1,495	1,482	1,077	1,062	1,273	1,149
10—15 ..	1,249	1,175	1,286	1,221	904	806	1,493	1,502
15—20 ..	999	996	778	681	1,015	900	936	897
20—40 ..	2,856	2,915	3,037	3,029	3,370	3,403	3,428	3,193
40—60 ..	1,502	1,475	1,631	1,610	1,669	1,653	1,681	1,757
60 and over ..	421	476	479	591	398	499	258	366
Mean age ..	22.64	22.93	23.50	23.68	22.06	22.87	24.50	24.69
North Gujarat								
0—5 ..	1,470	1,480	1,287	1,377	1,543	1,661	959	1,012
5—10 ..	1,326	1,237	1,453	1,387	1,192	1,032	1,259	1,237
10—15 ..	1,281	1,207	1,272	1,186	931	798	1,407	1,259
15—20 ..	986	1,000	888	748	901	810	1,156	1,044
20—40 ..	2,852	2,993	2,999	3,105	3,508	3,651	3,473	3,432
40—60 ..	1,682	1,662	1,699	1,731	1,615	1,676	1,507	1,692
60 and over ..	403	421	402	466	310	372	239	324
Mean age ..	23.37	23.65	23.29	23.65	22.10	22.74	23.71	24.60
South Gujarat								
0—5 ..	1,583	1,632	1,359	1,409	1,611	1,660	1,302	1,463
5—10 ..	1,325	1,256	1,481	1,379	1,247	1,184	1,360	1,358
10—15 ..	1,192	1,129	1,232	1,180	1,097	1,039	1,327	1,172
15—20 ..	898	998	820	839	834	853	964	916
20—40 ..	3,039	3,132	3,043	3,201	3,267	3,386	3,211	3,080
40—60 ..	1,576	1,462	1,631	1,547	1,554	1,431	1,508	1,559
60 and over ..	387	391	434	445	390	447	328	452
Mean age ..	23.06	22.78	23.53	22.44	22.25	22.09	23.49	23.88

SUBSIDIARY TABLE II

SUBSIDIARY TABLE II

AGE DISTRIBUTION OF 10,000 OF EACH SEX IN EACH MAIN RELIGION

AGE	1931		1921		1911		1901	
	Male	Female	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8	9
Hindu—								
0—5 ..	1,461	1,519	1,237	1,344	1,473	1,604	910	993
5—10 ..	1,275	1,217	1,402	1,353	1,128	1,026	1,268	1,239
10—15 ..	1,214	1,159	1,223	1,172	929	812	1,372	1,215
15—20 ..	979	1,003	859	740	896	818	1,045	948
20—40 ..	2,979	3,054	3,083	3,125	3,536	3,605	3,555	3,490
40—60 ..	1,679	1,619	1,762	1,760	1,685	1,702	1,597	1,763
60 and over ..	413	429	434	506	353	433	253	352
Mean age ..	23.66	23.6	23.99	24.14	22.86	22.94	23.70	24.66
Tribal—								
0—5 ..	1,701	1,887	1,435	1,562	1,902	2,023	1,433	1,637
5—10 ..	1,397	1,384	1,654	1,554	1,385	1,310	1,252	1,304
10—15 ..	1,194	1,150	1,265	1,185	914	909	1,295	1,172
15—20 ..	803	955	781	842	724	817	1,028	946
20—40 ..	3,074	3,097	3,001	3,167	3,348	3,423	3,240	3,129
40—60 ..	1,574	1,283	1,571	1,427	1,455	1,229	1,427	1,412
60 and over ..	257	244	293	263	272	289	325	400
Mean age ..	22.61	20.83	22.27	21.84	20.59	19.92	22.54	22.12
Muslim—								
0—5 ..	1,432	1,476	1,177	1,271	1,430	1,528	985	1,016
5—10 ..	1,256	1,204	1,323	1,300	1,120	1,049	1,182	1,197
10—15 ..	1,172	1,124	1,225	1,164	952	856	1,310	1,141
15—20 ..	970	1,012	781	766	874	820	967	916
20—40 ..	3,068	3,114	3,120	3,183	3,391	3,534	3,503	3,416
40—60 ..	1,645	1,598	1,838	1,731	1,803	1,700	1,733	1,828
60 and over ..	457	472	536	585	430	513	320	486
Mean age ..	23.95	23.9	24.87	24.55	23.42	23.47	23.80	25.26
Jain—								
0—5 ..	1,315	1,282	1,030	1,051	1,195	1,218	873	1,042
5—10 ..	1,169	1,115	1,245	1,180	1,116	993	1,019	993
10—15 ..	1,139	1,073	1,282	1,142	1,022	933	1,182	1,066
15—20 ..	981	964	818	744	888	766	999	839
20—40 ..	2,985	3,083	3,096	3,213	3,436	3,537	3,767	3,523
40—60 ..	1,901	1,962	1,984	2,030	1,905	1,963	1,847	2,048
60 and over ..	510	521	545	640	438	590	313	489
Mean age ..	25.23	25.75	25.89	26.44	24.65	25.31	25.34	26.33

SUBSIDIARY TABLE III

AGE DISTRIBUTION OF 1,000 OF EACH SEX IN CERTAIN CASTES

CASTE	MALES (NUMBER PER MILLE) AGED					FEMALES (NUMBER PER MILLE) AGED				
	0—6	7—13	14—16	17—43	44 and over	0—6	7—13	14—16	17—43	44 and over
1	2	3	4	5	6	7	8	9	10	11
Advanced	165	163	65	405	202	169	157	64	413	197
<i>Hindu and Jain</i>	<i>163</i>	<i>160</i>	<i>66</i>	<i>407</i>	<i>204</i>	<i>167</i>	<i>156</i>	<i>63</i>	<i>414</i>	<i>200</i>
Bhavsar (Hindu and Jain)	146	184	70	401	199	159	148	69	410	214
Brahmabhat (Barot)	166	159	61	394	220	165	140	58	417	220
<i>Brahman</i>	<i>150</i>	<i>153</i>	<i>63</i>	<i>414</i>	<i>220</i>	<i>154</i>	<i>151</i>	<i>61</i>	<i>417</i>	<i>217</i>
Anavala	142	170	67	420	201	153	164	56	427	200
Audich	155	159	62	404	220	149	151	61	418	221
Deshastha	141	140	73	419	227	164	162	64	399	211
Khedawal	173	169	66	365	227	150	173	63	402	212
Konkanastha	146	146	84	417	207	173	155	67	411	194
Mewada	141	159	64	396	240	161	149	64	388	238
Modh	157	150	59	399	235	155	135	57	422	231
Nagar	157	168	64	362	249	148	160	60	396	236
Tapodhan	184	180	77	392	167	178	158	73	409	182
Other	132	128	54	468	218	156	143	60	430	211
Ghanchi	180	171	75	407	167	172	165	67	419	177
Kachhia (Khambhar)	175	168	65	407	185	168	155	66	413	198
Lewa Patidar (Hindu and Jain)	165	161	65	403	206	172	157	64	411	196
Luhana	192	190	73	366	179	185	176	59	399	181
Maratha Kshatriya	160	145	56	494	145	172	141	59	447	181
Prabhu	188	186	78	390	158	208	198	95	370	129
Soni	173	164	65	423	175	168	158	67	421	186
Sutar	179	167	75	394	185	174	164	70	412	180
<i>Vania (Hindu and Jain)</i>	<i>161</i>	<i>162</i>	<i>66</i>	<i>407</i>	<i>204</i>	<i>165</i>	<i>158</i>	<i>60</i>	<i>412</i>	<i>205</i>
Disawal	162	154	58	390	236	145	141	56	421	237
Kapol	190	176	81	351	202	192	192	52	365	199
Khadayata	151	152	67	428	202	188	159	69	400	184
Lad	167	156	63	423	191	171	160	63	405	201
Porwad	153	157	66	407	217	149	148	59	423	221
Shrimali	163	169	66	400	202	168	159	61	410	201
Other	156	159	67	419	199	165	159	58	416	202
Muslim	193	187	66	377	177	187	166	68	408	171
Khoja	212	212	77	328	171	222	189	63	369	157
Memon	192	200	72	374	162	206	177	67	401	149
Pinjara	202	178	66	384	170	180	152	68	422	178
Saiyad	172	164	66	420	178	177	153	70	417	183
Vohra (Agricultural)	199	200	67	365	169	190	165	64	397	184
Vohra (Trading)	195	180	58	365	202	171	171	74	425	159
Intermediate	187	174	74	394	171	185	168	74	407	166
<i>Hindu, Jain and Tribal</i>	<i>188</i>	<i>175</i>	<i>75</i>	<i>391</i>	<i>171</i>	<i>185</i>	<i>169</i>	<i>74</i>	<i>406</i>	<i>166</i>
Anjana Chaudhari	156	170	79	426	169	165	165	81	403	186
Baria	177	165	80	394	184	185	156	68	424	167
Bava and Gossain	143	143	66	420	228	183	159	64	402	192
Chamar (Khalpa)	203	205	81	359	152	192	181	82	404	141
Darji (Hindu and Jain)	197	185	67	370	181	168	159	70	418	185
Garoda	199	212	78	345	166	178	168	76	418	160
Gola (Rice-pounders)	201	181	72	432	114	185	166	64	428	157
Kadwa Patidar (Hindu and Jain)	193	175	80	384	168	176	188	84	393	159
Karadia	227	167	77	400	129	220	164	70	395	151
Kumbhar (Hindu and Jain)	192	180	79	378	171	191	170	75	395	169
Luhar	190	187	72	380	171	174	159	68	408	191
Mochi	197	171	72	397	163	186	170	68	416	160
Patanwadia	196	165	65	387	187	189	159	63	422	167

SUBSIDIARY TABLE III—concluded.

AGE DISTRIBUTION OF 1,000 OF EACH SEX IN CERTAIN CASTES

CASTE	MALES (NUMBER PER MILLE) AGED					FEMALES (NUMBER PER MILLE) AGED				
	0—6	7—13	14—16	17—43	44 and over	0—6	7—13	14—16	17—43	44 and over
1	2	3	4	5	6	7	8	9	10	11
<i>Primitive and Forest Tribes (Hindu and Tribal)</i>	213	181	61	394	151	231	171	59	408	131
Chodhra	209	179	61	393	158	226	172	62	405	135
Dhanka	216	139	45	426	174	223	145	53	435	144
Dhodia	218	190	63	391	138	239	171	56	410	124
Rajput	170	161	69	426	174	173	150	75	422	180
Sathawara	208	179	66	389	158	186	154	70	407	183
Talabda	190	173	71	396	170	186	160	68	392	194
Targala (Hindu and Jain)	193	164	67	373	203	172	152	62	395	219
Valand	175	175	73	396	181	176	157	73	420	174
Vankar (Dhed)	198	190	78	366	168	188	171	76	404	161
<i>Muslim</i>	180	161	63	421	175	187	157	66	417	173
Fakir	167	168	63	418	184	204	157	67	395	177
Ghanchi	194	162	68	393	183	183	166	72	411	168
Malek	185	156	65	406	188	187	147	57	426	183
Molesalam	196	163	63	392	186	187	144	62	419	188
Momna	207	186	69	375	163	196	174	75	397	158
Pathan	166	152	57	451	174	191	152	64	421	172
Shaikh	168	150	58	455	169	178	151	63	435	173
Sindhi	178	162	73	418	169	191	172	71	380	186
Tai	178	183	76	388	175	173	164	78	424	161
<i>Indian Christian</i>	166	166	92	449	127	166	217	86	383	148
Illiterate	207	180	71	384	158	220	168	67	405	140
Bhangi	204	194	71	382	149	196	170	69	427	138
Bharwad	179	169	88	400	164	170	170	88	405	167
Chunvalia	211	183	73	387	146	221	154	64	412	149
<i>Primitive and Forest Tribes (Hindu and Tribal)</i>	219	173	60	392	156	237	161	59	411	132
Bhil	215	171	59	393	162	249	161	62	397	131
Dubla	228	169	56	390	157	230	161	52	407	150
Gamit	211	182	62	412	133	238	174	61	409	118
Nayakda	213	179	60	400	148	221	162	54	428	135
Tadvi	208	164	64	399	165	221	148	54	428	149
Talavia	232	168	54	366	180	230	151	56	420	143
Vasawa	230	179	64	387	140	247	168	63	406	116
Ravalia	206	185	79	382	148	207	165	78	407	143
Shenva	208	200	75	365	152	195	182	74	404	145
Thakarda (Hindu and Jain)	201	186	76	373	164	220	174	69	394	143
Vagher	193	191	64	383	169	223	181	52	389	155
Vaghri	224	185	72	367	152	237	175	63	396	129

SUBSIDIARY TABLE IV

PROPORTION OF CHILDREN UNDER 14 AND OF PERSONS OVER 43 TO
THOSE AGED 14-43 IN CERTAIN CASTES : ALSO OF MARRIED FEMALES
AGED 14-43 PER 100 FEMALES

CASTES	PROPORTION OF CHILDREN, BOTH SEXES PER 100		PROPORTION OF PERSONS OVER 43 PER 100 AGED 14-43		Number of Married Females aged 14-43 per 100 Females of all ages
	Persons aged 14-43	Married Females aged 14-43	Males	Females	
1	2	3	4	5	6
Advanced Group					
Brahman	64	174	46	45	36
Lewa Patidar	69	169	44	41	42
Luhana	83	197	41	40	39
Maratha Kshatriya	58	180	26	36	39
Prabhu	83	279	34	28	28
Sutar	72	165	40	37	42
Vania	67	172	43	41	38
Intermediate					
<i>i.—Military and Dominant</i>					
Rajput	66	166	35	36	41
<i>ii.—Agriculturists</i>					
Kadwa	78	179	36	33	41
Anjana	66	164	33	38	41
Baria	71	161	39	34	45
<i>iii.—Artisan group</i>					
Darji	76	162	41	38	42
Kumbhar	79	175	38	36	42
Luhar	76	169	38	40	41
Mochi	76	169	35	33	44
<i>iv.—Labouring group</i>					
Talabdia	76	169	36	42	42
Patanwadia	76	166	41	35	45
Vankar	81	171	38	34	43
Illiterate					
Bhangi	81	177	33	28	44
Bharwad.. .. .	70	158	34	34	45
Bhil	87	199	36	28	41
Gamit	85	231	28	25	36
Talavia	87	184	43	30	43
Thakarda	85	202	36	31	41
Vaghri	92	209	35	28	41
Muslim					
<i>i.—With Foreign strain</i>					
Saiyad	68	191	37	38	36
Pathan	66	189	34	35	39
Shaikh	64	172	33	35	40
<i>ii.—Local converts</i>					
Vohra (both classes)	81	187	43	36	38
Memon	85	204	37	32	38
Malek	71	174	40	38	39

SUBSIDIARY TABLE V

PROPORTION OF CHILDREN UNDER 10 AND OF PERSONS AGED 60 AND OVER TO
THOSE AGED 15-40 : ALSO OF MARRIED FEMALES AGED 15-40 PER 100 FEMALES

NATURAL DIVISION	PROPORTION OF CHILDREN BOTH SEXES PER 100						PROPORTION OF PERSONS AGED 60 AND OVER PER 100 AGED 15-40						Number of married females aged 15-40 per 100 females of all ages		
	Persons aged 15-40			Married Females aged 15-40			1931		1921		1911				
	1931	1921	1911	1931	1921	1911	Male	Fe- male	Male	Fe- male	Male	Fe- male	1931	1921	1911
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Baroda State ..	68	69	60	157	167	145	10	11	11	13	8	10	36	33	37
Baroda City ..	48	48	44	134	132	119	7	11	11	16	10	15	38	35	35
Central Gujarat ..	64	65	56	147	157	135	11	11	12	14	8	11	38	34	39
Kathiawad ..	76	75	61	178	183	146	11	12	12	16	9	12	34	32	37
North Gujarat ..	70	71	61	160	172	148	11	11	10	12	7	8	34	33	37
South Gujarat ..	72	71	68	165	170	158	10	9	11	11	10	11	35	33	36

SUBSIDIARY TABLE V-A

PROPORTION IN CERTAIN RELIGIONS OF CHILDREN UNDER 10 AND OF PERSONS
AGED 60 AND OVER TO THOSE AGED 15-40 : ALSO OF MARRIED FEMALES
AGED 15-40 PER 100 FEMALES

RELIGION AND NATURAL DIVISION	PROPORTION OF CHILDREN OF BOTH SEXES PER 100						PROPORTION OF PERSONS AGED 60 AND OVER PER 100 AGED 15-40						Number of married females aged 15-40 per 100 females of all ages		
	Persons aged 15-40			Married females aged 15-40			1931		1921		1911				
	1931	1921	1911	1931	1921	1911	Male	Fe- male	Male	Fe- male	Male	Fe- male	1931	1921	1911
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Baroda State															
All Religions ..	68	69	60	157	167	145	10	11	11	13	8	10	36	33	37
Hindu ..	68	68	59	156	165	143	10	11	11	13	8	10	36	34	38
Tribal ..	81	80	80	203	205	184	7	6	8	7	7	7	32	31	37
Muslim ..	66	65	59	158	156	143	11	11	14	15	10	12	35	33	37
Jain ..	61	57	52	155	150	141	13	13	14	16	10	14	32	30	32
Zoroastrian ..	53	54	59	182	158	161	31	25	31	27	24	24	19	22	24
Baroda City															
All Religions ..	48	48	44	134	132	119	7	11	11	16	10	15	38	35	35
Hindu ..	48	49	44	134	132	118	7	10	11	16	10	15	38	35	37
Muslim ..	47	46	47	136	128	122	8	11	13	17	10	16	38	35	38
Central Gujarat															
All Religions ..	64	65	56	147	157	135	11	11	12	14	8	11	38	34	39
Hindu ..	64	65	55	146	157	133	11	11	12	14	8	11	38	34	40
Muslim ..	65	62	56	155	153	138	11	11	13	15	9	11	36	34	38
Kathiawad															
All Religions ..	76	75	61	178	183	146	11	12	12	16	9	12	34	32	37
Hindu ..	76	74	60	177	182	144	11	12	12	14	9	11	34	32	38
Muslim ..	79	82	73	183	183	164	12	12	16	17	13	13	33	33	36
North Gujarat															
All Religions ..	70	71	61	160	172	148	11	11	10	12	7	8	34	33	37
Hindu ..	71	72	62	161	174	149	10	10	10	12	7	8	35	33	38
Muslim ..	69	67	59	160	160	145	12	11	13	13	9	9	34	33	37
South Gujarat															
All Religions ..	72	71	68	165	170	158	10	9	11	11	10	11	35	33	36
Hindu ..	72	66	66	162	146	150	10	9	13	13	10	11	36	36	37
Muslim ..	64	66	66	153	149	147	12	12	17	16	15	14	34	33	35

SUBSIDIARY TABLE VI
VARIATION IN POPULATION AT CERTAIN AGE-PERIODS

NATURAL DIVISIONS	VARIATION PER CENT IN POPULATION (INCREASE + OR DECREASE —)						
	PERIOD	All Ages	0-10	10-15	15-40	40-60	60 and over
1	2	3	4	5	6	7	8
Baroda State ..	1891-1901	— 19.2	— 35.6	+ 1.1	— 12.4	— 14.7	— 40.6
	1901-1911	+ 4.1	+ 22.0	— 28.4	+ 2.2	+ 4.9	+ 20.9
	1911-1921	+ 4.6	+ 6.1	+ 42.5	— 7.1	+ 8.7	+ 23.0
	1921-1931	+ 14.9	+ 17.1	+ 13.1	+ 18.0	+ 8.4	+ 4.5
Baroda City ..	1891-1901	— 10.9	— 16.0	+ 11.8	— 11.9	— 6.7	— 29.7
	1901-1911	— 4.3	+ 6.9	— 19.0	— 4.2	— 11.4	+ 12.9
	1911-1921	— 4.7	— 2.1	+ 17.9	— 10.0	— 4.7	— 4.2
	1921-1931	+ 19.2	+ 27.4	+ 15.3	+ 28.4	+ 1.5	— 16.5
Central Gujarat ..	1891-1901	— 22.9	— 38.0	— 2.3	— 17.0	+ 3.3	— 42.4
	1901-1911	+ 8.75	+ 29.6	— 26.4	+ 4.5	— 14.9	+ 47.4
	1911-1921	+ 4.3	+ 6.0	+ 49.7	— 8.6	+ 9.2	+ 21.7
	1921-1931	+ 16.1	+ 19.1	+ 12.2	+ 21.0	+ 6.5	+ 7.6
Kathiawad ..	1891-1901	— 3.8	— 25.8	+ 55.2	— 4.5	+ 15.8	— 36.9
	1901-1911	+ 2.79	+ 23.0	— 41.3	+ 5.6	— 0.5	+ 48.1
	1911-1921	— 0.1	+ 5.1	+ 46.2	— 13.5	— 2.7	+ 19.0
	1921-1931	+ 14.7	+ 20.5	+ 10.9	+ 18.3	+ 5.4	— 3.5
North Gujarat ..	1891-1901	— 24.1	— 43.1	— 7.9	— 13.1	— 11.7	— 51.9
	1901-1911	— 0.3	+ 21.2	— 35.4	— 2.9	+ 2.5	+ 19.7
	1911-1921	+ 8.2	+ 9.6	+ 53.6	— 5.6	+ 12.9	+ 39.1
	1921-1931	+ 12.1	+ 12.4	+ 13.5	+ 13.4	+ 9.3	+ 6.7
South Gujarat ..	1891-1901	— 6.0	— 19.6	+ 10.3	+ 0.2	— 0.5	— 9.2
	1901-1911	+ 11.6	+ 16.1	— 4.6	+ 13.8	+ 8.7	+ 19.9
	1911-1921	+ 1.5	+ 0.1	+ 14.5	— 3.8	+ 7.9	+ 6.5
	1921-1931	+ 18.8	+ 22.4	+ 14.3	+ 21.3	+ 13.6	+ 5.0

SUBSIDIARY TABLE VII
REPORTED BIRTH RATE BY SEX AND NATURAL DIVISIONS

YEAR	NUMBER OF BIRTHS PER 1,000 OF TOTAL ESTIMATED POPULATION AT EACH YEAR									
	Baroda State		Central Gujarat		North Gujarat		South Gujarat		Kathiawad	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8	9	10	11
1921 (March to Dec.) ..	23.1	21.9	24.7	24.5	19.2	17.6	25.9	24.7	30.3	28.6
1922 (Jan. to Dec.) ..	25.8	24.4	27.7	27.2	21.9	20.0	29.2	27.4	30.9	30.7
1923 ..	26.7	25.7	28.3	28.7	24.7	22.9	25.3	24.0	32.6	31.2
1924 ..	28.2	26.7	29.5	29.5	24.9	22.3	31.8	30.6	31.9	29.7
1925 ..	26.0	24.9	26.8	27.0	22.9	20.7	29.5	28.7	31.4	30.1
1926 ..	26.7	24.8	26.8	25.8	23.9	21.5	30.6	28.3	32.6	30.5
1927 ..	25.3	24.4	27.1	26.6	21.9	20.0	28.8	28.1	31.1	30.1
1928 ..	24.6	23.5	24.5	24.7	20.9	18.9	30.0	28.7	32.4	31.9
1929 ..	26.2	25.2	25.8	25.8	24.6	22.2	28.4	27.3	32.5	33.1
1930 ..	28.4	26.7	29.3	28.9	26.0	23.4	29.7	27.4	33.9	33.1
1931 (Jan-Feb.) ..	4.5	4.4	4.2	4.5	4.6	4.1	4.6	4.2	5.4	5.5

SUBSIDIARY TABLE VIII

REPORTED DEATH RATE BY SEX AND NATURAL DIVISION

YEAR	NUMBER OF DEATHS PER 1,000 OF TOTAL ESTIMATED POPULATION AT EACH YEAR									
	Baroda State		Central Gujarat		North Gujarat		South Gujarat		Kathiawad	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8	9	10	11
1921 (March to Dec.)..	15.7	14.4	17.5	17.2	14.6	12.8	12.8	11.8	18.7	17.1
1922 (Jan. to Dec.) ..	19.9	18.2	21.5	21.3	17.1	14.7	19.0	17.6	28.6	25.7
1923	22.1	20.3	24.3	24.2	19.7	16.5	22.7	21.4	24.5	21.8
1924	20.8	19.4	23.0	22.9	19.0	16.3	20.9	19.9	21.9	20.0
1925	18.5	17.2	20.2	20.2	17.6	15.6	19.4	17.5	15.0	13.6
1926	22.8	21.8	25.8	26.6	20.2	18.1	22.0	21.7	23.6	21.5
1927	17.8	17.4	19.1	19.7	17.0	15.5	17.2	16.7	17.6	18.7
1928	20.1	18.2	22.5	22.0	17.7	15.1	20.0	18.6	21.2	18.9
1929	21.4	19.7	22.5	21.7	20.8	18.6	19.7	18.2	22.2	20.8
1930	23.5	22.3	24.9	24.7	21.9	19.4	22.5	21.8	26.3	26.9
1931 (Jan.to Feb.) ..	3.0	2.7	2.9	2.6	2.9	2.4	3.3	2.9	3.6	3.5

SUBSIDIARY TABLE IX

REPORTED DEATH RATE BY SEX AND AGE IN DECADE AND IN SELECTED YEARS
PER MILLE LIVING AT SAME AGE BASED ON THE FIGURES OF THE CENSUSES
OF 1921 AND 1931 (*See note below*)

AGE	AVERAGE OF DECADE (ABSOLUTE FIGURES)		AVERAGE OF DECADE (PRO- PORTIONAL FIGURES)		1921-22		1923-24		1927-28		1928-29		1929-30	
	Male	Fe- male	Male	Fe- male	Male	Fe- male	Male	Fe- male	Male	Fe- male	Male	Fe- male	Male	Fe- male
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ALL AGES	23,943	20,943	21.90	20.49	18.71	17.06	20.32	18.63	20.68	19.22	21.49	19.99	23.97	22.71
Under 1 year ..	5,008	4,290	147.69	126.43	128.32	105.33	140.16	116.35	119.06	101.71	120.42	107.76	156.06	143.10
1-5 ..	4,953	4,451	48.19	42.71	32.27	29.05	40.90	35.78	38.27	35.21	42.05	38.43	54.19	52.35
5-10 ..	1,180	1,074	7.60	7.70	5.80	5.75	6.46	6.31	7.57	8.09	8.06	8.16	12.32	12.49
10-15 ..	657	601	4.86	5.00	4.35	4.14	4.31	4.56	4.76	4.97	4.94	5.15	5.05	5.71
15-20 ..	585	671	6.28	8.71	5.59	7.04	5.94	7.22	5.53	7.90	5.87	6.79	6.18	7.25
20-30 ..	1,551	1,748	9.01	10.46	9.24	9.61	8.65	9.52	7.54	10.05	7.75	9.76	7.52	9.22
30-40 ..	1,853	1,717	11.12	11.12	11.25	11.09	11.35	10.67	11.12	11.22	11.36	10.92	11.11	10.52
40-50 ..	2,074	1,458	17.73	13.03	17.42	12.44	16.88	12.44	17.81	12.74	18.01	13.38	17.33	12.74
50-60 ..	2,376	1,569	31.08	23.62	29.76	22.91	29.88	22.96	32.61	22.78	35.56	24.66	29.85	22.89
60 and over ..	3,725	3,364	78.01	65.86	62.43	54.02	69.16	61.29	86.61	74.50	85.82	78.08	78.84	67.62

NOTE.—In calculating proportional figures, the census figures for 1921 and 1931 have been accepted as the basis, on which the estimated population for each year selected has been calculated according to the method of geometrical progression. For "All Ages," such estimates have been calculated only on the census population of 1921 in areas where registration of vital occurrences takes place, i.e. in the calculation, the population of the Camp and Railway Areas under non-state administration has been excluded. For the different age-periods however, the total census populations in each age-period as disclosed in the censuses of 1921 and 1931 have been taken to find out by above means of geometrical progression, the estimated population in these age periods in each year selected.

SUBSIDIARY TABLE X

REPORTED DEATHS FROM CERTAIN DISEASES PER MILLE OF EACH SEX

YEAR	WHOLE STATE					ACTUAL NUMBER OF DEATHS IN									
	Actual number of deaths			Ratio per mille of each Sex		Baroda City		Central Gujarat		Kathlawad		North Gujarat		South Gujarat	
	Total	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cholera—															
1920—21 ..	65	29	36	.03	.04	4	4	10	5	9	14	4	9	2	4
1921—22 ..	24	13	11	.01	.01	..	..	2	1	2	4	4	3	5	3
1922—23 ..	30	17	13	.02	.01	1	..	6	6	1	..	6	1	3	9
1923—24 ..	50	30	20	.03	.02	..	..	11	4	1	..	16	16	2	..
1924—25 ..	13	10	3	.009	.003	1	..	5	2	..	..	3	1	1	..
1925—26 ..	15	9	6	.008	.006	..	..	3	2	..	..	3	1	3	3
1926—27 ..	12	6	6	.005	.006	1	..	3	2	..	..	2	2	..	2
1927—28 ..	24	15	9	.01	.009	..	..	8	5	1	..	5	3	1	1
1928—29 ..	27	16	11	.01	.01	1	..	2	3	..	..	12	8	1	..
1929—30 ..	120	61	59	.06	.06	1	3	42	44	..	1	15	9	3	2
Small Pox—															
1920—21 ..	431	233	198	.21	.19	6	7	52	61	14	12	142	97	19	21
1921—22 ..	213	105	108	.10	.11	29	36	39	28	12	8	15	27	10	9
1922—23 ..	565	333	232	.30	.23	11	10	118	91	20	15	141	87	43	29
1923—24 ..	966	473	493	.43	.48	5	3	148	150	128	150	144	126	48	64
1924—25 ..	1,057	573	484	.52	.47	5	4	74	68	59	48	391	334	44	30
1925—26 ..	1,033	563	470	.51	.46	9	17	210	172	73	72	213	134	58	75
1926—27 ..	380	205	175	.19	.17	9	7	82	66	6	6	13	14	95	82
1927—28 ..	251	120	131	.11	.13	..	..	25	33	39	40	8	10	48	48
1928—29 ..	865	461	404	.42	.40	31	24	75	73	109	107	219	182	27	18
1929—30 ..	8,616	4,365	4,251	4.0	4.1	41	54	854	795	609	655	2,590	2,501	271	246
Fever—															
1920—21 ..	33,712	18,086	15,626	16.4	15.2	608	502	5,514	4,789	1,878	1,660	7,514	6,236	2,572	2,439
1921—22 ..	29,646	15,925	13,721	14.5	13.4	570	574	4,387	4,039	2,020	1,657	6,906	5,673	2,042	1,778
1922—23 ..	38,522	20,455	18,067	18.6	17.6	612	645	6,103	5,469	1,977	1,694	8,177	6,735	3,586	3,524
1923—24 ..	33,292	17,849	15,443	16.2	15.1	597	582	5,207	4,502	1,705	1,445	7,451	6,191	2,889	2,723
1924—25 ..	35,634	18,944	16,690	17.2	16.3	672	599	5,520	5,070	1,271	1,054	8,430	7,117	3,051	2,850
1925—26 ..	32,991	17,292	15,699	15.7	15.3	626	671	5,575	5,129	1,230	1,074	7,171	6,214	2,690	2,611
1926—27 ..	32,936	17,149	15,787	15.6	15.4	702	755	4,935	4,605	1,342	1,318	7,374	6,361	2,706	2,748
1927—28 ..	37,355	19,701	17,654	17.9	17.2	712	667	5,779	5,216	1,522	1,404	8,782	7,700	2,906	2,667
1928—29 ..	39,141	20,653	18,488	18.8	18.2	809	799	6,651	5,924	1,657	1,488	8,473	7,236	3,063	3,041
1929—30 ..	38,166	20,184	17,982	18.3	17.5	796	793	6,328	5,495	1,453	1,383	8,253	7,188	3,354	3,123
Dysentery and Diarrhoea—															
1920—21 ..	663	379	284	.34	.28	40	27	132	97	68	50	59	40	80	70
1921—22 ..	600	348	252	.32	.25	71	29	112	86	50	40	72	53	43	44
1922—23 ..	642	368	274	.33	.27	58	32	123	101	43	39	65	42	79	60
1923—24 ..	705	412	293	.37	.28	62	59	120	81	56	38	91	42	83	78
1924—25 ..	737	431	306	.39	.30	88	56	124	77	60	54	70	45	89	74
1925—26 ..	638	391	247	.36	.24	53	28	105	101	67	55	64	32	102	31
1926—27 ..	957	545	412	.50	.40	65	46	134	114	109	93	102	13	144	146
1927—28 ..	688	397	291	.36	.28	60	33	93	80	60	34	86	44	98	100
1928—29 ..	616	326	290	.30	.28	44	31	108	83	39	41	45	38	90	97
1929—30 ..	546	389	257	.35	.25	32	25	71	56	55	55	62	49	69	72
Plague—															
1920—21 ..	16	4	12	.004	.012	1	..	1	5	..	1	2	5	..	1
1921—22 ..	15	6	9	.005	.009	..	..	..	..	4	95	135	7	..	2
1922—23 ..	253	109	144	.1	.14	..	..	7	4	..	2	6	1	..	3
1923—24 ..	15	11	4	.01	.004	..	..	2	..	..	..	1	..	1	1
1924—25 ..	3	3	..	.003	..	..	..	1	..	..	..	1	..	1	..
1925—26 ..	6	6	..	.005	..	..	..	..	..	2	..	4	..	..	..
1926—27 ..	9	3	6	.003	.006	..	..	2	3	..	1	1	2	..	..
1927—28 ..	102	53	49	.05	.05	1	..	..	1	..	..	6	5	46	43
1928—29 ..	129	70	59	.06	.06	2	..	..	..	..	1	1	1	67	57
1929—30 ..	4	1	3	.001	.003	..	..	1	3	..	..	..	..	..	..
Pneumonia—															
1920—21 ..	2,613	1,584	1,029	1.4	1.0	326	292	644	393	171	91	275	126	168	127
1921—22 ..	2,683	1,601	1,082	1.5	1.1	333	295	638	400	147	103	304	177	179	107
1922—23 ..	3,114	1,906	1,208	1.7	1.2	348	310	773	423	146	75	392	200	247	200
1923—24 ..	2,661	1,624	1,037	1.5	1.0	325	292	675	384	119	85	305	147	200	129
1924—25 ..	2,562	1,527	1,035	1.4	1.0	255	289	625	394	118	63	295	134	234	155
1925—26 ..	2,807	1,681	1,126	1.5	1.1	293	319	676	356	145	96	313	183	254	172
1926—27 ..	2,727	1,586	1,141	1.4	1.1	254	256	594	362	148	103	351	237	239	183
1927—28 ..	2,861	1,838	1,023	1.7	1.0	298	231	691	357	169	75	412	202	268	158
1928—29 ..	3,059	1,895	1,164	1.7	1.1	287	218	744	439	187	99	417	234	260	174
1929—30 ..	2,867	1,768	1,099	1.6	1.1	247	192	646	406	182	95	431	226	262	180
All other causes—															
1920—21 ..	4,495	2,356	2,139	2.1	2.1	467	445	799	714	243	189	485	454	362	337
1921—22 ..	4,702	2,449	2,253	2.2	2.2	608	496	824	747	221	187	504	501	292	322
1922—23 ..	5,380	2,777	2,603	2.5	2.5	623	561	982	926	218	190	577	596	377	330
1923—24 ..	4,715	2,408	2,307	2.2	2.2	578	530	817	797	220	222	480	451	313	307
1924—25 ..	4,422	2,307	2,115	2.1	2.1	507	483	774	682	224	194	429	402	373	354
1925—26 ..	4,948	2,543	2,405	2.3	2.3	576	531	827	790	338	294	390	403	412	387
1926—27 ..	4,680	2,332	2,348	2.1	2.3	538	457	789	817	268	265	407	462	330	347
1927—28 ..	4,635	2,370	2,265	2.2	2.2	534	422	806	778	310	286	394	453	336	326
1928—29 ..	4,559	2,373	2,186	2.2	2.1	545	456	750	703	298	230	404	428	376	369
1929—30 ..	4,875	2,480	2,395	2.3	2.3	531	470	796	812	335	320	445	441	373	352

SUBSIDIARY TABLE XI

INFANTILE MORTALITY

NATURAL DIVISION	1921 March to 1931 February				Percentage of deaths under one year to births			Total number of deaths	Percentage of deaths under one year to total deaths (both sexes)
	Number of births		Number of deaths under one year						
	Male	Female	Male	Female	Male	Female	Total		
1	2	3	4	5	6	7	8	9	10
Baroda State ..	307,613	274,965	49,106	42,133	15.96	13.70	15.66	446,906	20.42
Central Gujarat (including City) ..	108,622	95,973	20,567	18,020	18.93	18.78	18.86	166,963	23.11
Central Gujarat (exclusive of City) ..	91,068	79,990	15,936	13,879	17.50	17.35	17.43	136,352	21.87
City ..	17,554	15,983	4,631	4,141	26.38	25.91	26.22	30,611	28.66
Kathiawad ..	31,720	29,019	5,474	4,658	17.26	16.05	16.68	41,018	24.70
North Gujarat ..	113,664	99,378	16,230	13,385	14.28	13.47	13.90	168,338	17.59
South Gujarat ..	53,607	50,595	6,835	6,070	12.75	12.00	12.38	70,587	18.28

CHAPTER IV—AGE

PART II

AGE DISTRIBUTION AND MORTALITY RATES

119. Introductory—It was for the first time after the Census of 1921 that an investigation was made into the age distribution and the rates of mortality of the Baroda State population. In the following pages I propose to make a similar investigation with the figures of the 1931 and past censuses. A general survey based on the crude returns as smoothed into quinary groups by the preliminary process enjoined on all provinces and states by the Census Commissioner for India, has been given in Part I of this chapter. I shall confine myself only to statistical analysis of the population figures supplied to me.

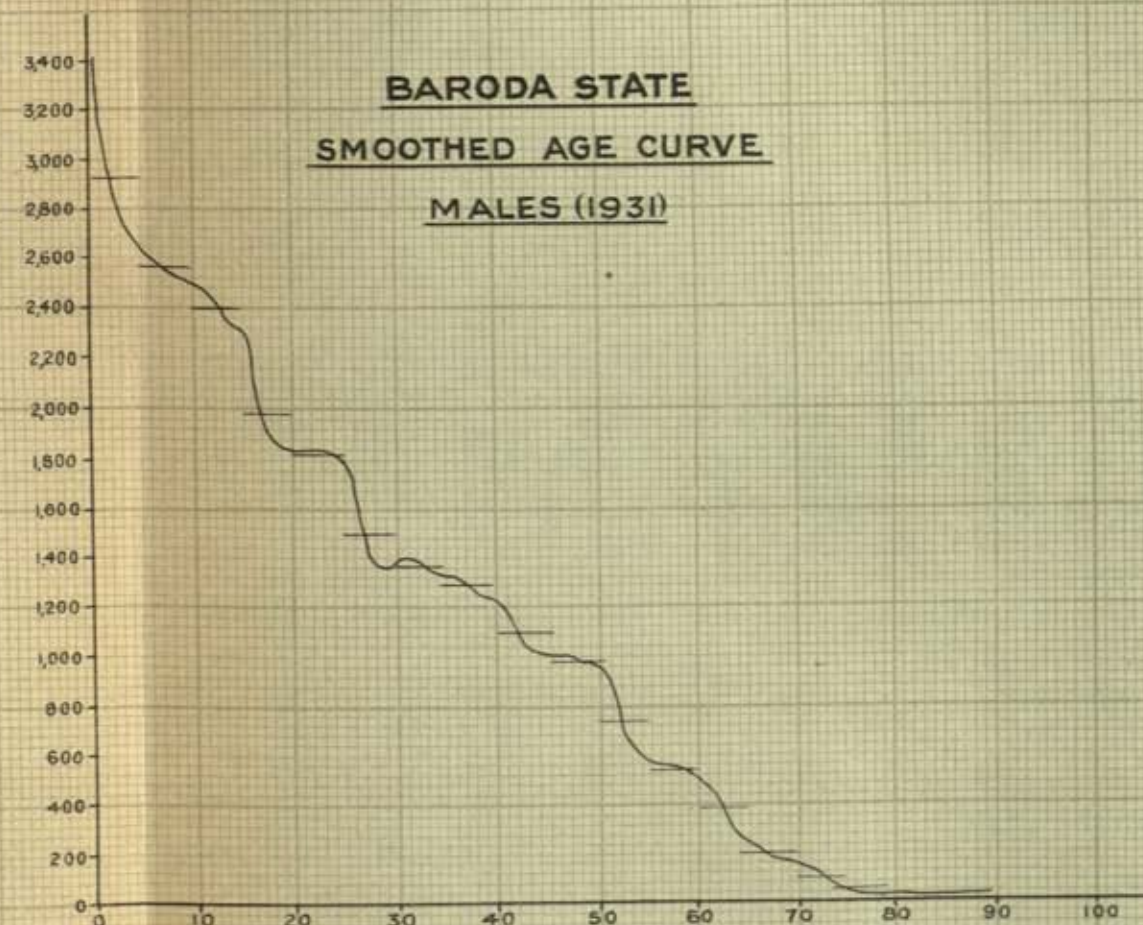
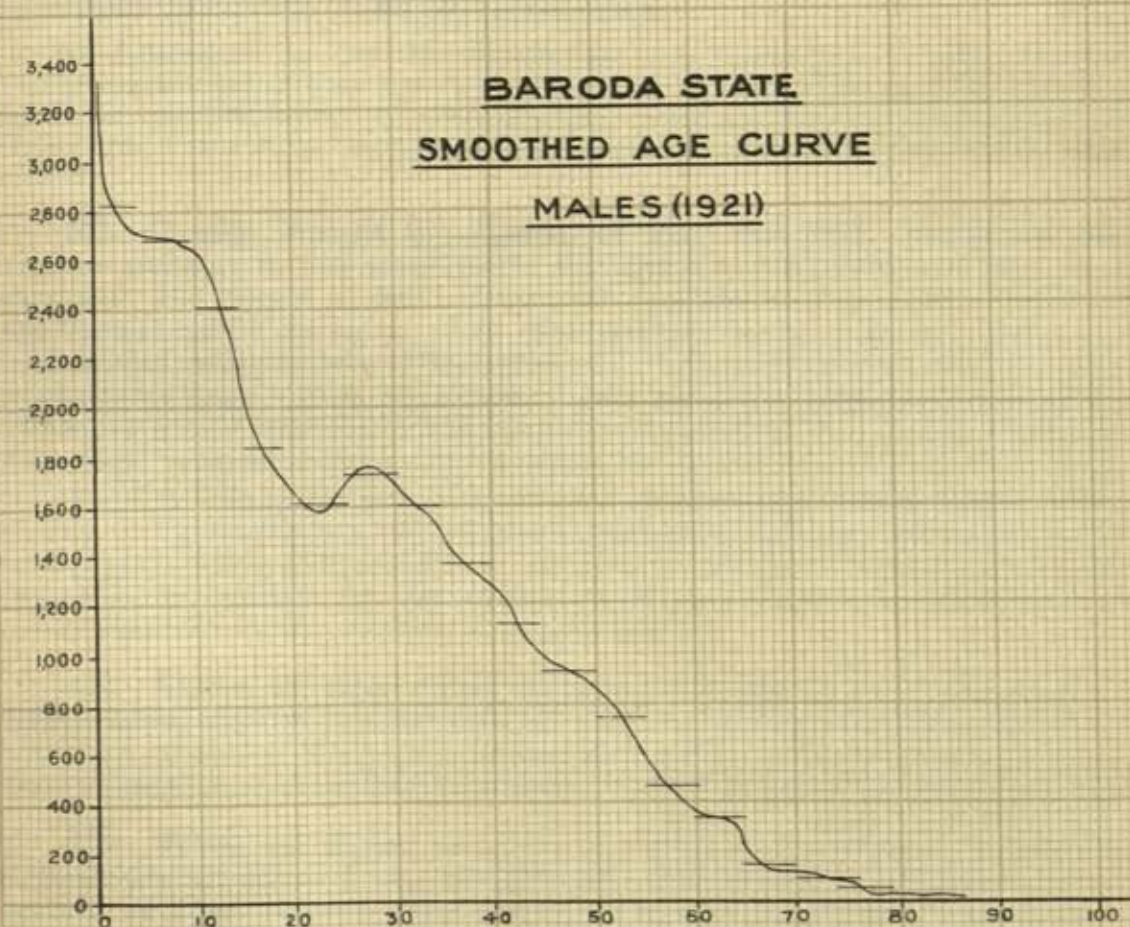
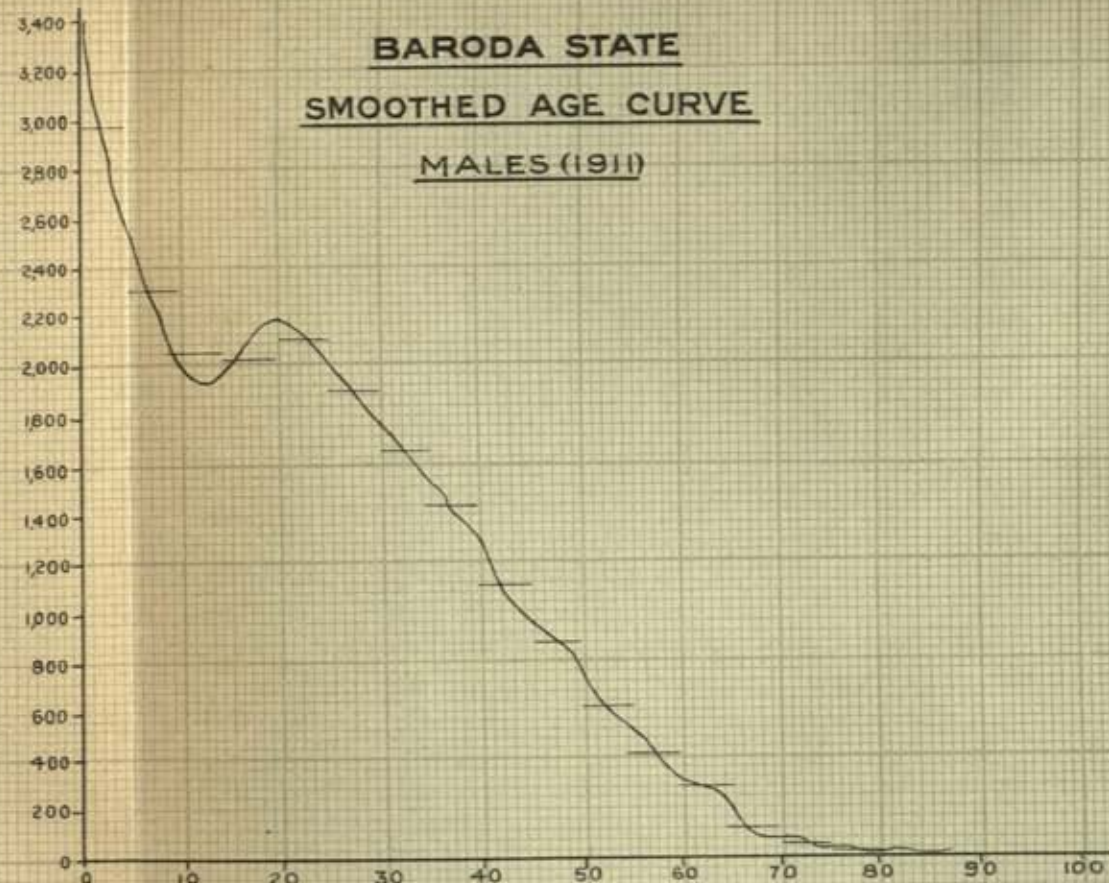
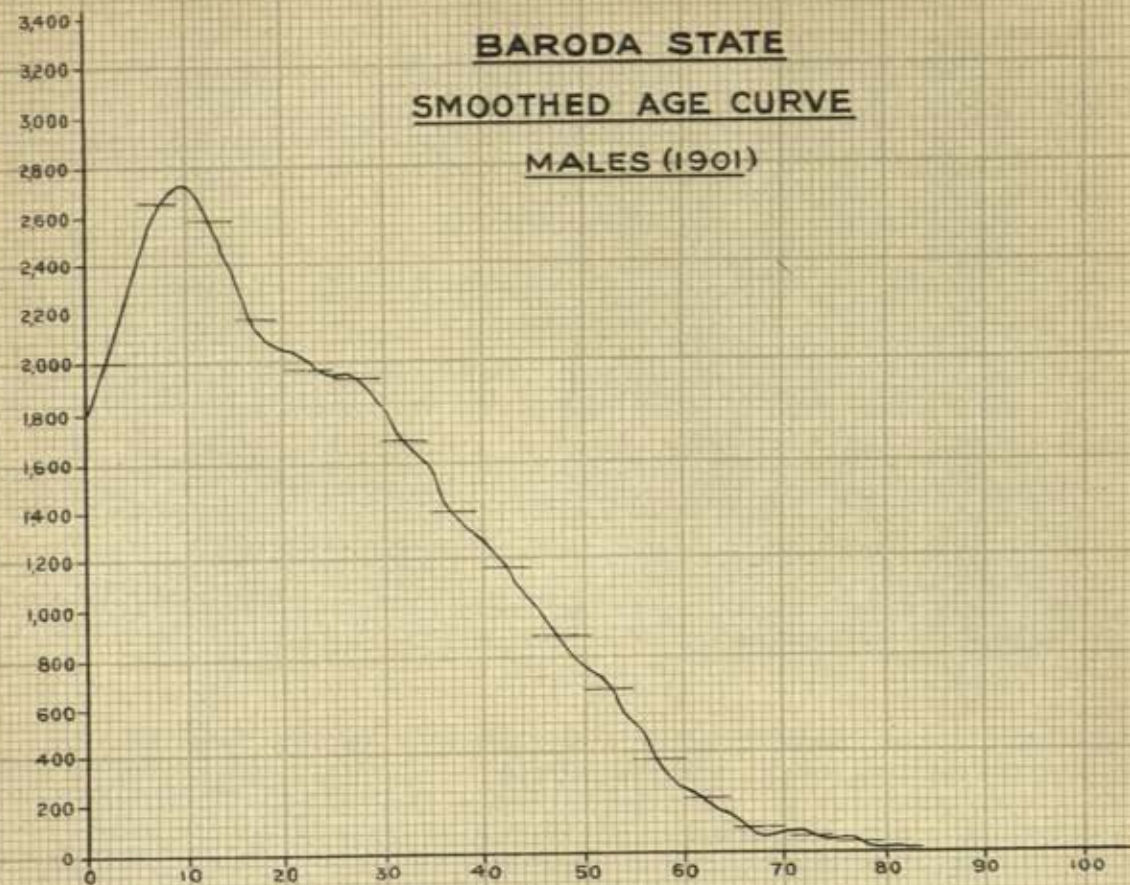
120. Data in Hand—The data available for the purpose included :—

- (1) The State Census returns for the decades 1891-1901, 1901-1911, 1911-1921 and 1921-1931, showing for each sex the numbers living at each age.
- (2) The State Census Reports for 1911 and 1921.
- (3) The Government of India Actuarial Reports for 1901, 1911 and 1921.
- (4) Birthplace returns showing the numbers born and enumerated elsewhere in the State.

121. The Period under Consideration—In order to arrive at the correct figures representing the population living at different ages it is essential to include in the investigation figures of past censuses. Censuses have generally been taken in India after each decade and as the period of ten years is but a small span in the life of a population, the law of its growth or decay cannot be deduced from results based on the figures of a single census only. Further, it is also necessary to take note of the special events of each decade which affect vital statistics. As population (for purposes of mathematical investigation) is a continuous whole, the depression created in the population curve by a famine or an epidemic 15 or 20 years ago runs through the population for years to come. To embody the effects of all these characteristic facts, it is therefore necessary to take into consideration the figures of population covering as long a period as possible. I have included in my investigation the figures of the Baroda State population for the Censuses of 1901, 1911, 1921 and 1931.

122. Review of the Decades since 1901—I now proceed to take a review of these decades.

(i) *The decade 1901-1911*—The preceding decade 1891-1900 was full of unprecedented calamities. In 1894 the rainfall was insufficient, and the later years were also not propitious. Following upon this came the great famine of 1898-1901 which even now stands as an unforgettable landmark. In common with the rest of Gujarat the State of Baroda suffered immensely. The effect of the famine was both extensive and severe. The Government of India Commission of 1901, appointed to assess the effects of this calamity, moderately estimated about a million deaths in British territory together with another three millions in the Indian states. Together with this there was the plague epidemic which alone took away no less than 77,975 lives during the years 1899-1910. The extent of the havoc done by the famine of 1900 is shown by the figures of the 1901 Census which showed an enormous decrease of 19.2 per cent in the State population. Quite a large proportion of this decrease was in the age-group 0-5 so much so that the number of infants returned in 1901 Census between the ages 0-2 was abnormally low. Thus the decade 1901-1911 began with a big depression in the population curve. That the famine carried away far larger number of children than adults is shown by the depression in the part of the curve corresponding to the earlier ages. A very interesting fact is shown by the four smoothed age curves of the Baroda State population drawn from figures of the Censuses of 1901, 1911, 1921 and 1931 (Graph No. 1). They show convincingly how the depression in the age curve created by the disastrous famine of 1898-1900 has travelled from decade to decade to ages 10, 20 and 30 in the enumerations of 1911, 1921, and 1931 respectively. The curve for 1931 further shows that the present population has very nearly regained the enormous loss sustained thirty years ago.



I shall subsequently discuss in detail the factors which have brought about the gradual levelling up of the depression from decade to decade.

(ii) *The decade 1911-1921*—The next decade was smooth till 1915. In 1915-16 cholera broke out which fortunately was not severe in this State—the recorded deaths being only 7,431. In 1917 the rainfall was excessive being in some parts of the State 20 inches more than the normal. Following this came the plague epidemic of 1917 which took away 27,460 lives. Then in 1918 came the great influenza epidemic which in its devastating effects was almost as severe as the famine of 1900. The reported death rate in the State in that year reached the appalling magnitude of 62.9 per mille for males and 64.1 per mille for females. The State paid a heavy toll of 71,472 lives in a brief period of three months of that year. Perhaps even this big figure does not cover the total amount of havoc done by the calamity. In the Registration records of 1918 the number of deaths from fever was shown at 40,331 in place of the usual average 35,000. It is reasonably surmised that the excess in deaths by fever was due to the fact that in that period influenza passed by the name of fever in many cases. Transferring at least half of the excess in deaths by fever to influenza, the total deaths by influenza may be estimated to about 74,200.

(iii) *The Toll of Influenza*—Unlike the famine of 1900, the influenza epidemic killed a far larger number of adults in the ages 16-19 rather than children and old persons. This important aspect of the influenza epidemic has special bearing on the smoothed age curve already referred to. The abnormal number of deaths in the adult ages lowered the age curve in the period 16-19. The age group near 20 in the curve for 1921 being already loaded with a depression due to the famine of 1900, the new dip created in the immediately previous ages by the influenza epidemic of 1918 had thus the tendency of levelling up the relative undulations of the two successive age periods. This is one of the factors which has brought about the comparative smoothing of the 1931 curve near age 30 which corresponds to the dip in the 1921 curve ten years before.

(iv) *The decade 1921-1931*—The decade 1921-1931 has fortunately been a normal one, from the point of view of epidemics and such like calamities. Except the floods which swept over Gujarat in 1927, there have been no untoward happenings. The devastating effects of this flood were far less than expected—thanks to the relief activities of the State. The total lives lost numbered only about 51, which had practically no effect on the life of the population as a whole. The next two years were not bad, so that the loss sustained by the peasantry in cattle and crops was very nearly made up in the later years. Thus it is but natural that no trace of this calamity can be found in the present census figures.

(v) *Influence of the Past*—The smoothed age curve drawn from the census figures of 1931 gives convincing evidence that the loss incurred by the State population in the disastrous famines of 1898-1900, is now very nearly recouped. The population even now bears the scar of that great wound in the form of a slight depression near age 30 in the smoothed age curve of 1931.

123. Double Weight for figures of 1911 and 1931—Out of the four censuses included in this investigation the figures of both 1901 and 1921 were abnormal. The figures of 1901 reflected the condition of a population weakened and thinned out by the havoc of an unprecedented famine. As the census was taken within twelve months of the famine year, the population had hardly any time to recoup its losses. Next, the Census of 1921 was taken within two years of the influenza epidemic which had killed quite a large percentage of the adult population. Both these censuses therefore do not reflect the normal condition and age distribution of the State population. The other two decades were comparatively normal as they were generally free from untoward occurrences affecting vital statistics and the age distribution of the population. In view of the above facts I have decided to give double weight to the census figures of 1911 and 1931 in comparison to those of 1901 and 1921 for the purposes of my investigation.

124. Errors of Age—Before the census figures could be subjected to a mathematical analysis, it is necessary to correct the errors in the statement of age which are inherent in the population statistics of all countries. These errors are more in degree in an uneducated population which is unfortunately the case in India.

125. Types of Error—In any census enumerations age can be recorded in three different ways: (1) Age last birthday, (2) Age next birthday, and (3) Age nearest birthday. But whatever be the definition of age adopted the types of error given below would be common to them all:—

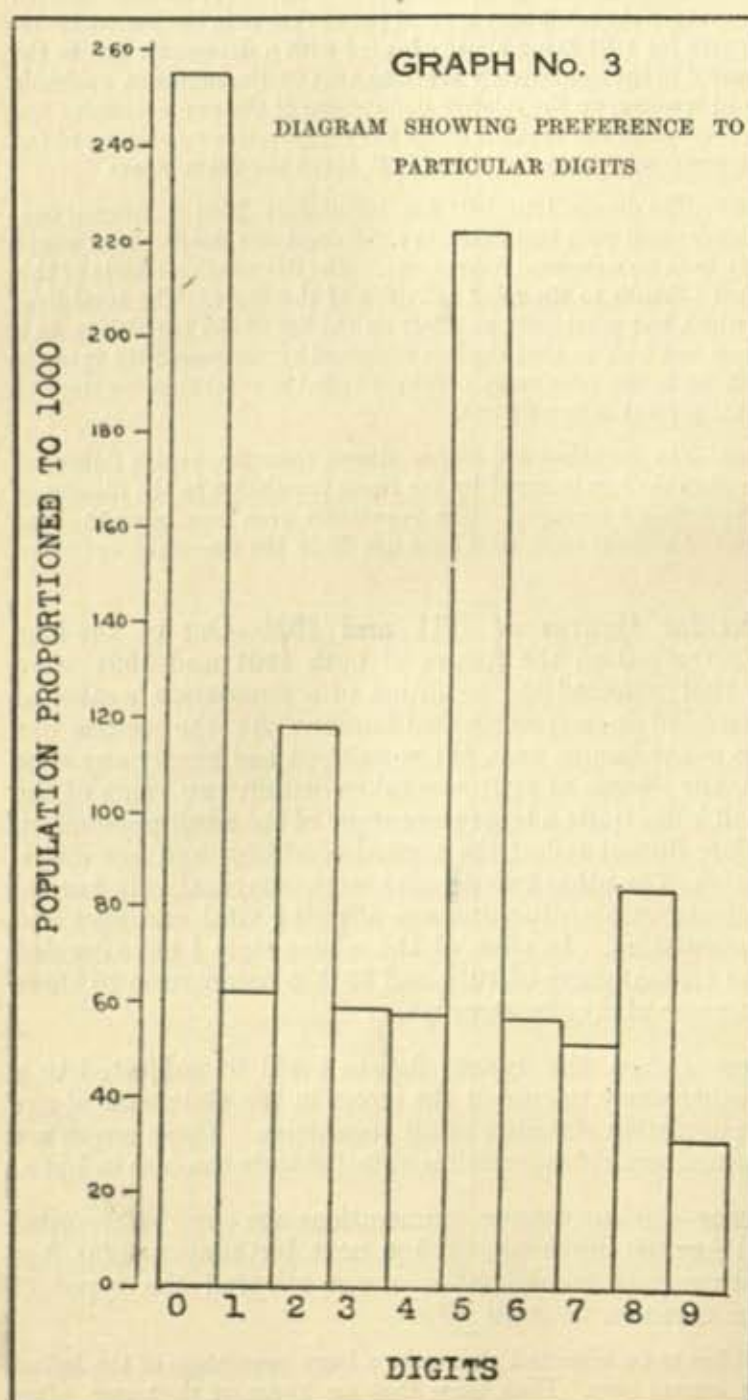
(i) *Accidental Errors*—It has to be admitted that quite a large percentage of the Indian population do not know their correct ages. Even those that are aware of their ages, often

TABLE No. I

Digit of age returned in Census	Number per 1000 recorded in respect of each digit of age	Order of preference
1	2	3
0	255	I
1	62	V
2	118	III
3	59	VI
4	58	VII
5	223	II
6	57	VIII
7	52	IX
8	84	IV
9	32	X

give them in multiples of 5 or in even numbers. In the large number of cases in which the enumerator has to fill up the age column himself the amount of error is hardly mitigated—it being a psychological fact that multiples of 5 and even numbers are more readily guessed than numbers ending in digits 1, 3, 7, 9. Thus in the age schedules of the enumerator certain digits and their multiples get an unaccountable preference over others. The accompanying table gives the preference shown to respective digits as obtained from 1931 Census figures (males).

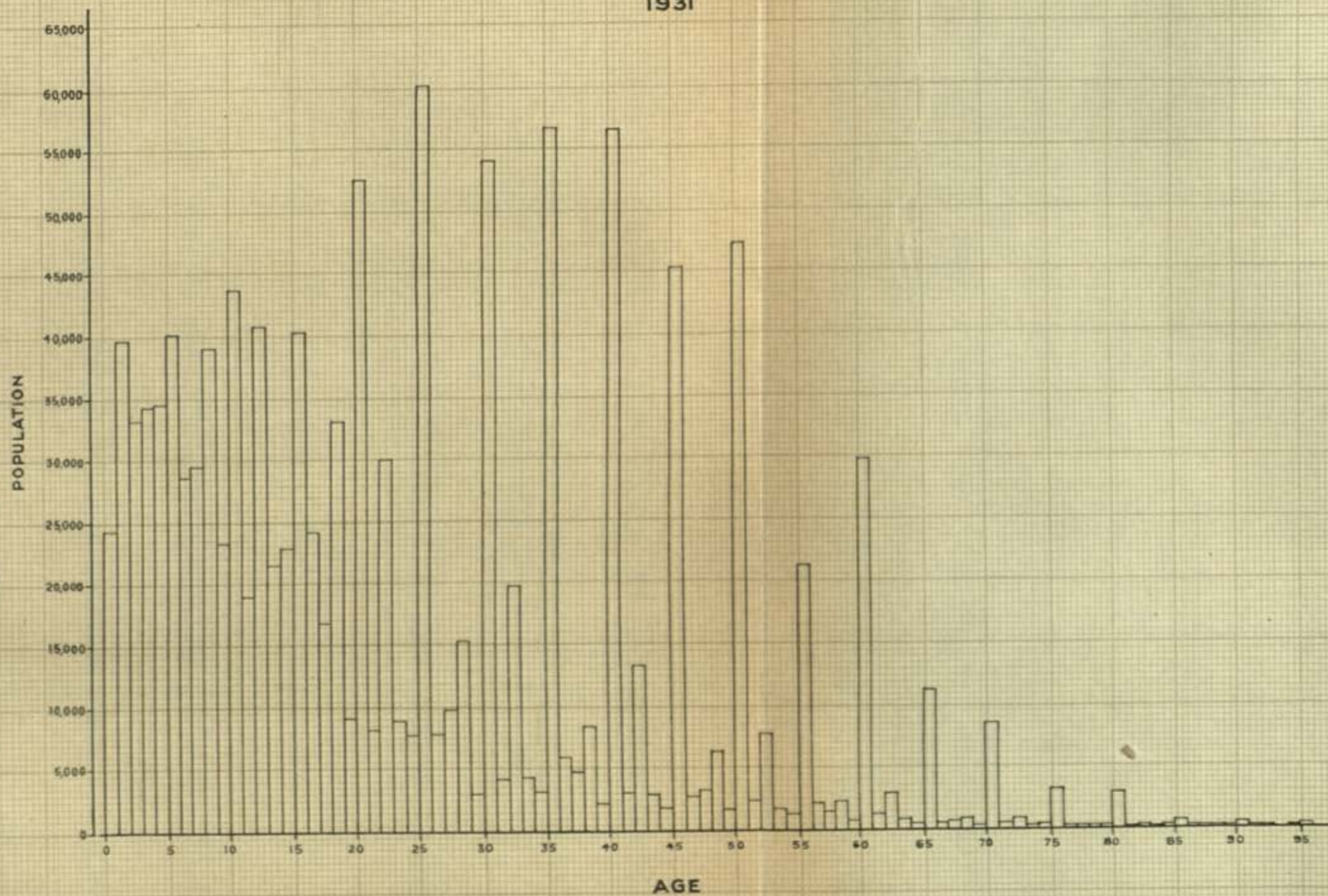
From the Table it is clear that more than 25 per cent of the population state their ages in multiples of 10 and another 22 per cent in uneven multiples of 5. Of the remaining digits, the even ones get a decided preference over the odd numbers. Numbers ending with digit 9 seem to be most unlucky as only 3 per cent of the population are returned at those ages. Thus in actual census figures the number of persons returned at age 30 is 112,469 whereas at the adjacent ages 29 and 31 the numbers returned are 5,312 and 6,600 only. It is evident that persons living at age 30 cannot be so much in excess to persons at the adjacent ages 29 and 31. The two following graphs show the discrepancies above referred to. Graph No. 2 illustrates the uneven and disproportionate distribution of the State population from age to age as obtained from the 1931 Census enumerations.



Graph No. 3 illustrates the preference in respect of each digit out of a sample population of 1000.

It may be remarked that the errors described above are not special to the Baroda State. The census figures of other Indian provinces are mostly of the same nature. The order of preference to respective digits as deduced in the 1921 Indian Census Report is as 0, 5, 2, 8, 6, 4, 3, 7, 1, 9, which is very nearly the same as in the State population. The amount of misstatement for instance in a province like Bengal is seen from the following table which gives the deviations obtained from a comparison between the reported and graduated numbers per 100,000 of sample population. Side by side with these numbers are set out the numbers for Baroda State deduced in the same way for the 1921 Census.

GRAPH N^o2
BARODA STATE
DIAGRAM SHOWING INACCURACIES OF AGE RETURNS
(MALES)
 1931



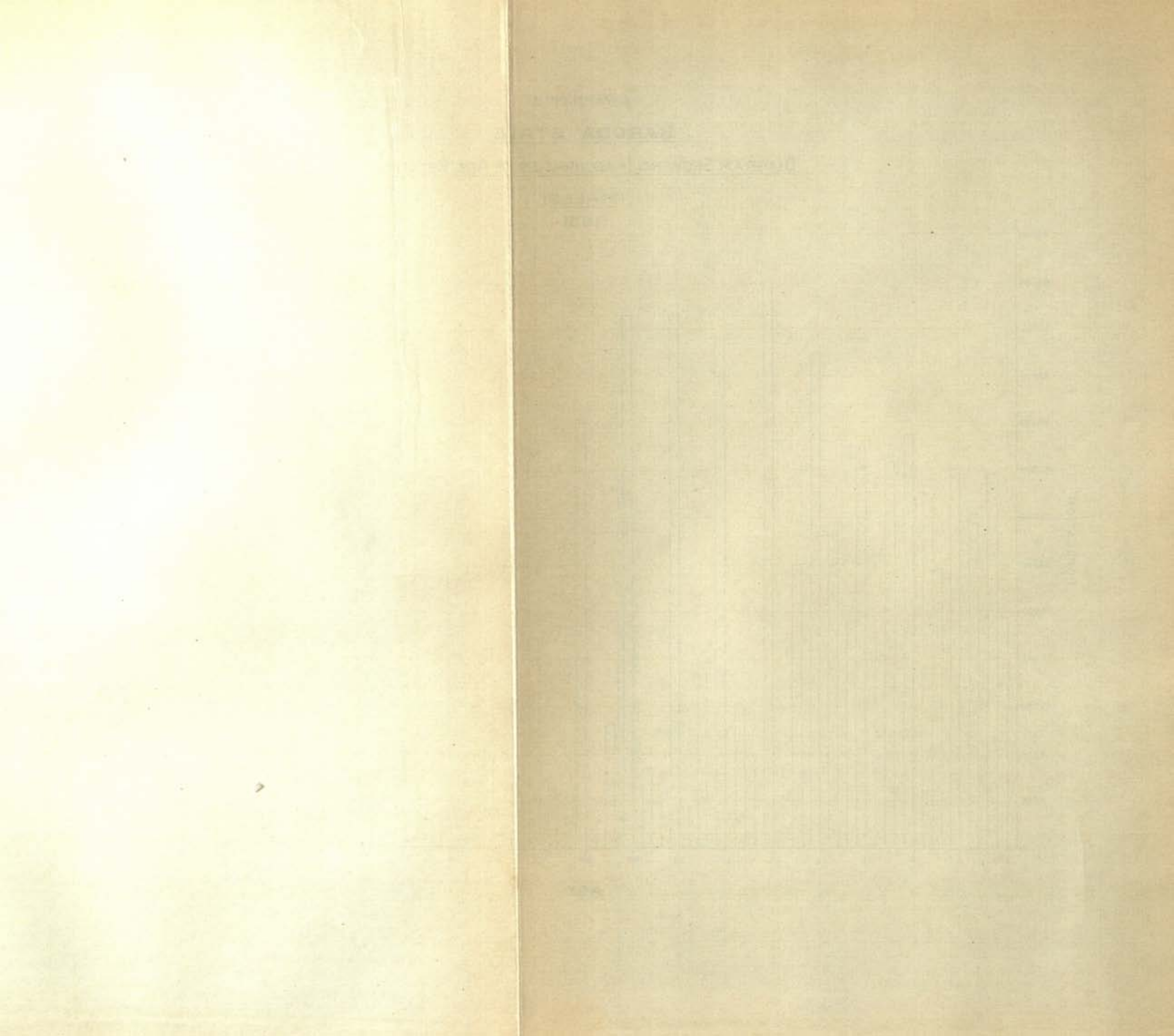


TABLE NO. II

Estimated misstatement of age based on a comparison of the reported and graduated numbers of Males at each age in Baroda State (calculated after 1921 Census). Similar numbers in Bengal (calculated after 1911 Census) given in Column 5.

AGE	Reported Numbers 1921 (Baroda)	Graduated Numbers 1921 (Baroda)	Difference between the graduated and reported numbers (Baroda)		Difference between the graduated and reported numbers (Bengal)	
1	2	3	4		5	
			+	-	+	-
0	3,081	3,786	....	705	....	1,321
1	1,444	3,281	....	1,837	....	2,195
2	2,400	3,012	....	612	....	377
3	2,571	2,831	....	260	....	5
4	2,924	2,705	219	....	....	51
5	3,420	2,613	807	....	853	....
6	2,586	2,544	42	....	142	....
7	2,622	2,489	133	....	378	....
8	3,501	2,443	1,058	....	1,159	....
9	1,981	2,404	....	423	....	379
10	3,813	2,369	1,444	....	1,469	....
11	1,529	2,337	....	808	....	977
12	3,619	2,306	1,313	....	1,572	....
13	1,690	2,277	....	587	....	1,151
14	1,637	2,247	....	610	....	392
15	3,235	2,217	1,018	....	....	126
16	1,732	2,187	....	455	....	76
17	1,076	2,155	....	1,079	....	1,106
18	1,890	2,122	....	232	538	....
19	529	2,087	....	1,558	....	1,157
20	3,578	2,050	1,528	....	1,039	....
21	602	2,010	....	1,408	....	1,183
22	1,918	1,969	....	51	295	....
23	567	1,926	....	1,359	....	1,073
24	564	1,881	....	1,317	....	634
25	5,333	1,836	3,497	....	2,816	....
26	633	1,789	....	1,156	....	528
27	778	1,741	....	963	....	644
28	1,425	1,693	....	268	450	....
29	249	1,644	....	1,395	....	967
30	5,532	1,595	3,397	....	3,253	....
31	313	1,546	....	1,233	....	1,026
32	1,678	1,496	182	....	703	....
33	344	1,447	....	1,103	....	922
34	263	1,397	....	1,134	....	772
35	5,315	1,347	3,968	....	2,148	....
36	453	1,298	....	845	74	....
37	374	1,249	....	875	....	690
38	683	1,201	....	518	....	86
39	187	1,153	....	966	....	763
40	4,792	1,105	3,687	....	3,213	....
41	220	1,059	....	839	....	725
42	947	1,012	....	65	....	87
43	172	967	....	795	....	754
44	149	923	....	774	....	558
45	3,373	878	2,495	....	1,601	....
46	196	835	....	639	....	513
47	202	793	....	591	....	538
48	455	752	....	297	....	189
49	123	712	....	589	....	554
50	3,889	672	3,227	....	2,282	....
51	199	634	....	435	....	490
52	539	597	....	58	....	178
53	111	561	....	450	....	491
54	97	429	....	429	....	415
55	1,621	492	1,129	....	519	....
56	139	460	....	321	....	283
57	114	428	....	314	....	348
58	171	398	....	227	....	216
59	57	369	....	312	....	336
60	2,104	341	1,763	....	1,562	....
61	73	314	....	241	....	288
62	168	289	....	121	....	143
63	44	264	....	220	....	276

TABLE NO. II—*contd.*

AGE	Reported Numbers 1921 (Baroda)	Graduated Numbers 1921 (Baroda)	Difference between the Graduated and reported Numbers (Baroda)		Difference between the Graduated and reported Numbers (Bengal)	
1	2	3	4		5	
64	34	241	+	—	+	—
65	655	219	....	207	....	220
66	41	198	436	....	175	....
67	39	179	....	157	....	199
68	51	160	....	140	....	176
69	21	143	....	109	....	119
			....	122	....	150
70	506	127	379	....	445	....
71	20	112	....	92	....	108
72	52	98	....	46	....	39
73	10	85	....	75	....	88
74	10	73	....	63	....	68
75	198	62	136	....	101	....

From this table we see that the excess in quinary and decennial ages in cases of both Bengal and Baroda are practically the same. For instance, the deviations at ages 9, 10, 11 in the case of Baroda are —423, +1,444, —808 whereas for Bengal they are —379, +1,469, —977 respectively.

In the light of the above discussions regarding the nature and amount of error in age returns it seems doubtful whether even an accurate mathematical formula of correction would be able to iron out the roughness in the data near quinary and decennial ages. As has already been emphasised the ages 0, 5, 10, 15, etc. usurp among themselves more than 47 per cent of the total population leaving the remaining only to be claimed by the other 80 individual ages. The difficulty of finding suitable formulæ to effect the requisite redistribution has been recognised by all statisticians dealing with Indian Census figures. I have only to add that whatever be the methods adopted, the final result cannot be anything more than a rough approximation to the actual state of affairs. It is expected that the spread of education in the masses would make them gradually conscious of the statistical importance of age figures.

(ii) *Systematic Errors*—To add to the accidental misstatements of age referred to above there are other kinds of error known as systematic errors. These being more or less deliberate may be classified under the following heads :—

(a) On account of certain social handicaps the ages of unmarried girls who have attained maidenhood are seldom stated accurately. Thus quite a large percentage of the female population aged 14 to 16 are enumerated in the lower ages 11, 12 and 13.

(b) On account of legal restrictions imposed on marriage age there is a tendency to overstate the ages of young wives specially if they attain motherhood.

(c) There is a general tendency to be considered young. In European countries this tendency is very much pronounced in the fair sex so that the figures of recorded female population in the ages 25-45 can never be trusted. In India this tendency is more pronounced in bachelors and widowers approaching the middle of life.

TABLE No. III

AGE	Number of persons recorded
1	2
70	18,123
75	6,124
80	6,180
85	1,028
90	1,034
95	231
100	190
105	33
110	13
115	5
120	8

(d) There is a marked desire for old persons to overstate their ages. This may be illustrated by the following table giving the returns at the older quinary and decennial ages beginning from seventy. As the death-rate increases rapidly after age 60 or 65, numbers at successive ages in the table are greater than they actually should be. In all 38,158 persons have been returned at the ages 70-120 which is wholly disproportionate to the total population. Further the returns at these ages are so extremely abrupt from age to age that they cannot be usefully utilised for the construction of a life table. These inaccuracies at the older ages even affect the figures in the life table at earlier ages for "the expectation of life at each age under 70 is dependent on the rates of mortality at all ages above 70."

126. Method of Correction as adopted in 1921—(COLUMNAR DIFFERENCING).—In order to effect the necessary amount of corrections in the crude population figures, a mathematical formula was adopted in the previous Census Reports. The numbers were first grouped in quinary groups 0-4, 5-9, (age last birthday) and then by means of the above formula, one half of the excess at the ages which are multiples of 5 over and above the mean value of the numbers at the preceding and the following ages, was transferred to the preceding age group. This greatly reduced the plumbings at multiples of 5 and it was argued that no further corrections were needed for small errors in intermediate ages like 22, 23, etc. For instance a man aged 33 may return his age as 32 or 34 but since individual ages were discarded and only quinary groups were taken for final graduation, inaccuracies of the above type had no effect as long as the reported age fell in the proper quinary group. For purposes of calculations the process took the following form :—

$$(U_{5n} + U_{5n+1} + U_{5n+2} + U_{5n+3} + U_{5n+4}) - \frac{1}{2} [U_{5n} - \frac{1}{2} (U_{5n-1} + U_{5n+1})] \\ + \frac{1}{2} [U_{5n+5} - \frac{1}{2} (U_{5n+4} + U_{5n+6})] = \sum_0^4 U_{5n+t} - \frac{1}{4} (\Delta^2 U_{5n+5} - \Delta^2 U_{5n})$$

127. Definition of Age—Before discussing the above method, it is necessary to consider the degree of accuracy that might be obtained by changing the definition of age. In previous censuses age was recorded as at last birthday so that the correctness of the data depended on the assumption that the majority of the population understood the meaning of age last birthday. In Punjab in 1891 age was recorded as at next birthday whereas in the 1901 Census age was recorded as at last birthday. In both these cases it was found by comparing the figures with standard graduated tables that the nature and amount of misstatement were unchanged. This no doubt was due to the fact that the majority of the population or even of the enumerators did not understand the implications either of last or next birthday. The preferences to particular digits in both cases were in the order 0, 5, 2, 8, 6, 4, 3, 7, 1, 9, so that the amount of correction necessary was the same. For these reasons it was suggested in the 1921 Government of India Actuarial Report that the ages recorded by the enumerators were probably on the basis of nearest birthday in spite of the definite instructions to record them as at last birthday. As the majority of the Indian population is unconscious about their correct age and more so as regards the finer distinction of last and next birthday the above suggestion seems to be plausible. For these reasons for the Census of 1931, it was decided to record age as at nearest birthday instead of last birthday. It is to be seen how this change in the definition of age, brings about the desired amount of accuracy in the age returns of future censuses.

128. Methods of Grouping—The next is the question of grouping the age returns conveniently. It has been pointed out by Mr. Meikle* that there are fifteen different ways of grouping. The method so long has been to schedule the figures in groups of 5 so that ages which were multiples of 5 came at the beginning of each quinary group, *i.e.* groups 0-4, 5-9, The grouping can also be arranged so that multiples of 5 are placed at second, third, fourth or fifth place in each quinary group. Thus each of the methods of recording age, *i.e.* as at last, next or nearest birthday would give rise to five different ways of grouping. It has already been pointed out that the greatest plumbings of the age returns were at multiples of 5. By grouping the figures into groups 0-4, 5-9, *i.e.* by having multiples of five in the first place of each group, a great amount of loading was unavoidably brought about at the beginning of each group. The method of correction of these groups by the Columnar differencing formula was mainly necessary to disperse the accumulation of the data at those points. From the graphs enclosed in the present report, it is evident that the heapings at ages like 20, 25, 30, . . . are very much in excess to the dips at the adjacent ages 19, 21, 24, 26, 29, 31, etc. It is doubtful whether the amount of the transfers from each of the age groups to the preceding ones effected by the application of the Columnar differencing formula would smooth out the ups and downs which are so greatly in contrast in the crude data. It has therefore to be decided at the very outset whether or not the method of grouping should be changed in the interests of accuracy.

* Government of India Actuarial Report, 1921.

129. Method recommended by Mr. Meikle—Of the fourteen other methods described by Mr. Meikle, he has recommended that groups should be so made as to have multiples of 5 at the 2nd or 4th place of each group. Both the 2nd and 4th place methods have got special advantages and to get the benefit of both it has been suggested to combine them alternately. We can have the best advantages of both these methods if we replace the quinary groups by groups of 3 and 7 ages alternately, so that, ages which are respectively odd and even multiples of 5 come in the middle place of these groups *e.g.* 4-6, 7-13, 14-16, 17-23, etc., all ages being recorded as at nearest birthday. The exact limits of age for each group which would be obtained by this system of grouping with ages stated at nearest birthday are given by the following table :—

TABLE NO. IV

Groups of age stated according to age nearest birthday	Limits of exact age in the sub-division of each group in Column I
1	2
0	0— $\frac{1}{2}$
1	$\frac{1}{2}$ — $1\frac{1}{2}$
2	$1\frac{1}{2}$ — $2\frac{1}{2}$
3	$2\frac{1}{2}$ — $3\frac{1}{2}$
4 to 6	$3\frac{1}{2}$ — $6\frac{1}{2}$
7 to 13	$6\frac{1}{2}$ — $13\frac{1}{2}$
14 to 16	$13\frac{1}{2}$ — $16\frac{1}{2}$
17 to 23	$16\frac{1}{2}$ — $23\frac{1}{2}$
24 to 26	$23\frac{1}{2}$ — $26\frac{1}{2}$
27 to 33	$26\frac{1}{2}$ — $33\frac{1}{2}$
34 to 36	$33\frac{1}{2}$ — $36\frac{1}{2}$
etc.	etc.

It is now necessary to evolve a method of adjustment to deduce from the above ternary and septenary groups, the usual quinary groups, *i.e.* 0-1, 1-2, 2-3, 4-5, 5-10, 10-15, etc. In past Indian censuses ages have always been arranged in quinary groups and to facilitate comparison it is a prime necessity to schedule our data ultimately in the above form.

(a) *The process for the earliest ages*—To get the groups 0-1, 1-2, 2-3, 3-4, we may amalgamate the first group 0- $\frac{1}{2}$ with half of the second $\frac{1}{2}$ - $1\frac{1}{2}$ and the remaining half of the second with half of the third group and so on. Thus we may get the figures of population living

over exact age	0	and under	1
"	"	"	1
"	"	"	2
"	"	"	2
"	"	"	3

which would perhaps be more accurate than the figures obtained from statements of age at last or next birthday. It may be argued that by taking the mean of the consecutive groups as described above, we overlook the decrement of the population from age to age. In order to find the actual percentage of each group which is to be amalgamated with the previous group, reference must be made to a standard graduated table which no doubt embodies the real variation of population in successive ages.

(b) *The process for the quinary groups*—To obtain the quinary groups 5-10, 10-15, 15-20, etc., from the ternary and septenary groups we have to ascertain how many persons of the age group 4-6 (nearest birthday) are over exact age 5 and how many persons of group 7-13 are below exact age 10 and how many of group 13-16 are below exact age 15 and so on. The percentages of such transfers can be worked out by reference to a standard graduated table. I calculated the corresponding ratios by utilising the Baroda graduated figures of 1921 and found them to be very nearly the same as those obtained by Mr. Meikle except for the age groups 57-63 and 67-73. For these ages the ratios of persons below and above 60 and 70 respectively found by reference to the Baroda graduation (1921) was

56 : 44 and 60 : 40 whereas those adopted in the Indian Report were 55 : 45 and 58 : 42. For the correction of the State Census figures I have adopted the ratios 56 : 44 and 60 : 40 for the age groups above referred to. The following table gives the complete method of correction described above for the 1931 figures (males) :—

TABLE NO. V

TABLE SHOWING THE WORKING OF THE METHODS OF CORRECTION APPLIED TO
1931 CENSUS FIGURES WITH AGES RECORDED AS AT NEAREST BIRTHDAY
(Males—1931)

Groups of age stated according to age nearest birthday	Limits of exact age in the sub-division of each group in Column (1)	Number in each group in Column (2) stated as percentages of the total number in the corresponding group in Column (1)	Population recorded in each group in Column (1)	Population redistributed into groups shown in Column (2)	Population in each group shown in Column (7)	Limits of exact age in the corresponding group in Column (6)	Numbers in Column (6) proportioned to 100,000
1	2	3	4	5	6	7	8
0	0 - $\frac{1}{2}$	100	24,408	24,408	45,074	0- 1	3,583
1	$\left\{ \begin{array}{l} \frac{1}{2} - 1 \\ 1 - 1\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 52 \\ 48 \end{array} \right.$	39,742	$\left\{ \begin{array}{l} 20,666 \\ 19,076 \\ 17,120 \end{array} \right.$		1- 2	2,878
2	$\left\{ \begin{array}{l} 1\frac{1}{2} - 2 \\ 2 - 2\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 51.5 \\ 48.5 \end{array} \right.$	33,242	$\left\{ \begin{array}{l} 16,122 \\ 17,560 \end{array} \right.$	33,682	2- 3	2,678
3	$\left\{ \begin{array}{l} 2\frac{1}{2} - 3 \\ 3 - 3\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	34,432	$\left\{ \begin{array}{l} 16,872 \\ 17,576 \end{array} \right.$	34,448	3- 4	2,739
4- 6	$\left\{ \begin{array}{l} 3\frac{1}{2} - 4 \\ 4 - 5 \\ 5 - 6\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 17 \\ 34 \\ 49 \end{array} \right.$	103,389	35,152	35,152	4- 5	2,795
7-13	$\left\{ \begin{array}{l} 6\frac{1}{2} - 10 \\ 10 - 13\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	216,678	$\left\{ \begin{array}{l} 50,661 \\ 110,506 \end{array} \right.$	161,167	5-10	12,813
14-16	$\left\{ \begin{array}{l} 13\frac{1}{2} - 15 \\ 15 - 16\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	87,336	$\left\{ \begin{array}{l} 106,172 \\ 44,541 \end{array} \right.$	150,713	10-15	11,982
17-23	$\left\{ \begin{array}{l} 16\frac{1}{2} - 20 \\ 20 - 23\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 52 \\ 48 \end{array} \right.$	158,328	$\left\{ \begin{array}{l} 42,795 \\ 82,331 \end{array} \right.$	125,126	15-20	9,948
24-26	$\left\{ \begin{array}{l} 23\frac{1}{2} - 25 \\ 25 - 26\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	75,820	$\left\{ \begin{array}{l} 75,997 \\ 38,668 \end{array} \right.$	114,665	20-25	9,116
27-33	$\left\{ \begin{array}{l} 26\frac{1}{2} - 30 \\ 30 - 33\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 52 \\ 48 \end{array} \right.$	110,088	$\left\{ \begin{array}{l} 37,152 \\ 57,246 \end{array} \right.$	94,398	25-30	7,505
34-36	$\left\{ \begin{array}{l} 33\frac{1}{2} - 35 \\ 35 - 36\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	65,424	$\left\{ \begin{array}{l} 52,842 \\ 33,366 \end{array} \right.$	86,208	30-35	6,854
37-43	$\left\{ \begin{array}{l} 36\frac{1}{2} - 40 \\ 40 - 43\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 53 \\ 47 \end{array} \right.$	91,064	$\left\{ \begin{array}{l} 32,058 \\ 48,264 \end{array} \right.$	80,322	35-40	6,386
44-46	$\left\{ \begin{array}{l} 43\frac{1}{2} - 45 \\ 45 - 46\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 52 \\ 48 \end{array} \right.$	49,972	$\left\{ \begin{array}{l} 42,800 \\ 25,985 \end{array} \right.$	68,785	40-45	5,469
47-53	$\left\{ \begin{array}{l} 46\frac{1}{2} - 50 \\ 50 - 53\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 54 \\ 46 \end{array} \right.$	70,230	$\left\{ \begin{array}{l} 23,987 \\ 37,924 \end{array} \right.$	61,911	45-50	4,922
54-56	$\left\{ \begin{array}{l} 53\frac{1}{2} - 55 \\ 55 - 56\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 52 \\ 48 \end{array} \right.$	25,746	$\left\{ \begin{array}{l} 32,306 \\ 13,388 \end{array} \right.$	45,694	50-55	3,633
57-63	$\left\{ \begin{array}{l} 56\frac{1}{2} - 60 \\ 60 - 63\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 56 \\ 44 \end{array} \right.$	39,284	$\left\{ \begin{array}{l} 12,358 \\ 21,999 \end{array} \right.$	34,357	55-60	2,731
64-66	$\left\{ \begin{array}{l} 63\frac{1}{2} - 65 \\ 65 - 66\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 53 \\ 47 \end{array} \right.$	12,416	$\left\{ \begin{array}{l} 17,285 \\ 6,580 \end{array} \right.$	23,865	60-65	1,897
67-73	$\left\{ \begin{array}{l} 66\frac{1}{2} - 70 \\ 70 - 73\frac{1}{2} \end{array} \right.$	$\left\{ \begin{array}{l} 60 \\ 40 \end{array} \right.$	11,750	$\left\{ \begin{array}{l} 5,836 \\ 7,050 \end{array} \right.$	12,886	65-70	1,024
74 and over	73 $\frac{1}{2}$ and over	100	8,468	8,468	13,168	70 and over	1,047
					1,257,817		100,000

130. Smoothed Age Curve for 1931—Both the male and female figures of 1931 were thus corrected and made into quinary groups and then proportioned to 100,000. To obtain the figures of population that belong to each individual age, the above figures in quinary groups were redistributed graphically as shown by Graphs No. 4 and 5.

The distribution so obtained for males and females are recorded in the following table. These figures give approximately the true population out of a sample of 100,000 at each age in 1931 which would have been the case had ages been recorded correctly.

TABLE NO. VI

PERSONS LIVING AT EACH AGE DEDUCED FROM THE SMOOTHED AGE CURVES OF 1931

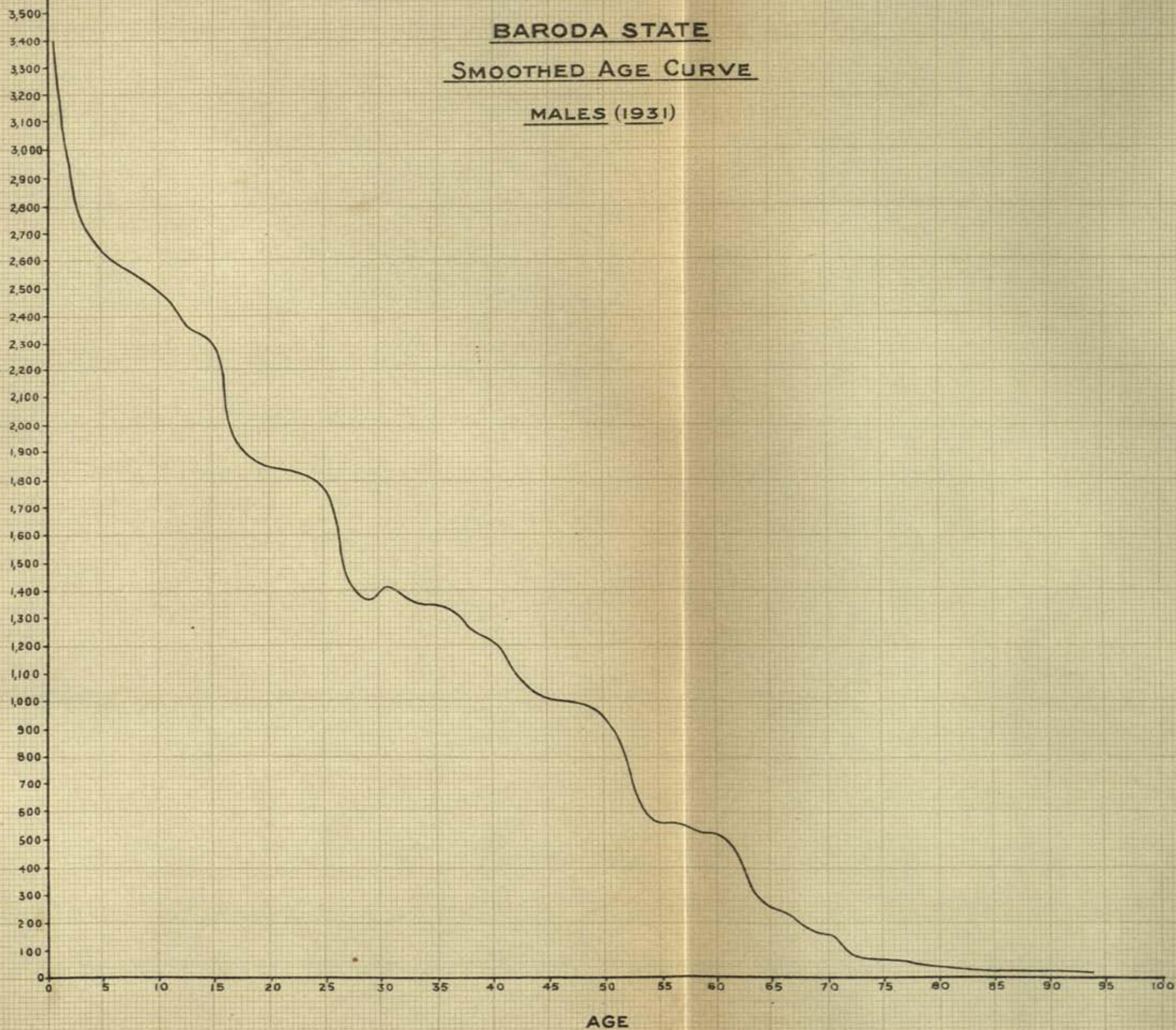
Age limits	Males	Females	Age limits	Males	Females	Age limits	Males	Females
1	2	3	1	2	3	1	2	3
0-1	3,402	3,506	32-33	1,368	1,356	64-65	261	329
1-2	3,039	3,224	33-34	1,351	1,340	65-66	246	311
2-3	2,843	2,997	34-35	1,339	1,336	66-67	225	262
3-4	2,728	2,818	35-36	1,335	1,332	67-68	199	171
4-5	2,661	2,685	36-37	1,314	1,321	68-69	175	127
5-6	2,615	2,576	37-38	1,275	1,303	69-70	161	118
6-7	2,582	2,498	38-39	1,239	1,279	70-71	142	109
7-8	2,563	2,437	39-40	1,223	1,254	71-72	88	104
8-9	2,541	2,391	40-41	1,197	1,220	72-73	74	98
9-10	2,512	2,346	41-42	1,142	1,154	73-74	67	84
10-11	2,483	2,329	42-43	1,078	1,088	74-75	62	76
11-12	2,436	2,312	43-44	1,040	1,011	75-76	59	64
12-13	2,379	2,295	44-45	1,012	976	76-77	52	57
13-14	2,348	2,274	45-46	1,003	962	77-78	47	51
14-15	2,336	2,242	46-47	997	957	78-79	41	45
15-16	2,277	2,191	47-48	983	935	79-80	38	41
16-17	2,040	2,102	48-49	975	902	80-81	34	37
17-18	1,912	2,022	49-50	964	890	81-82	30	33
18-19	1,868	1,973	50-51	916	862	82-83	28	30
19-20	1,851	1,939	51-52	820	768	83-84	26	28
20-21	1,842	1,931	52-53	723	625	84-85	25	27
21-22	1,834	1,923	53-54	609	571	85-86	23	25
22-23	1,821	1,919	54-55	565	552	86-87	21	23
23-24	1,816	1,907	55-56	559	544	87-88	19	21
24-25	1,803	1,892	56-57	552	541	88-89	18	20
25-26	1,758	1,844	57-58	544	537	89-90	17	18
26-27	1,592	1,664	58-59	525	524	90-91	15	17
27-28	1,430	1,458	59-60	520	510	91-92	13	14
28-29	1,358	1,384	60-61	509	478	92-93	12	13
29-30	1,367	1,356	61-62	456	438	93-94	11	12
30-31	1,402	1,382	62-63	397	392	94-95	11	11
31-32	1,394	1,389	63-64	305	351	95 and over	92	109

GRAPH N°4

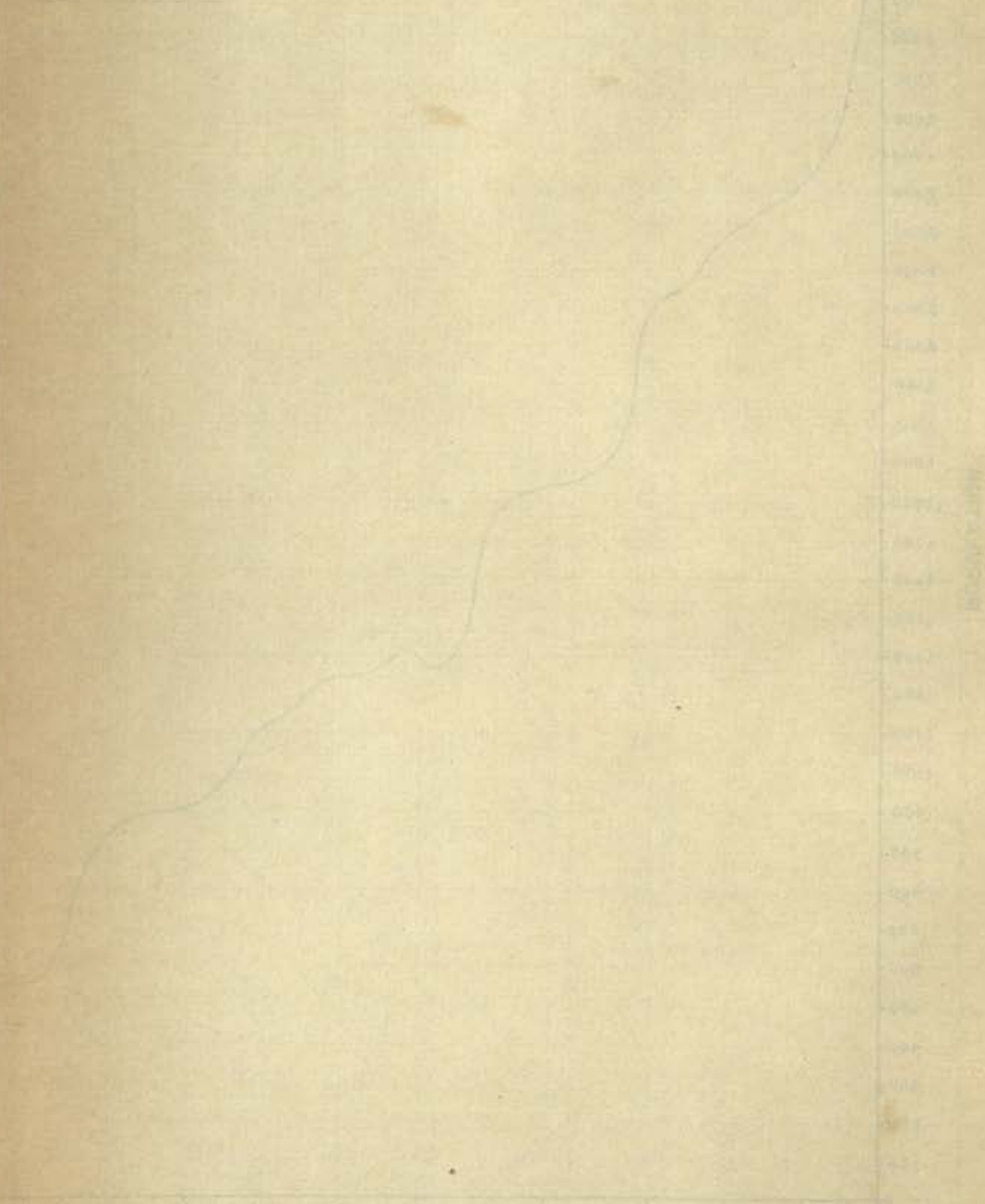
BARODA STATE
SMOOTHED AGE CURVE

MALES (1931)

POPULATION



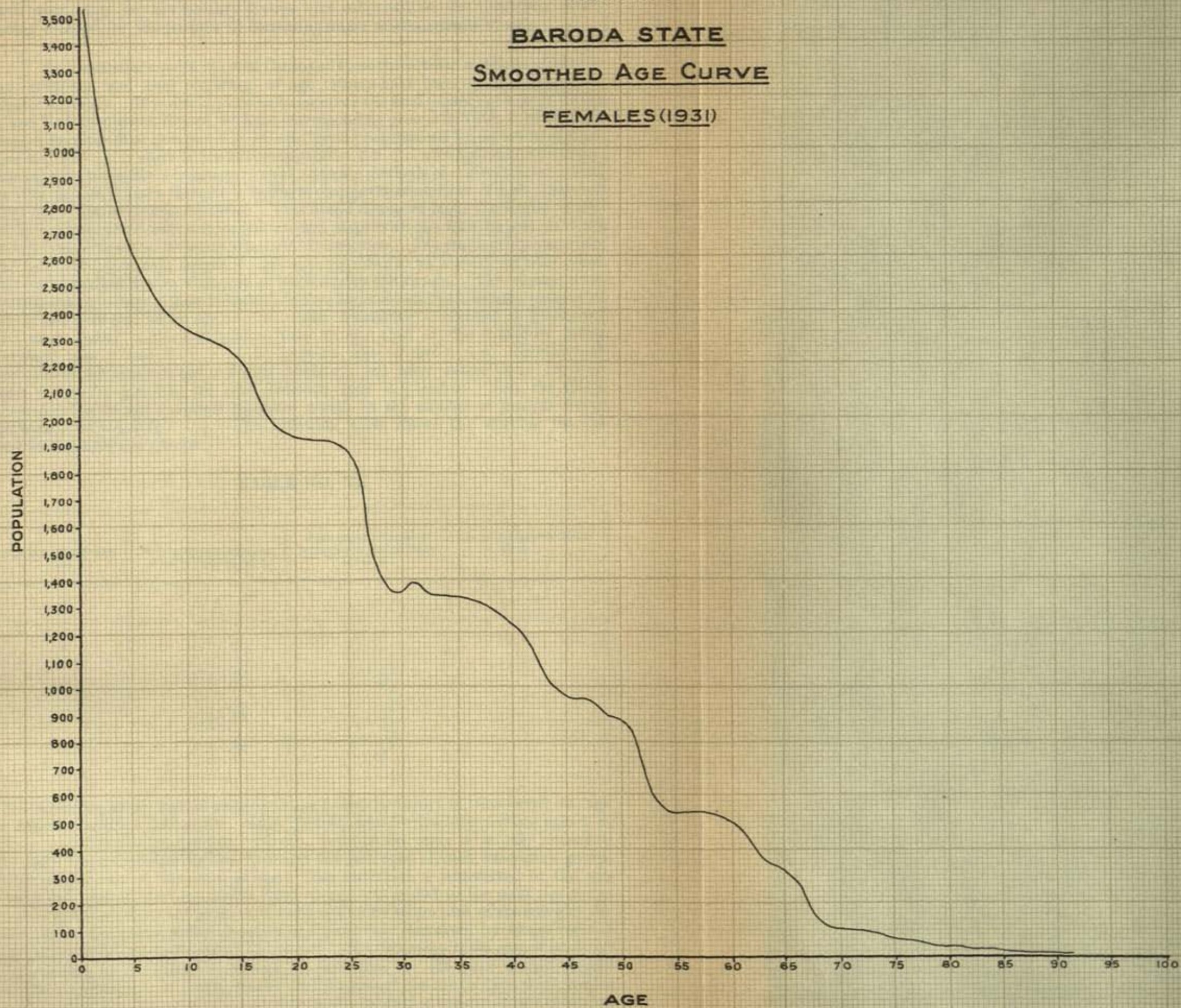
WATER LEVEL
STATION NO. 100
DATE 10/1/1911



GRAPH N°5

BARODA STATE
SMOOTHED AGE CURVE

FEMALES (1931)



131. Correction of Previous Census Figures—Before proceeding to graduation it is necessary to incorporate with the 1931 figures, the figures of 1901, 1911 and 1921. In all the past censuses (i) age was recorded as at last birthday, (ii) quinary groups were made by keeping multiples of age 5 at the first place of each group, and (iii) the quinary groups were subjected to the Columnar differencing method for the purpose of correcting minor misstatements of age.

As discussed above for the 1931 Census all these three basic methods of recording, grouping, and final correction of age returns have been changed to achieve greater accuracy. It is not impossible to compare the final quinary groups in Tables A and B of the present Report, with the corresponding groups in Table A of the 1921 Report since the final groups 0-5, 5-10, etc., giving populations living between exact ages 0-5, 5-10, agree to the 1921 groups of 0-4, 5-9 with ages at last birthday. But in order to get the advantage of more accurate methods of correction as applied to 1931 figures, I have thought it better to change the crude data of 1901, 1911 and 1921 from *last* to *nearest* birthday. This would moreover make the figures of previous censuses absolutely comparable at each stage with the 1931 figures as both would then be based on the same principles of correction. The problem is to ascertain the probable population figures if ages were recorded as at *nearest* birthday when the corresponding figures with ages at *last* birthday are known. The enumeration corresponding to age x (last birthday) in the previous censuses contains persons of age x and over and below age $x + 1$. After consulting a number of graduated and ungraduated tables I decided to take 51 per cent of the numbers living between ages x and $x + 1$ to be between ages x and $x + \frac{1}{2}$. Similarly 51 per cent of the entry at age $x-1$ (last birthday) has been taken to be between ages $x-1$ and $x-\frac{1}{2}$ and 49 per cent between ages $x-\frac{1}{2}$ and x . Thus the group corresponding to age x nearest birthday would be the number of persons living between ages $x-\frac{1}{2}$ and $x + \frac{1}{2}$. The following table shows the working for the first four annual age groups :—

TABLE NO. VII

Age group (last birthday)	Half-yearly sub-divisions of the periods in col. 1	Percentages of persons belonging to sub-divisions in col. 2	Age group (nearest birthday)
1	2	3	4
0	$\left\{ \begin{array}{l} 0 - \frac{1}{2} \\ \frac{1}{2} - 1 \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	0
1	$\left\{ \begin{array}{l} 1 - 1\frac{1}{2} \\ 1\frac{1}{2} - 2 \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	1
2	$\left\{ \begin{array}{l} 2 - 2\frac{1}{2} \\ 2\frac{1}{2} - 3 \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	2
3	$\left\{ \begin{array}{l} 3 - 3\frac{1}{2} \\ 3\frac{1}{2} - 4 \end{array} \right.$	$\left\{ \begin{array}{l} 51 \\ 49 \end{array} \right.$	3

The remaining 49 per cent of persons at age 3 (last birthday) is transferred to age 4 nearest birthday and so on. Since the total sum for the intermediate ages 5, 8, 9, in the groups 4-6, 7-13, etc., remains the same it is only necessary to make the corrections for the first and the last ages of each successive group. Thus 49 per cent of the entry at age 3 (last birthday) is transferred to the age group 4-6, and 49 per cent of the entry at age 6 is added to the next age group 7-13. In short every age group is to be increased by 49 per cent of the entry at the last annual age period in the previous age group and decreased by 49 per cent of the entry at its own last annual age period. The following table shows in detail the working of the complete process of correction to the 1911 Census figures (males). Columns 1 to 5 refer to the modification of the crude data from last to nearest birthday and columns 7 to 11 refer to the method of correction and grouping from ternary and septenary groups as applied to 1931 Census figures.

TABLE NO. VIII

SPECIMEN TABLE SHOWING THE WORKING OF THE ADJUSTMENTS AND CORRECTIONS AS APPLIED TO THE MALE AND FEMALE FIGURES OF 1901, 1911 AND 1921 CENSUSES

(Males 1911)

AGE GROUP.	Adjustments	Net increase or decrease for each age group in Col. (1)	Recorded entry for each age group in Col. (1) with ages recorded as at last birthday	Corrected entry for each age group in Col. (1) with ages as at nearest birthday	Groups of age stated according to nearest birthday	Limits of exact age in the subdivision of each group in Col. (6)	Percentages as in Col. (3) of Table No. (3)	Population redistributed into groups shown in Col. (7)	Population in each age group shown in Col. (11)	Limits of exact age for the corresponding groups in Col. (10)	Numbers in Col. (10) proportioned to 100,000
1	2	3	4	5	6	7	8	9	10	11	12
0	-20,386	-20,386	41,605	21,219	0	0- $\frac{1}{2}$	100	21,219	37,074	0-1	3,512
1	+20,386 -9,707	+10,679	19,811	30,490	1	1- $\frac{1}{2}$ 1-1 $\frac{1}{2}$	52 48	15,855 14,635			
2	+9,707 -16,357					1 $\frac{1}{2}$ -2 2-2 $\frac{1}{2}$	51.5 48.5	13,767 12,965	28,402	1-2	2,690
3	+16,357 -15,132	+1,225	30,881	32,106	2	2 $\frac{1}{2}$ -3 3-3 $\frac{1}{2}$	51 49	16,374 15,732			
4-6	+15,132 -11,116					3 $\frac{1}{2}$ -4 4-5 5-6 $\frac{1}{2}$	17 34 49	15,643 31,286 45,090	31,375	3-4	2,971
7-13	+11,116 -7,726	+3,390	147,268	150,658	7-13	6 $\frac{1}{2}$ -10 10-13 $\frac{1}{2}$	51 49	76,836 73,822			
14-16	+7,726 -8,624					13 $\frac{1}{2}$ -15 15-16 $\frac{1}{2}$	51 49	33,964 32,632	107,786	10-15	10,208
17-23	+8,624 -3,640	+4,984	137,109	142,093	17-23	16 $\frac{1}{2}$ -20 20-23 $\frac{1}{2}$	52 48	73,888 68,205			
24-26	+3,640 -3,705					23 $\frac{1}{2}$ -25 25-26 $\frac{1}{2}$	51 49	42,276 40,618	110,481	20-25	10,463
27-33	+3,705 -2,198	+1,507	113,543	115,050	27-33	26 $\frac{1}{2}$ -30 30-33 $\frac{1}{2}$	52 48	59,826 55,224			
34-36	+2,198 -2,399					33 $\frac{1}{2}$ -35 35-36 $\frac{1}{2}$	51 49	32,765 31,481	87,989	30-35	8,333
37-43	+2,399 -915	+1,484	82,594	84,078	37-43	36 $\frac{1}{2}$ -40 40-43 $\frac{1}{2}$	53 47	44,561 39,517			
44-46	+915 -1,046					43 $\frac{1}{2}$ -45 45-46 $\frac{1}{2}$	52 48	19,217 17,738	58,734	40-45	5,562
47-53	+1,046 -595	+451	52,964	53,415	47-53	46 $\frac{1}{2}$ -50 50-53 $\frac{1}{2}$	54 46	28,844 24,571			
54-56	+595 -564					53 $\frac{1}{2}$ -55 55-56 $\frac{1}{2}$	52 48	8,529 7,873	33,100	50-55	3,135
57-63	+564 -175	+380	24,590	24,979	57-63	56 $\frac{1}{2}$ -60 60-63 $\frac{1}{2}$	56 44	13,088 10,991			
64-66	+175 -161					63 $\frac{1}{2}$ -65 65-66 $\frac{1}{2}$	53 47	3,258 2,889	14,249	60-65	1,349
67-73	+161 -49	+112	5,563	5,675	67-73	66 $\frac{1}{2}$ -70 70-73 $\frac{1}{2}$	60 40	3,405 2,270			
73 and over	+49	+49	4,132	4,181	73 and over	73 $\frac{1}{2}$ and over	100	4,181	6,294	65-70	596
									6,451	70 and over	611

The process detailed in Table No. VIII was applied to the male and female figures of 1901, 1911 and 1921 and the quinary groups so obtained were utilised for the purposes of final graduation. The figures for graduation for males and females were obtained by taking the weighted mean of 1901, 1911, 1921 and 1931 figures by giving double weight to 1911 and 1931. The smoothed quinary groups together with their means obtained according to the above method are set out in Tables A and B at the end of this Report.

132. Migration—Before proceeding to graduation it is necessary to discuss the effects of migration on the age distribution of the State population. Unless the balance of immigrants over emigrants be of an appreciable percentage, it is not likely to affect the general age distribution and much less the rates of mortality of the population deduced after graduation. In Indian provinces generally the balance of migration is comparatively small; thus in the presidencies of Bengal, Bombay and Madras the balance was calculated to be hardly about 2 per cent after the 1921 Census. The corresponding figure for Baroda State was 1 per cent as deduced in 1921. As this was negligible, no allowance was made for migration in the graduation of 1921.

So far I have not been supplied with complete data regarding migration. Birthplace returns from different British provinces where the State born population is likely to be enumerated were not available. The only reliable figures to which I had access were those of the political immigrants known as the *hijratists*. But even in this case the data was incomplete for my purposes since no age schedules were prepared for the *hijratists*. Had I decided to use the figures of political immigrants, it would have been necessary for me to distribute the 26,755 lives (14,424 males, 12,331 females) into different age groups on an arbitrary basis. This would neither have been justifiable nor profitable since the ultimate change brought about by this adjustment in the rates of mortality would have been negligible. I have therefore made no correction for migration disturbances.

133. Methods of Graduation—The figures, obtained after the above adjustments, embody in themselves the variation and distribution of the Baroda State population group by group. The processes of correction and of taking the weighted mean of four decennial censuses have no doubt greatly smoothed out the anomalies that are inherent in population returns. It is now necessary to subject the mean figures to a process of graduation by some standard mathematical formula. The process of graduation will remove systematic and other anomalies in the data and would bring about a smooth progression in the figures from age to age. The most familiar types of formulæ which are utilised for graduating statistical data are those given by Karl Pearson's extensions of the Gaussian formula. This later method is fundamentally based on the differential equation:—

$$\frac{1}{u} \frac{du}{dx} = kx$$

Pearson's extension takes the form:—

$$\frac{1}{u} \frac{du}{dx} = \frac{x+a}{b_0 + b_1x + b_2x^2}$$

which gives rise to a variety of forms and may be fitted to any type of frequency distribution by proper choice of the arbitrary constants. Other forms of special importance in vital statistics are the formulæ first given by Gompertz and then modified by Makeham. Sir George Hardy in the Indian Census Reports of 1881, 1891, and 1901 utilised the second modification of Gompertz's law of mortality for graduating the Indian population figures. In the Report of 1911 Mr. T. G. Ackland graduated the mean figures by using Karl Pearson's frequency curves. In 1921, Mr. H.G.W. Meikle graduated the ratios of T_x (i.e., population above age x) to T_x of some well graduated Table by a curve of the type $y = 1 - ax - bx^2 + cx^3$.

In the present Report, I propose to graduate the figures by Karl Pearson's frequency curves. In doing so I follow the same method as was used in the State Actuarial Report of 1921. It is not possible to detail here the complete laborious process of graduation. Suffice it to say that the constants involved in the equation of the graduating curve were ultimately calculated from the moments of the given distribution referred to a convenient base. The final equation obtained by me for graduating the male figures may be exhibited in the form:—

$$y = .032462 x^{.388535} (95.1988 - x)^{2.682325}$$

134. Graduation for female figures—Regarding the graduation of female population figures, it has been a custom in the past to base their graduation on the equation obtained for the males. As the errors in statements of age differ both in nature and degree in case of males and females in different periods of life, it is hardly advisable to deduce the graduation of one from the other. Mr. Meikle holding this view writes "there is great danger in basing the rate of mortality for females on calculations depending on the ratio of the males to females as shown in the crude census figures as was done on the previous occasions."

I have therefore graduated the female population figures directly by the same methods as applied to the males. The equation of the graduating curve in this case may be written as :—

$$y = .0424063 x^{.381055} (95.75425 - x)^{2.618365}$$

The graduated distribution at individual ages for males and females is embodied in Table C, the values for quinary groups being given in Tables A and B at the end of this chapter. The graduated mean age curves for the State are given in Graphs No. 6 and 7.

135. Ages of Infancy and Childhood—In all the Census Reports from 1872 to 1921, it has been emphasised that the data for the ages of infancy and childhood were extremely defective. Not only are the ages stated most inaccurately but even a substantial percentage of the infant population is omitted altogether in the census enumeration. Even in an advanced country like England it was admitted that about 7 per cent of the juvenile population in the first two years of life escaped the Census of 1911. There is no doubt that such omissions are common in the Indian population also. Due to these defects in the data at earlier age periods it has always been a difficult matter to determine the correct age distribution and rates of mortality at these ages.

136. The Proclaimed Clans Experience—To remedy this defect the Government of India kept strict legal supervision over the vital occurrences in a certain class of people known as the Proclaimed Clans. The experience so obtained was analysed by Sir George Hardy and formed into a life table in the Census Reports of 1881, 1891 and 1901. In obtaining the age distribution and rates of mortality for the State population I utilised the functions deduced by Sir George Hardy for the earlier ages with modifications so as to fit as smoothly as possible with the mean graduated figures of the State population at later ages.

137. The Life Table—The inaccuracies and omissions in the data were considered by Mr. Meikle to be so enormous that he did not think it worthwhile to compute the Life Table for the Indian population in the 1921 Actuarial Report. He has also not given the rates of mortality for the ages of infancy. In this connection he writes :—

"At infantile ages I am so strongly of opinion that the shortage is due partly to non-enumeration, that I have omitted to quote the rates of mortality for these ages, as not only would no useful purpose be served by doing so but the rates, if published, might be misleading. I have also omitted to calculate the expectation of life."

Further he adds :—

"The q_x column based on Indian Census returns is not reasonably dependable, and it is wrong to pretend that it is, consequently we are not justified in preparing an e_x column."

138. Why a Life Table is Desirable—I agree with Mr. Meikle in his emphatic assertion regarding the amount of error present in the Indian population statistics. It is no doubt true that the magnitude of error present, more than outweigh the adjustments effected by the application of mathematical processes.

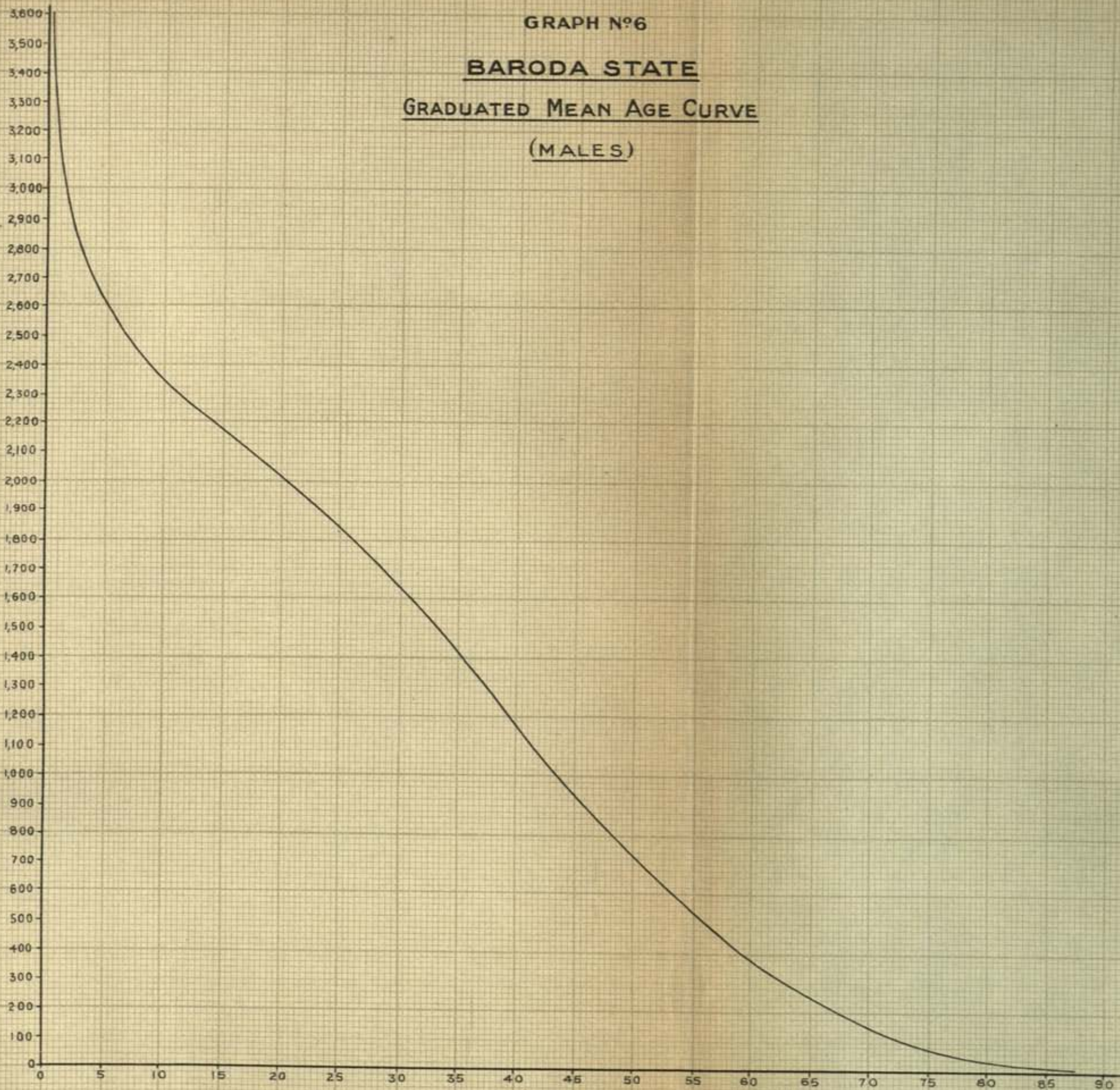
GRAPH N°6
BARODA STATE
GRADUATED MEAN AGE CURVE
(MALES)

POPULATION

3,600
3,500
3,400
3,300
3,200
3,100
3,000
2,900
2,800
2,700
2,600
2,500
2,400
2,300
2,200
2,100
2,000
1,900
1,800
1,700
1,600
1,500
1,400
1,300
1,200
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400
300
200
100
0

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90

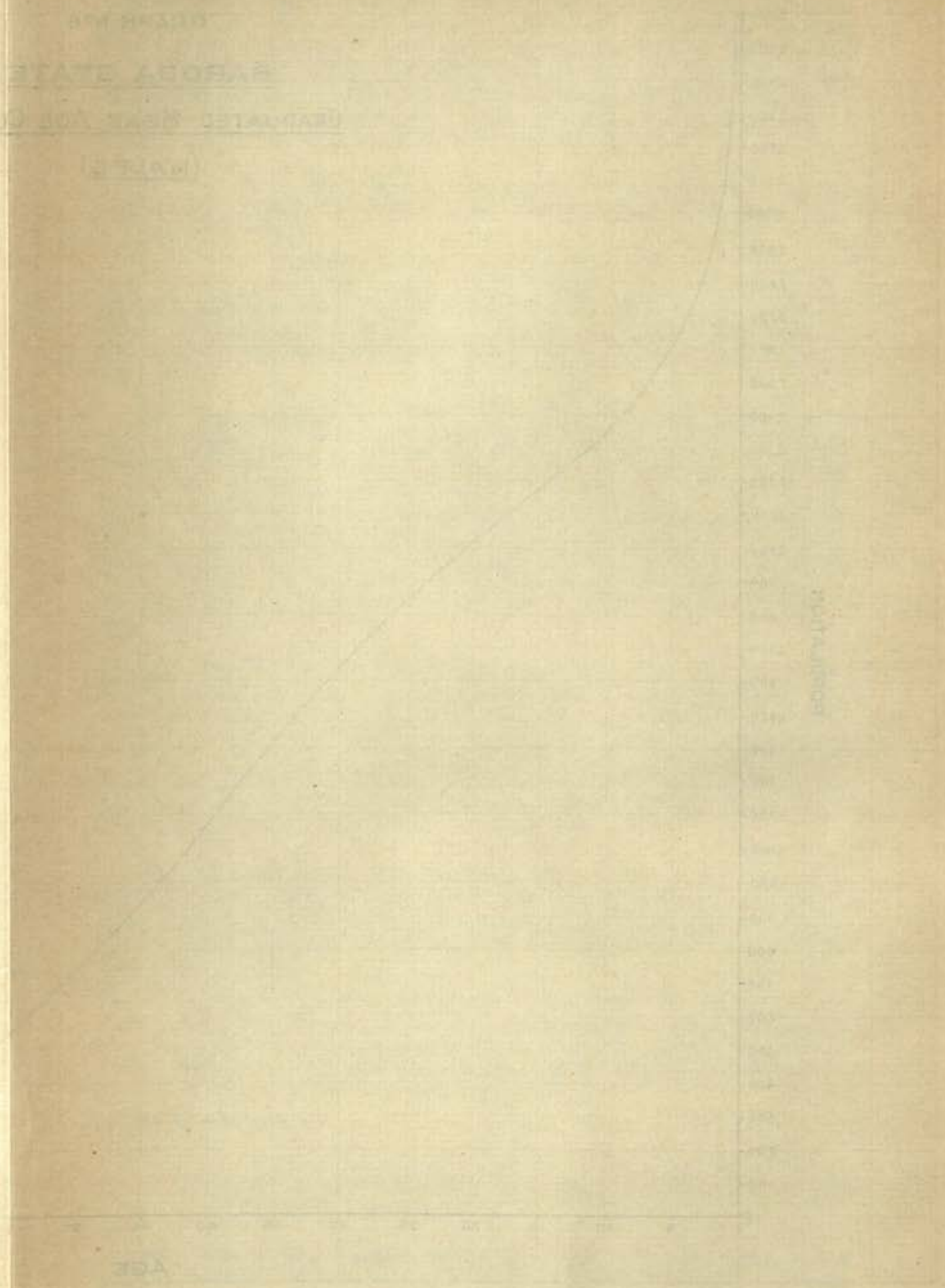
AGE



STATE AGRICULTURE

DEPARTMENT OF AGRICULTURE

(WALLS)



GRAPH N° 7

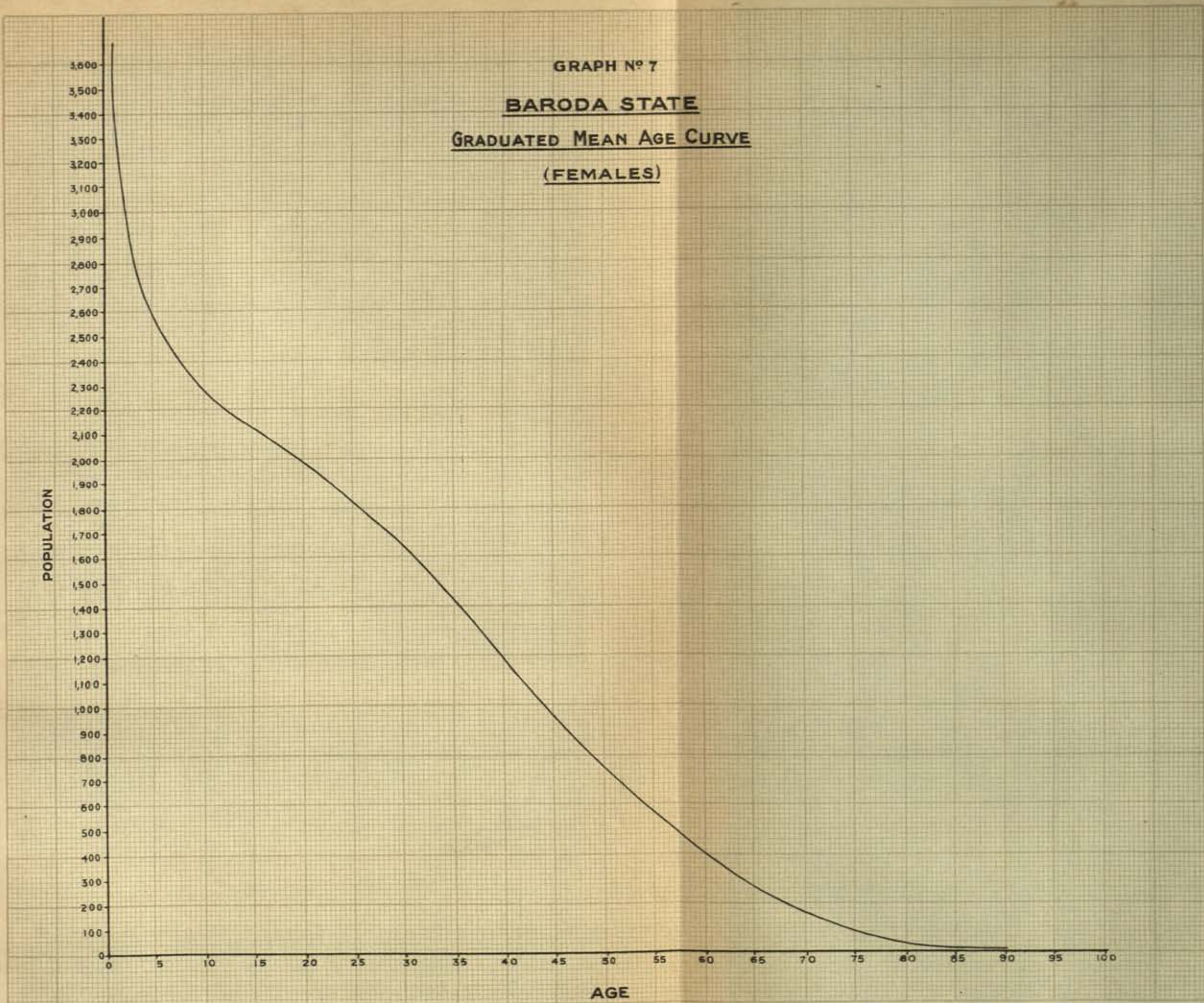
BARODA STATE
GRADUATED MEAN AGE CURVE
(FEMALES)

POPULATION

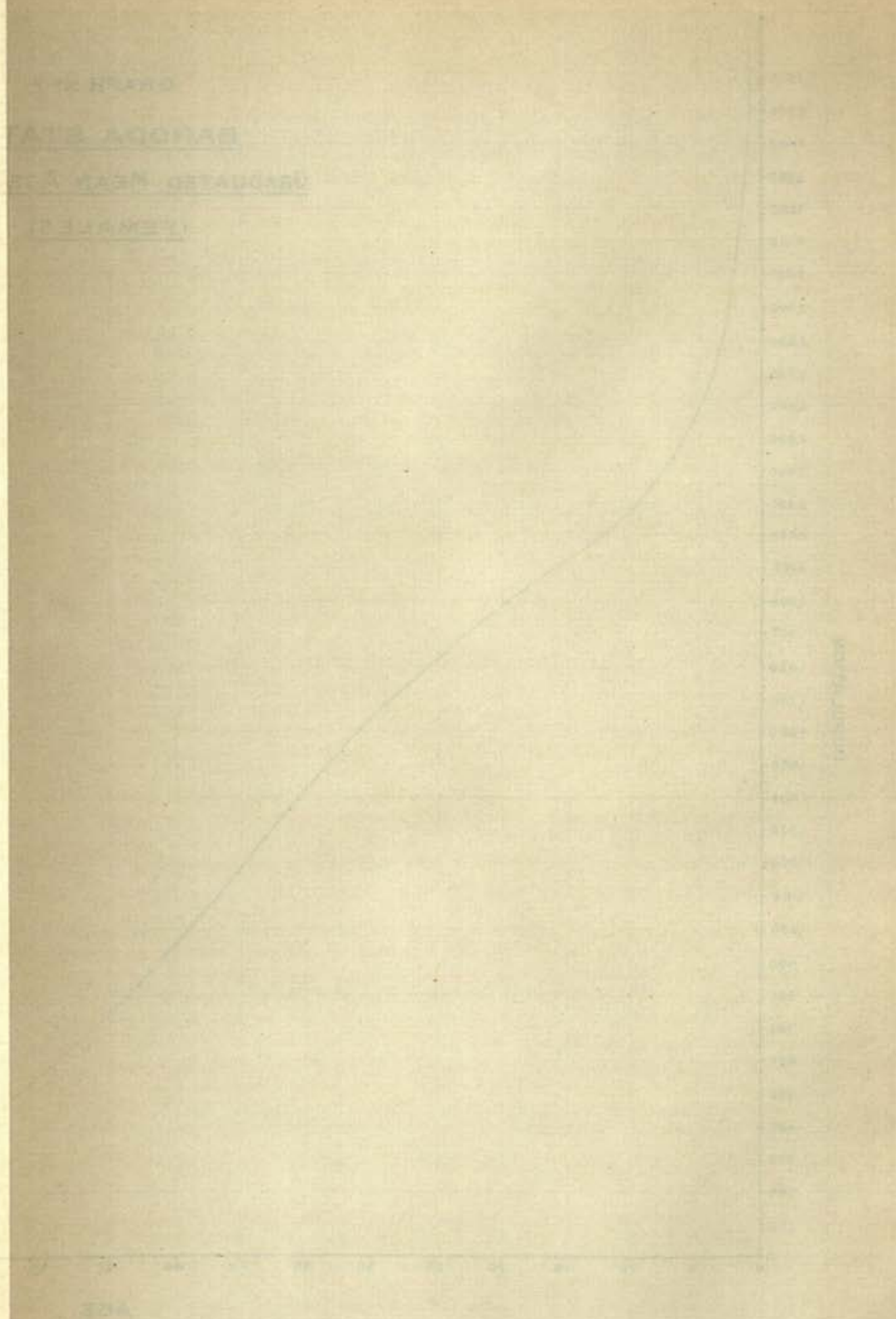
3,600
3,500
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3,300
3,200
3,100
3,000
2,900
2,800
2,700
2,600
2,500
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2,200
2,100
2,000
1,900
1,800
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0

AGE

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100



GRAPH 2-1
STATE AGONY
UNGRATED MEAT
TEMPERATURE



But even then I do not think that the construction of a Life Table is altogether useless. The Life Tables so obtained may not be comparable to those of England and other European countries since these are based on more accurate figures. But the Tables computed for different Indian provinces are at least comparable among themselves since the types of error inherent in the crude population figures are common to the whole of India. The tables constructed by Sir George Hardy in 1901 and by Mr. T. G. Ackland in 1911 are even now useful as a basis of comparison. For these reasons I have thought it desirable to compute the columns of the Life Table by methods similar to those of Sir George Hardy and Mr. Ackland.

139. General Method of Constructing a Life Table—The general method for constructing a Life Table is by comparing the living with the dying. Along with the figures of population living at each age, it is necessary to have the figures of population dying at respective ages. The crude figures of the number dying at each age recorded in the Death Registers of the Registration department have first to be corrected and graduated by methods similar to what have been applied to the population figures. The number living and dying at each age proportioned to a total population of 100,000 can then be utilised to obtain all the functions of the Life Table. The English Tables Nos. 7 and 8 and other accurate Tables were all constructed by this principle.

140. Defective Registration of Births and Deaths—Unfortunately for Baroda and as a matter of fact for the whole of India, the records of births and deaths of the Registration departments have not yet attained the level of dependable accuracy. In spite of the extension of the compulsory Birth and Death Notification Act to all municipalities in the State, the population at large has not taken seriously the necessity of registration. In the decade 1911-1921, the recorded births and deaths were 580,390 and 612,055 respectively. As this gave a balance in favour of deaths, the increase of 4.6 per cent in the population during that decade could hardly be justified by the excess of immigrants over emigrants. In the decade 1921-1931 the number of births and deaths recorded are 582,578 and 446,906. In this case the balance 135,672 in favour of births is also not able to explain the census increase of 316,485 (14.9 per cent) even after making reasonable allowance for migration. The margin of error in the records of death of persons aged 5 and over has been calculated in Chapter I to be about 30.7 and it may safely be asserted that the error in the records for ages below 5 is much more. Hence the figures of deaths at each age supplied by the Registration offices cannot at all be used for the construction of a Life Table.

141. Rates of Increase—In view of the above facts the only course open to me is to utilise the average rate of increase of population in the period under consideration. Having found this rate it is possible, on the basis of a geometrical rate of increase, to determine from the graduated figures of population living at each age, the numbers living at each age six months before and six months after the date midway between these two years. Then by dividing the numbers living between ages x and $x+1$ six months after the middle date by those living between ages $x-1$ and x six months before that date, we get the probability of living a year at the age $x-\frac{1}{2}$ as under :—

$$\frac{L_x}{L_{x-1}} = \frac{l_{x+\frac{1}{2}}}{l_{x-\frac{1}{2}}} = p_{x-\frac{1}{2}}$$

The rates of increase in the male population during the decades 1901-1911 and 1911-1921 were found to be 4.69 and 4.226 whereas in the present decade (1921-1931) the increase has been 14.288 per cent. From these the average rate of increase during the period of 30 years (1901-1931) was deduced. This average rate, which was supposed to be constant at all ages, was utilised to obtain the values of $p_{x-\frac{1}{2}}$ from the graduated numbers living at each age by the method described in the last paragraph. The values of the probabilities p_x at integral ages were then deduced by interpolation. Exactly similar methods were used for obtaining the values of the probabilities p_x in the case of female lives.

142. Columns in the life table explained—The Life Tables (Tables D and E given at the end) consist of 7 columns. Column (2) represents the numbers that would reach their xth birthday out of a total of 100,000 born, column (3) gives the numbers dying between consecutive ages, column (4) embodies the mortality per cent as deduced from the number living and dying between ages x and $x+1$. Use column (5) represents the numbers living between ages x and $x+1$, and were deduced for ages 14 and over by taking the arithmetic mean of the consecutive numbers in column (2). For earlier ages the arithmetic means had to be modified as it would have been erroneous to suppose that the deaths were evenly distributed throughout the year in the periods of infancy and childhood. The figures of column (6) give the numbers living above age x , obtained by summation of the numbers in the previous column from bottom upwards. The last column (7) represents the complete expectation of life or mean after lifetime at age x , deduced by dividing the numbers in column (6) by those in column (2), regard being had, at the older ages, to the fractional part of the numbers omitted in column (2).

143. Comparative Expectations of life—I give below the expectations of life at decennial ages of the different Indian Provinces as deduced by Sir George Hardy and Mr. Ackland from the results of the 1891, 1901 and 1911 Censuses. Side by side with these are set out the corresponding figures for Baroda State for 1921 and 1931 and also those of England for 1901 and 1911.

TABLE IX (MALES)
COMPARATIVE EXPECTATIONS OF LIFE

AGE	BENGAL PRESIDENCY			UNITED PROVINCES			PUNJAB			BURMA		
	1891	1901	1911	1891	1901	1911	1891	1901	1911	1891	1901	1911
0 ..	22.78	21.57	21.47	24.45	25.30	21.21	26.58	23.18	21.23	..	30.29	31.48
10 ..	33.85	32.95	32.54	34.10	35.26	31.44	38.07	35.45	31.38	..	39.93	39.88
20 ..	27.77	27.50	27.10	27.75	28.43	25.27	31.76	29.59	26.12	..	33.28	32.82
30 ..	22.51	22.64	22.15	22.35	22.01	20.89	25.60	24.54	21.60	..	27.68	27.30
40 ..	17.98	18.28	17.56	17.74	16.76	17.18	20.22	19.99	17.55	..	22.58	22.04
50 ..	13.83	13.93	13.39	13.56	12.64	13.47	15.58	15.43	14.15	..	17.45	16.51
60 ..	9.89	9.52	9.27	9.63	8.92	9.84	11.41	10.70	10.63	..	12.18	11.00
70 ..	6.35	5.61	5.40	6.15	5.50	6.50	7.60	6.39	6.53	..	7.37	6.66
80 ..	3.59	2.86	2.49	3.43	2.96	3.42	4.48	3.28	3.11	..	3.84	3.61
90 ..	1.69	1.07	.95	1.60	1.23	1.11	2.26	1.38	1.13	..	1.75	1.77

AGE	MADRAS PRESIDENCY			BOMBAY PRESIDENCY			BARODA STATE		ALL INDIA			ENGLAND		
	1891	1901	1911	1891	1901	1911	1921	1931	1891	1901	1911	1891	1901	1911
0 ..	26.92	26.21	25.92	26.12	22.77	22.52	22.44	27.66	24.59	23.63	22.59	..	44.07	48.53
10 ..	38.70	36.93	37.78	37.20	34.62	33.33	32.97	36.38	35.46	34.73	33.36	..	49.65	51.81
20 ..	32.55	30.43	31.60	30.87	28.39	26.43	25.86	28.76	29.24	28.59	27.46	..	41.04	43.01
30 ..	26.57	24.24	25.35	24.67	22.27	21.32	20.42	22.19	23.66	22.90	22.45	..	33.06	34.76
40 ..	21.06	18.60	20.06	18.94	16.90	17.23	16.17	17.19	18.75	17.91	18.01	..	25.65	26.96
50 ..	15.91	14.05	15.74	13.88	12.48	13.51	12.51	13.34	14.28	13.59	13.97	..	18.89	19.76
60 ..	11.06	10.10	11.70	9.59	8.73	9.94	9.22	9.78	10.12	9.53	10.00	..	12.90	13.49
70 ..	6.94	6.27	7.68	6.05	5.38	6.55	6.08	6.49	6.48	5.80	6.19	..	8.02	8.39
80 ..	3.85	3.35	3.98	3.39	2.81	3.48	3.24	3.49	3.65	3.07	3.06	..	4.40	4.86
90 ..	1.82	1.56	1.50	1.65	1.07	1.41	1.00	1.48	1.69	1.23	1.15	..	2.32	2.56

TABLE X (FEMALES)

COMPARATIVE EXPECTATIONS OF LIFE

Age	BENGAL PRESIDENCY			UNITED PROVINCES			BURMA			MADRAS PRESIDENCY		
	1891	1901	1911	1891	1901	1911	1891	1901	1911	1891	1901	1911
0	23.73	22.51	21.58	25.25	23.93	21.50	..	32.21	32.61	27.99	27.13	27.65
10	32.76	32.03	32.44	32.97	34.90	31.94	..	38.92	40.22	37.78	36.27	37.62
20	27.76	27.55	27.20	27.71	28.89	25.88	..	32.98	32.67	32.78	30.65	32.02
30	23.52	23.86	22.45	23.31	23.33	21.42	..	28.96	27.21	27.90	25.06	26.01
40	19.43	19.99	17.91	19.15	18.38	17.51	..	24.62	22.24	22.78	19.56	20.73
50	15.16	15.14	13.67	14.85	13.82	13.69	..	19.09	16.75	17.41	15.03	16.28
60	10.65	10.18	9.40	10.36	9.52	9.99	..	13.16	11.15	11.89	10.86	12.00
70	6.68	5.87	5.43	6.45	5.74	6.56	..	7.77	6.72	7.28	6.60	7.79
80	3.70	2.95	2.48	3.54	3.02	3.43	..	3.96	3.63	3.97	3.51	4.00
90	1.59	1.31	.95	1.65	1.50	1.06	..	1.83	1.77	1.85	1.77	1.50

Age	BOMBAY PRESIDENCY			BARODA STATE		ALL-INDIA			ENGLAND	
	1891	1901	1911	1921	1931	1891	1901	1911	1901	1911
0	27.07	24.05	22.86	22.91	26.35	25.54	23.96	23.31	47.70	52.38
10	36.15	33.69	33.50	33.33	37.71	34.40	33.86	33.74	51.98	54.53
20	30.92	28.52	26.54	25.99	29.91	29.28	28.64	27.96	43.45	45.77
30	25.69	22.98	21.57	20.63	22.75	24.69	23.82	22.99	35.43	37.36
40	20.31	17.78	17.60	16.66	17.70	20.20	19.12	18.49	27.81	29.37
50	15.07	13.37	13.81	12.96	13.67	15.59	14.50	14.28	20.63	21.81
60	10.24	9.30	10.13	9.45	10.04	10.87	10.02	10.11	14.08	15.01
70	6.33	5.58	6.62	6.23	6.58	6.80	5.98	6.22	8.74	9.25
80	3.47	2.92	3.49	3.31	3.52	3.76	3.12	3.06	4.84	5.36
90	1.59	1.20	1.42	1.25	1.41	1.75	1.64	1.10	2.68	2.94

In comparing the values of the expectations of life deduced in the present Report with those of 1891, 1901, 1911 and 1921 (Baroda), it must be remembered that the decade ending with 1891 was completely free from famine and epidemics whereas the following decades were generally characterised by severe calamities which affected the vitality of the population to a large extent. In constructing the Life Tables after the 1901 Census, the figures of 1891 were given double weight as compared to those of 1881 and 1901. But even then the expectations of life for 1901 in the above table show a definite decline as compared to those of 1891. The same may be said regarding the figures for 1911. Comparing the Baroda State figures for 1931 in the above table with those of Bombay Presidency to which they are directly comparable we find that they are almost in line with those of 1891 for the Bombay Presidency. It has already been mentioned that in deducing the present figures I have given double weight to the figures of 1911 and 1931 in comparison to those of 1901 and 1921. As the decade (1921-1931) was a most happy one, showing a censal increase of 14.9 per cent, the above combination in taking the weighted mean had thus the effect of correcting the unhealthy bias of the previous decades due mainly to famines and epidemics. The expectations of life for Bombay as deduced after 1901 and 1911 and for (Baroda) 1921, thus indicate an inferior vitality in the population to the corresponding expectations calculated after 1891 and 1931 Censuses. The State population has now fully made up the losses incurred since 1901, and the totals of 1931 Census exceed those of 1891 by 27,611 or 1.2 per cent. This great regain has undoubtedly reflected its vitalising influence on the figures of expectations of life calculated by me. Thus it is that the 1931 figures for this State in the above table show a definite improvement as compared to the corresponding State figures of 1921 and Bombay figures of 1901 and 1911. In view of the above arguments it is but natural that the expectations of life calculated after 1931 Census should agree with those of the "normal decade" ending in 1891 rather than with those of 1901, 1911 or 1921, both in the case of males and females.

144. Rates of Mortality—Regarding the rates of mortality also it is found by comparison of the 1921 and 1931 figures that there has been a definite improvement since 1921. The table constructed by me takes very nearly a middling course

between the tables for Burma and Bombay Presidency constructed by Mr. Ackland after 1911 Census. As is well known the province of Burma has a very high place among all the Indian provinces for showing a lighter mortality rate and greater expectancy of life and hence it is gratifying to note that the present Baroda table has some likeness to that of Burma.

145. Improvement in Expectation of Life—The high figures of expectation of life for England as compared to those of the Indian population show what education, sanitation, better methods of living and superior climatic conditions can do to enhance the longevity of the human race. Leaving the question of climate aside, it may safely be asserted that there is room for improvement in sanitation and methods of living of the Indian population, which would undoubtedly increase the value of a life in India. The Baroda State, in matters of education and social uplift, has in the past given a lead to the rest of India and it is expected that work in these directions would be intensified more and more in the near future. For unless the people live well and are made conscious of their own potentialities by the light of education, there can be no hope of regeneration.

146. Suggestions and Recommendations—Before I finish this memorandum I feel it my duty to make a few suggestions which would facilitate future statistical investigations :—

- (i) In order that a correct life table may be constructed by comparing the living with the dying it is absolutely necessary that proper supervision should be kept on the records of births and deaths in the different parts of the State. The offence of not registering a birth or death should be made punishable by a substantial fine and the fine should be exacted as far as possible.
- (ii) It has been found that deaths in the first two years of life often go unrecorded. Hence it is imperative that special care should be taken regarding the accurate registration of deaths in these ages.
- (iii) If it be not possible to adopt the above suggestions completely for the whole of the State, a few representative areas may be selected and strict supervision may be kept over them. These areas may then supply reliable data on the basis of which a life table may be constructed after the methods of Sir George Hardy in the case of Proclaimed Clans.
- (iv) It may also be profitable to collect data regarding certain typical communities. For instance Life Tables may be constructed for an advanced community like the Parsis in the State and a comparison with their rates of mortality and expectations of life may reveal interesting facts.
- (v) Lastly I may mention that full details regarding the immigrants and emigrants should be noted. The records of age for the migrant population are necessary if correct adjustments are to be made for migration in the population figures. This would obviate the necessity of applying an assumed age distribution for the migrant population by approximate calculations.

147. Conclusion—Before I conclude, I take this opportunity to express my feelings of deep gratitude to the Census Commissioner, Mr. S. V. Mukerjee, B.A. (Oxon), F.S.S., but for whose uniform courtesy and ready help this report would not have been completed in time. I am also indebted to the Office Staff for the help they gave me. As I was not a professional actuary, I had to submit myself to a hard course of preparation before I could take up the work. Hence I feel all the more grateful to the Census Commissioner for the encouragement and facilities he extended to me on all occasions. I also record here my humble acknowledgment of the favour shown to me by His Highness's Government by allowing me the opportunity of serving the State by doing this important work.

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SHOWING AGE DISTRIBUTION OF 100,000 PERSONS OF EACH SEX FOR THE
CENSUSES OF 1901-1931 IN THE BARODA STATE

TABLE A
(MALES)

AGE	1901	1911	1921	1931	Mean 1901-1931	Graduated Mean Numbers
1	2	3	4	5	6	7
0-5	9,982	14,913	12,787	14,673	13,657	14,674
5-10	13,310	11,547	14,161	12,813	12,699	12,372
10-15	12,938	10,208	12,764	11,982	11,680	11,303
15-20	10,852	10,088	8,808	9,948	9,956	10,551
20-25	9,836	10,463	8,466	9,116	9,577	9,691
25-30	9,693	9,512	8,624	7,505	8,725	8,726
30-35	8,426	8,333	8,069	6,854	7,812	7,681
35-40	6,986	7,201	6,911	6,386	6,845	6,500
40-45	5,793	5,562	5,458	5,469	5,552	5,286
45-50	4,445	4,411	4,786	4,922	4,650	4,167
50-55	3,353	3,135	3,520	3,633	3,401	3,168
55-60	1,866	2,070	2,440	2,731	2,318	2,303
60-65	1,076	1,349	1,610	1,897	1,530	1,584
65-70	528	596	772	1,024	756	1,010
70 and over	913	611	824	1,047	842	984

TABLE B
(FEMALES)

AGE	1901	1911	1921	1931	Mean 1901-1931	Graduated Mean Numbers
1	2	3	4	5	6	7
0-5	10,676	15,829	13,734	15,230	14,421	15,241
5-10	12,863	10,667	13,536	12,248	12,038	12,056
10-15	11,832	9,142	12,010	11,452	10,838	10,973
15-20	10,196	10,005	8,767	10,227	9,905	10,265
20-25	9,654	10,765	8,571	9,572	9,817	9,511
25-30	9,392	9,966	8,779	7,706	8,919	8,669
30-35	8,159	8,383	8,022	6,803	7,759	7,686
35-40	7,124	7,084	7,015	6,489	6,881	6,518
40-45	6,013	5,488	5,607	5,449	5,582	5,337
45-50	4,769	4,272	4,633	4,646	4,540	4,239
50-55	3,683	3,081	3,299	3,378	3,317	3,255
55-60	2,271	2,334	2,486	2,690	2,467	2,394
60-65	1,413	1,601	1,767	1,954	1,715	1,668
65-70	759	628	804	1,008	806	1,088
70 and over	1,196	755	970	1,148	995	1,105

TABLE C

GRADUATED NUMBERS LIVING BETWEEN AGES x AND $(x + 1)$ OUT OF
100,000 OF EACH SEX IN THE BARODA STATE

AGE x	Baroda State		AGE x	Baroda State		AGE x	Baroda State	
	Male	Female		Male	Female		Male	Female
0-1	3,464	3,763	8-9	2,422	2,349	16-17	2,142	2,082
1-2	2,996	3,178	9-10	2,374	2,302	17-18	2,112	2,054
2-3	2,845	2,929	10-11	2,330	2,261	18-19	2,080	2,025
3-4	2,722	2,742	11-12	2,291	2,224	19-20	2,047	1,995
4-5	2,647	2,629	12-13	2,257	2,191	20-21	2,012	1,965
5-6	2,582	2,537	13-14	2,227	2,162	21-22	1,976	1,934
6-7	2,523	2,465	14-15	2,198	2,135	22-23	1,939	1,903
7-8	2,471	2,403	15-16	2,170	2,109	23-24	1,901	1,871

TABLE C—concl'd.

Age x	Baroda State		Age x	Baroda State		Age x	Baroda State	
	Male	Female		Male	Female		Male	Female
24-25	1,863	1,838	47-48	833	847	70-71	146	158
25-26	1,824	1,804	48-49	792	806	71-72	131	142
26-27	1,785	1,770	49-50	751	765	72-73	116	126
27-28	1,746	1,735	50-51	711	726	73-74	101	111
28-29	1,706	1,699	51-52	671	688	74-75	86	98
29-30	1,665	1,661	52-53	633	650	75-76	74	85
30-31	1,624	1,622	53-54	595	613	76-77	64	73
31-32	1,582	1,581	54-55	558	578	77-78	56	63
32-33	1,538	1,539	55-56	524	544	78-79	48	53
33-34	1,492	1,495	56-57	492	510	79-80	40	45
34-35	1,445	1,449	57-58	460	478	80-81	33	37
35-36	1,398	1,401	58-59	429	446	81-82	26	30
36-37	1,349	1,352	59-60	398	416	82-83	20	23
37-38	1,300	1,303	60-61	369	387	83-84	14	18
38-39	1,251	1,255	61-62	342	359	84-85	9	14
39-40	1,202	1,207	62-63	316	333	85-86	7	10
40-41	1,153	1,160	63-64	291	307	86-87	5	7
41-42	1,105	1,113	64-65	266	282	87-88	4	5
42-43	1,057	1,067	65-66	243	259	88-89	3	3
43-44	1,009	1,021	66-67	221	237	89-90	1	2
44-45	962	976	67-68	201	216	90-91	..	1
45-46	917	932	68-69	182	195	91-92	..	1
46-47	874	889	69-70	163	176			

TABLE D
LIFE TABLE, BARODA STATE
(MALES)

AGE x	Living at age x	Dying between ages x and x + 1	Mortality per cent	Living between ages x and x + 1	Living above age x	Mean after Lifetime at age x	AGE x
1	2	3	4	5	6	7	8
0	1,00,000	25,762	25.76	79,623	2,765,591	27.66	0
1	74,238	5,657	7.62	71,270	2,685,968	36.18	1
2	68,581	2,733	3.98	67,094	2,614,698	38.13	2
3	65,848	2,110	3.20	64,698	2,547,604	38.69	3
4	63,738	1,360	2.13	62,987	2,482,906	38.96	4
5	62,378	1,027	1.64	61,807	2,419,919	38.79	5
6	61,351	873	1.42	60,878	2,358,112	38.44	6
7	60,478	774	1.28	60,071	2,297,234	37.98	7
8	59,704	755	1.26	59,318	2,237,163	37.47	8
9	58,949	702	1.19	58,595	2,177,845	36.94	9
10	58,247	600	1.03	57,946	2,119,250	36.38	10
11	57,647	484	.84	57,405	2,061,304	35.76	11
12	57,163	373	.65	56,976	2,003,899	35.06	12
13	56,790	328	.58	56,626	1,946,923	34.28	13
14	56,462	308	.54	56,308	1,890,297	33.48	14
15	56,154	298	.53	56,005	1,833,989	32.66	15
16	55,856	342	.61	55,685	1,777,934	31.83	16
17	55,514	403	.72	55,313	1,722,299	31.02	17
18	55,111	445	.81	54,888	1,666,986	30.25	18
19	54,666	502	.92	54,415	1,612,098	29.49	19
20	54,164	550	1.01	53,889	1,557,683	28.76	20
21	53,614	584	1.09	53,322	1,503,794	28.05	21
22	53,030	654	1.23	52,703	1,450,472	27.35	22
23	52,376	667	1.27	52,043	1,397,769	26.69	23
24	51,709	684	1.32	51,367	1,345,726	26.02	24
25	51,025	707	1.38	50,672	1,294,359	25.37	25
26	50,318	715	1.42	49,961	1,243,687	24.72	26
27	49,603	747	1.50	49,229	1,193,726	24.07	27
28	48,856	793	1.62	48,460	1,144,497	23.43	28
29	48,063	815	1.69	47,655	1,096,037	22.80	29
30	47,248	844	1.78	46,826	1,048,382	22.19	30

TABLE D—concl'd.

AGE x	Living at age x	Dying between ages x and x + 1	Mortality per cent	Living between ages x and x + 1	Living above age x	Mean after Lifetime at age x	AGE x
1	2	3	4	5	6	7	8
31	46,404	907	1.95	45,950	1,001,556	21.58	31
32	45,497	985	2.17	45,004	955,606	21.00	32
33	44,512	1,048	2.35	43,988	910,602	20.46	33
34	43,464	1,068	2.46	42,930	866,614	19.94	34
35	42,396	1,133	2.67	41,830	823,684	19.43	35
36	41,263	1,174	2.84	40,676	781,854	18.95	36
37	40,089	1,195	2.98	39,491	741,178	18.49	37
38	38,894	1,214	3.12	38,287	701,687	18.04	38
39	37,630	1,236	3.28	37,062	663,400	17.61	39
40	36,444	1,239	3.40	35,824	626,338	17.19	40
41	35,205	1,244	3.53	34,583	590,514	16.77	41
42	33,961	1,270	3.74	33,326	555,931	16.37	42
43	32,691	1,274	3.90	32,054	522,605	15.99	43
44	31,417	1,248	3.97	30,793	490,551	15.61	44
45	30,169	1,201	3.98	29,568	459,758	15.24	45
46	28,968	1,190	4.11	28,373	430,190	14.85	46
47	27,778	1,182	4.25	27,187	401,817	14.47	47
48	26,596	1,167	4.39	26,013	374,630	14.09	48
49	25,429	1,151	4.53	24,853	348,617	13.71	49
50	24,278	1,134	4.67	23,711	323,764	13.34	50
51	23,144	1,109	4.79	22,590	300,053	12.96	51
52	22,035	1,098	4.98	21,486	277,463	12.59	52
53	20,937	1,083	5.17	20,395	255,977	12.23	53
54	19,854	1,064	5.36	19,322	235,582	11.87	54
55	18,790	1,039	5.53	18,271	216,260	11.51	55
56	17,751	1,013	5.71	17,244	197,989	11.15	56
57	16,738	991	5.92	16,243	180,745	10.80	57
58	15,747	981	6.23	15,256	164,502	10.45	58
59	14,766	970	6.57	14,281	149,246	10.10	59
60	13,796	907	6.57	13,343	134,965	9.78	60
61	12,889	872	6.76	12,453	121,622	9.43	61
62	12,017	844	7.02	11,595	109,169	9.08	62
63	11,173	854	7.64	10,746	97,574	8.73	63
64	10,319	814	7.89	9,912	86,828	8.41	64
65	9,505	779	8.19	9,115	76,916	8.09	65
66	8,726	745	8.54	8,354	67,801	7.77	66
67	7,981	712	8.92	7,625	59,447	7.45	67
68	7,269	679	9.34	6,929	51,822	7.13	68
69	6,590	644	9.77	6,268	44,893	6.81	69
70	5,946	610	10.26	5,641	38,625	6.49	70
71	5,336	576	10.80	5,048	32,984	6.18	71
72	4,760	543	11.41	4,489	27,936	5.87	72
73	4,217	508	12.05	3,963	23,447	5.56	73
74	3,709	473	12.75	3,472	19,484	5.25	74
75	3,236	439	13.57	3,017	16,012	4.95	75
76	2,797	406	14.52	2,594	12,995	4.65	76
77	2,391	371	15.52	2,205	10,401	4.35	77
78	2,021	339	16.77	1,852	8,193	4.05	78
79	1,682	304	18.07	1,530	6,344	3.77	79
80	1,378	270	19.59	1,243	4,814	3.49	80
81	1,108	237	21.39	990	3,571	3.22	81
82	871	204	23.42	769	2,581	2.96	82
83	667	172	25.79	581	1,812	2.72	83
84	495	140	28.28	425	1,231	2.49	84
85	355	110	31.00	300	806	2.27	85
86	245	84	34.29	203	506	2.06	86
87	161	60	37.27	131	303	1.88	87
88	101	41	40.59	80	172	1.70	88
89	60	29	48.33	46	92	1.53	89
90	31	15	48.81	23	46	1.48	90
91	16	8	52.81	12	23	1.42	91
92	8	4	56.99	6	11	1.31	92
93	4	2	62.01	3	5	1.13	93
94	2	1	67.88	2	2	1.02	94
95	1	1	70.27	..	..	..	..

TABLE E
LIFE TABLE, BARODA STATE
(FEMALES)

Age x	Living at age x	Dying between ages x and x + 1	Mortality per cent	Living between ages x and x + 1	Living above age x	Mean after Lifetime at age x	Age x
1	2	3	4	5	6	7	8
0	1,00,000	25,078	25.08	81,280	2,634,677	26.35	0
1	74,922	7,711	10.29	70,891	2,553,397	34.08	1
2	67,211	4,362	6.49	64,932	2,482,506	36.94	2
3	62,849	2,715	4.32	61,437	2,417,574	38.46	3
4	60,134	1,847	3.07	59,174	2,356,137	39.18	4
5	58,287	1,386	2.38	57,577	2,296,963	39.41	5
6	56,901	1,090	1.92	56,341	2,239,386	39.35	6
7	55,811	907	1.63	55,347	2,183,045	39.11	7
8	54,904	748	1.36	54,523	2,127,698	38.75	8
9	54,156	607	1.12	53,847	2,073,175	38.28	9
10	53,549	510	.95	53,290	2,019,328	37.71	10
11	53,039	424	.80	52,824	1,966,038	37.07	11
12	52,615	337	.64	52,444	1,913,214	36.36	12
13	52,278	272	.52	52,142	1,860,770	35.59	13
14	52,006	238	.46	51,887	1,808,628	34.77	14
15	51,768	251	.48	51,643	1,756,741	33.93	15
16	51,517	283	.55	51,375	1,705,098	33.10	16
17	51,234	315	.61	51,077	1,653,723	32.28	17
18	50,919	352	.69	50,743	1,602,646	31.47	18
19	50,567	366	.72	50,384	1,551,903	30.69	19
20	50,201	395	.79	50,003	1,501,519	29.91	20
21	49,806	409	.82	49,602	1,451,516	29.14	21
22	49,397	436	.88	49,179	1,401,914	28.38	22
23	48,961	471	.96	48,725	1,352,735	27.63	23
24	48,490	511	1.05	48,235	1,304,010	26.89	24
25	47,979	528	1.10	47,715	1,255,775	26.17	25
26	47,451	556	1.17	47,173	1,208,060	25.46	26
27	46,895	591	1.26	46,599	1,160,887	24.75	27
28	46,304	651	1.41	45,979	1,114,288	24.06	28
29	45,653	698	1.53	45,304	1,068,309	23.40	29
30	44,955	759	1.69	44,575	1,023,005	22.75	30
31	44,196	809	1.83	43,792	978,430	22.14	31
32	43,387	870	2.01	42,952	934,638	21.54	32
33	42,517	942	2.21	42,046	891,686	20.97	33
34	41,575	1,020	2.45	41,065	849,640	20.43	34
35	40,555	1,081	2.67	40,014	808,575	19.93	35
36	39,474	1,114	2.82	38,917	768,561	19.47	36
37	38,360	1,117	2.91	37,801	729,644	19.02	37
38	37,243	1,120	3.01	36,683	691,843	18.57	38
39	36,123	1,125	3.11	35,560	655,160	18.13	39
40	34,998	1,130	3.23	34,433	619,600	17.70	40
41	33,868	1,133	3.35	33,302	585,167	17.28	41
42	32,735	1,141	3.49	32,165	551,865	16.85	42
43	31,594	1,144	3.62	31,022	519,700	16.45	43
44	30,450	1,132	3.72	29,884	488,678	16.04	44
45	29,318	1,121	3.82	28,758	458,794	15.64	45
46	28,197	1,108	3.93	27,643	430,036	15.25	46
47	27,089	1,092	4.03	26,543	402,393	14.85	47
48	25,997	1,081	4.16	25,456	375,850	14.46	48
49	24,916	1,071	4.30	24,381	350,394	14.06	49
50	23,845	1,064	4.46	23,313	326,013	13.67	50
51	22,781	1,056	4.64	22,253	302,700	13.29	51
52	21,725	1,046	4.81	21,202	280,447	12.91	52
53	20,679	1,035	5.01	20,161	259,245	12.54	53
54	19,644	1,021	5.20	19,133	239,084	12.17	54
55	18,623	1,001	5.38	18,123	219,951	11.81	55
56	17,622	979	5.56	17,133	201,828	11.45	56
57	16,643	956	5.74	16,165	184,695	11.10	57
58	15,687	936	5.97	15,219	168,530	10.74	58
59	14,751	903	6.12	14,299	153,311	10.39	59
60	13,848	889	6.42	13,404	139,012	10.04	60

TABLE E—*concl.*

Age x	Living at age x	Dying between ages x and x + 1	Mortality per cent	Living between ages x and x + 1	Living above age x	Mean after Lifetime at age x	Age x
1	2	3	4	5	6	7	8
61	12,959	836	6.45	12,541	125,608	9.69	61
62	12,123	829	6.84	11,708	113,067	9.33	62
63	11,294	825	7.30	10,882	101,359	8.97	63
64	10,469	775	7.40	10,081	90,477	8.64	64
65	9,694	738	7.61	9,325	80,396	8.29	65
66	8,956	708	7.90	8,602	71,071	7.94	66
67	8,248	717	8.69	7,890	62,469	7.57	67
68	7,531	676	8.98	7,193	54,579	7.25	68
69	6,855	642	9.37	6,534	47,386	6.91	69
70	6,213	620	9.98	5,903	40,852	6.58	70
71	5,593	590	10.55	5,298	34,949	6.25	71
72	5,003	560	11.19	4,723	29,651	5.93	72
73	4,443	528	11.88	4,179	24,928	5.61	73
74	3,915	494	12.62	3,668	20,749	5.30	74
75	3,421	456	13.32	3,193	17,081	4.99	75
76	2,965	426	14.37	2,752	13,888	4.68	76
77	2,539	387	15.24	2,345	11,136	4.39	77
78	2,152	356	16.54	1,974	8,791	4.09	78
79	1,796	322	17.93	1,635	6,817	3.80	79
80	1,474	288	19.54	1,330	5,182	3.52	80
81	1,186	254	21.42	1,059	3,852	3.25	81
82	932	218	23.39	823	2,793	3.00	82
83	714	184	25.77	622	1,970	2.76	83
84	530	150	28.30	455	1,348	2.54	84
85	380	119	31.32	320	893	2.35	85
86	261	83	31.80	219	573	2.20	86
87	178	62	34.83	147	354	1.99	87
88	116	43	37.07	95	207	1.78	88
89	73	33	45.21	56	112	1.53	89
90	40	20	50.33	30	56	1.41	90
91	20	11	54.78	15	26	1.29	91
92	9	5	57.99	6	11	1.24	92
93	4	2	61.77	3	5	1.18	93
94	2	1	66.01	2	2	1.09	94
95	1	1	71.03	..	..	..	..

CHAPTER V

SEX

PART I

GENERAL OBSERVATIONS

§ 1. ANALYSIS OF GENERAL FIGURES

148. Scope of the Chapter—Sex is a category with which almost all Tables are concerned. Except Imperial Table III which deals with towns and villages classified according to their population strength and Table XII which concerns itself exclusively with unemployment amongst educated males, every one of the Imperial Tables compiles results by sex. But this chapter is specially concerned with the sex ratio in different localities, religions and castes, the influences that operate in determining the variations and the extent to which these figures of sex may be utilised in gauging the accuracy of the enumeration. For the purpose of Part I of this chapter therefore the most important set of figures is that contained in Imperial Tables VII and VIII. Six Subsidiary Tables in the course of the discussion will be dealt with. There is another part to this chapter which will give the main results of the special enquiries made into the size and sex constitution of families and the question of comparative fertility.

149. Accuracy of the Return—Of all the questions contained in the schedule, sex admits of no possibility of doubt. Humourists were not wanting however at census meetings to enquire what should be done with eunuchs and hermaphrodites: although instructions issued were specific that such persons were to be entered as males. There was little trouble in the compilation of figures. Differentiation was begun from the very outset, as females were recorded on different coloured slips from males. There was no question therefore of any omission of entry of sex in the record, which needed rectification at the compilation stage. The compilation office does not also report a single instance of a person's sex being recorded wrongly. As to fears regarding the omission of females altogether from the record, these have been shown in previous Census Reports to be groundless. The difficulty of recording details regarding young women amongst castes and communities which observe the *pardah* was met by appointment of enumerators and supervisors from amongst these communities, who were available in this census in much larger numbers than before. The old prejudice against the census has died down; and wherever it has remained, it has taken the form, not of actual omission of young females from the returns but of falsifying perhaps of entries re: age and civil condition of girls of nubile ages.

150. General Proportions of the Sexes by Natural Division—The

DIVISION	Masculinity per 1,000 females	Femininity per 1,000 *males
The State	1,061	942
The City	1,252	799
Baroda Prant ..	1,114	898
Amreli Prant ..	1,043	959
Mehsana Prant ..	1,030	971
Navsari Prant ..	1,010	990
Okhamandal ..	1,086	921

The number of females in the State is on the whole less than that of males, i.e. by 72,627, or by 58 per 1,000 males. Males outnumber females by 252 per 1,000 females in the City. The sex comparisons of the other administrative divisions from the figures of the present census are indicated in the margin. As usual Navsari shows the closest approach to sex equality. Next to the City, the Baroda division shows the greatest

excess of males, followed by Okhamandal. The corresponding ratios for femininity are also shown side by side. The state of things in previous censuses since 1901 is shown in the following Table which also gives the sex ratios for the natural population, so far as it can be estimated from the defective data of birthplace returns :—

SUBSIDIARY TABLE I

GENERAL PROPORTION OF THE SEXES BY NATURAL DIVISIONS

NATURAL DIVISION	NUMBER OF FEMALES TO 1,000 MALES							
	1931		1921		1911		1901	
	Actual population	Natural population	Actual population	Natural population	Actual population	Natural population	Actual population	Natural population
1	2	3	4	5	6	7	8	9
Baroda State	942	920	932	922	925	927	936	970
Baroda City	799	880	837	882	853	Not available	853	Not available
Central Gujarat excluding City.	898		886		872		891	
Kathiawad	953	861	934	868	940		939	
North Gujarat	971	943	953	942	947		956	
South Gujarat	990	976	990	987	982		992	

One significant feature of the above Table is that while the female ratio in the actual censused population has almost continuously risen since 1901, that for the estimated natural population in the whole State appears to have as significantly declined. The City female index (proportion of females per 1,000 males) has declined perceptibly since 1921, while everywhere else it has risen, so far as the actual population is concerned. The natural population figures for the separate administrative divisions are only available since 1921, but it is not possible in any case to isolate the City figures at all. Comparing however the available figures of natural population we find that the decline in the female index in the general population holds good in the different parts, except in North Gujarat, where it has remained almost stationary.

151. Causes of Sex Variations—Before the above variations can be properly understood, one must get a firm hold of the causes that generally affect the female index in different localities and amongst different classes of the population. Broadly the factors that govern are of two kinds from the point of view of the time element: permanent and temporary. The permanent factors are race, climatic and physical conditions and social customs, which latter modify the racial influence. The temporary factors are migration which affect the sex ratios vitally especially within a limited area like the State, and diseases and other causes which have a sex selection. Thus plague and influenza, it is notorious, select adversely against females. On the other hand, females used to have greater resisting power in the days when famines were wont to kill. The character of the racial factor is obscure, on account of the present state of knowledge of Indian caste origins. By it is meant however that the proportion of the sexes is a "character" of the line. As the late Mr. Sedgwick pointed out in the Bombay Census Report of 1921:

"The Indian endogamous caste with its exogamous divisions is a perfect method of preserving what is called in genetics the "pure line." The endogamy prevents external hybridisation, while the exogamy prevents the possibility of a fresh pure line arising within the old one by the isolation of any character not common to the whole line. With the preservation of the pure line the perpetuation of all characters common to it necessarily follows. And

there is no reason why sex-ratio should not be a transmissible character. An excess of either sex may in this view be caused either by (1) the birth of more of that sex than of the other or (2) the possession by the children of that sex of some character which tends to their preservation, probably greater resistance to certain diseases."

In order of importance, however, the factors of Race and Migration are of primary importance. To understand the first, one ought to have complete data of births and deaths and causes of deaths in different castes over a long term of years. To understand the incidence of the second, one should have accurate data of migration, so that we can isolate this factor and get at the true figures of natural population. In the birthplace returns, the figures of immigration are more complete and therefore more reliable. The influence of the regional factor is minor, as we find that even within a limited area, the sex ratios of different strata are widely varied, while even amongst castes of wide dispersions, the sex ratios in their natural population, where such can be estimated, tend to be the same wherever they are found, thus proving that the race is the dominant factor in this regard. But that climate and physical conditions do have a secondary effect was realised as early as 1891, when Sir Alexander Baines wrote in his Census Report of that year, that in coastal regions and hilly tracts the female index appeared to be higher, while in dry belts, it tended to be depressed. The late Mr. Sedgwick in his Bombay Report of 1921 stated that a low damp climate was more favourable to females and dry uplands to males. I concluded from a review of regional figures in 1921 * that apart from disturbing circumstances like migration or social environment, it seemed true that propinquity to the sea and, to a less extent, the existence of hills and forests tended to lessen the proportion of males. The influence of social environment, and in particular, the operation of certain social customs like endogamy or enforced widowhood also had an important effect. Endogamy as pointed out just now, deepens the effect of race, while enforced widowhood, such as Hinduism enjoins on the higher castes, encourages longevity amongst females in the higher ages and this helps to raise the general female index. Social habits of diet imposed by religious or other influence on particular races or tribes tended after a long term of years to modify the female index.

152. Influence of Locality on Sex Ratios—Turning to the regional factor as being the most obvious and easily calculable, we see from the Subsidiary Table I that the female index (for the natural population only) in Central Gujarat is 880, in Kathiawad 861, in North Gujarat 943 and in South Gujarat 976. Everywhere of course this factor is dominated by the race factor and social environment. In Central Gujarat, for instance, the deficiency of females is largely due to race and social environment, the bulk of the population being of Rajput and Gujar strain with a selective predisposition towards males. In South Gujarat again, the basic population being Raniparaj, their aboriginal strain has a predominantly high female index, which is modified a little from time to time by the selective influence of epidemics. The City ratio is governed largely by immigration from non-contiguous areas (which has a predominance of males). South Gujarat, North Gujarat and Kathiawad ratios are influenced also by migration of the contiguous type (where females predominate). That is why the female index for the actual population is higher than for the natural. Taking the selected

NAME OF TRACT	Proportion of females to 1,000 males in	
	1931	1921
I. Sea Coast Areas	1,013	999
II. Hilly and Forested Areas ..	930	931
III. Dry belts	977	959
IV. All other are as without City	914	902
V. Natural population ..	920	922

areas as in the margin we compare the respective female indices for the last two censuses. The Sea Coast areas include besides Okhamandal and Kodinar, Navsari and Gandevi talukas also. Class II consists of the Rani mahals, Mangrol, Dhari and Khambha. Class III includes the whole of Mehsana *prant* except Trans-Sabarmati and the parts of Kathiawad not comprised in the first two classes. The comparative

* Baroda Census Report of 1921, para 229.

ratios confirm the conclusions that the female index is decidedly high in coastal regions: that hilly regions do weight the figures in favour of females, wherever the race factor can be eliminated. The dry belts however upset the generally believed theory that damp climates select adversely against males and dry climates do the reverse. The decade has been drier than the previous one, particularly in the areas selected, and yet the female index there has risen. In the greater part of Mehsana *prant*, the movement of population has been governed as pointed out in the opening chapter, by natural causes. Here the generally high female index has been helped by the absence of epidemics that select against females. That is why this index has actually risen by one point in the natural population of this *prant* although in other parts of the State it has declined.

153. Influence of Race and Function—(a) *Race*—Coming to the factors of Race and Function—closely allied from times immemorial in the organisation of Indian communities,—the most important question is whether cross-breeding has an effect in lowering the female index. Mr. S. de Jastrzebski, beginning with a caution against the danger of building conclusions on imperfect data hazarded his personal opinion* that the effect of cross-breeding on the masculinity of the offspring depended probably on the nature of the cross. In 1921, the composition of the State population was analysed according to certain well-known types and the tentative conclusion was reached that the greater and more obvious was the cross the lower was the female index. In the margin the chief race groups according to the classification favoured in this Report are shown—for the details included in each, the reader must refer to the Chapter on Caste—and the female index is compared for the last two censuses. Part of the Muslims with foreign strain are influenced by the migration factor, as they are immigrants with a deficiency of females. The Rajput and Gujar ratio is small, because the cross-breeding is

RACE ELEMENT	Female index in	
	1931	1921
<i>Hindu and Tribal—</i>		
1. Aboriginal	965	963
2. Aryo Aboriginal	918	909
3. Aryan		
(i) Typical Gujarati	973	966
(ii) Rajput and Gujar strain ..	920	907
<i>Musalman—</i>		
1. Foreign Strain	873	898
2. Local converts	987	984
<i>Parsi</i>	1,321	1,323

here conjoined to the factor of race, by which these ethnic strains are from the beginning presumably weighted against females. The higher elements amongst the Rajput and the Gujar have a pure line but hypergamy prevalent amongst them helps to increase this racial tendency towards masculinity. The local converts amongst Musalmans are largely traders, the bulk of whose adult males suffer depletion through emigration—that is one of the reasons why the female ratio is high. But apart from this, it is undoubted that these Neo-Muslims are isolated groups, more or less like Hindu castes and marrying amongst themselves. There is less race admixture therefore amongst them than amongst the foreign elements, who have freely intermarried with the indigenous population. The Parsis have kept the racial character intact, but the high female ratio in this State is due largely to the absence of their adult males away on business or other employment. Apart from these disturbing circumstances, the general proposition would seem to hold good that the purer the line, the higher the femininity, except where the original predisposing ethnic tendency is towards an excess of males at birth. Thus the aboriginals, native to the soil, and such of the Kolis as have a high admixture of the Bhil blood like the Talabda show a comparatively high ratio of females. Amongst the Raniparaj, the Dubla, Dhodia, Bhil, Nayakda and Chodhra may be classed in order of their purity of aboriginal blood. The female ratio is in direct correlation to this order. Brahmans and Vanias generally show a high female index also.

(b) *Function*—Function seems also to join with race in governing sex-variations. The typically artisan groups show a high ratio of females. Where it is depressed, as amongst the Sonis (933), there the race—i.e., their Gujar strain—affects

* M. S. de Jastrzebski, *Sex Ratio at Birth*.

FUNCTIONAL GROUPS	Female Index in	
	1931	1921
<i>I Land holding—</i>		
Lewa	872	857
Anavala	926	889
Kadwa	977	957
Rajput	909	906
<i>II Artisan Groups—</i>		
Darji	1,087	1,064
Chamar	1,038	979
Valand	1,030	962
Vankar	1,027	1,031
Luhar	1,020	1,024
Kumbhar	978	951
Bhavsar	999	1,048
Ghanchi	952	944
Sutar	956	917
<i>III Labouring Groups—</i>		
Thakarda	900	876
Vaghri	906	884
<i>IV Trading Groups—</i>		
Vania	954	961
Luhana	955	990
Vohra	1,062	1,045
Memon	1,016	967
<i>V Professional and Learned—</i>		
Nagar	1,015	1,039
Audich	974	970
Saiyad	937	965
Parsi	1,321	1,323

the proportions. The land-holding groups, including the Anavalas, have a relatively low female ratio. So also have the typically labouring classes like the Thakarda and Vaghri women as they have to work as hard as their men for living and are necessarily short-lived. Finally the trading groups and the professional classes have a high proportion of women. But a study of sex variations can only be properly undertaken when each factor influencing can be isolated and its implications analysed in detail. The margin collects the principal figures of the female index from columns 1 and 2 of Subsidiary Table II given at the end of this part of the chapter and compares them to corresponding figures of 1921.

154. Religion and Sex Ratios—

The religious distribution has only an indirect and remote influence on the female index. Where its spread has become really effective, the particular social observances of a religion may have an indirect effect on the figures: the case of enforced widowhood has been cited already. The special customs of Islam, with its insistence on seclusion of women, cousin marriages, non-vegetarian diet and other features, may have to some extent reacted adversely on the life of its women. Similarly Hinduism by absorbing tribes like the Raniparaj on the fringes of its dominion may react on their sex composition by imposing its will on their social observances, diet, habits of drink and so on. Again the fact that certain faiths are more urban in their composition than others has an indirect consequence on their masculinity. Some of these reactions may be studied from the figures collected for three censuses in Subsidiary Table II, and of the regional variations of the female index by age in Subsidiary Table III (both printed at

YEAR	Raniparaj female index	Tribal female index
1891 ..	963	968
1901 ..	968	971
1911 ..	965	961
1921 ..	958	955
1931 ..	959	978

the end of this part). The Raniparaj for example have become progressively Hinduised in the last four decades: and their female index has similarly declined as will appear from the inset. The 1931 figure shows an increase of only one per mille, but on the other hand the Tribal female index has jumped from 955 to 978. Thus amongst the residue of the tribes, which is really outside Hinduism there is now in evidence a higher

RELIGION	FEMALE INDEX			
	50-60		60 and over	
	1931	1921	1931	1921
Hindu	891	870	978	1,080
Jain	1,011	970	990	1,156
Muslim	917	808	975	1,031
Tribal	778	874	943	858

proportion of females than in 1921, when the Tribal total included a large number of persons who were influenced by Hindu social contacts. Taking the Raniparaj of Central Gujarat, who have been completely Hinduised in this census, their female ratio is only 943. Thus Hinduisation apart from the inevitable racial admixture which it brings with it, does lower femininity with these tribes. Again

taking the figures by age-periods, the relative longevity of Hindu and Jain women as compared with the females of other religions is evident from the inset, particularly Jain women, as widowhood amongst them is strictly enforced. The Tribal index is the lowest for these ages, as the Raniparaj are the least long-lived amongst the State population.

155. Variations in Sex Proportions in the Different Religions—

Subsidiary Table II gives the variations in the female index for the last three censuses. As figures of natural population distributed by religion are not available, these ratios are not calculated therefor, but in that respect, the sex ratios of the respective religions for all-India (provisional census figures) may be compared with those of our State. The all-India figures may be accepted as the natural female index for the respective religions. The only figures comparable are those of Tribal aborigines, as they are least affected by migration, and their female index is governed by race, social environment and religious influences. They are more Hinduised and probably with their Hinduisation, they have suffered more cross breeding than their congeners in other parts of the country. That Parsis and Jains of the State are affected more by emigration seriously differentiating against their males than by any other cause is also seen from comparison with the all-India figures. But racially, they are predisposed towards sexual parity. Amongst Hindus and Muslims, the range of ethnic differences covered under each of these communal designations is too wide to admit of any theorising on sex from the figures of variations in the female index from year to year: the Baroda Hindus have more masculinity, because perhaps their governing Rajput and Gujar strain favours such a tendency, while the Muslims of the State have less than in India generally because of the conjoint effects of racial admixture and emigration.

RELIGION	FEMALE INDEX	
	Baroda	India
Hindu	940	951
Musalman	948	901
Tribal	978	1,008
Jain	970	951
Parsi	1,321	947

156. Sex Ratio in the State compared to other States and Provinces—It will be of interest to compare the general condition of sex differentiations obtaining in the State with the female index of other states and countries. The marginal figures show the comparative ratios for all-India, certain other Indian states and provinces and a few countries of western Europe. The female index here is higher than in British Gujarat and Bombay generally.

Name of Country	Female Index
India	940
Madras	1,021
Hyderabad	961
Mysore	955
Baroda State	942
Bengal	924
Bombay	908
British Gujarat	906
England and Wales (1921)	1,096
Italy (1921)	1,028
Germany (1925)	1,067
Portugal (1920)	1,112

§ 2. ANALYSIS BY AGE PERIODS

157. Sex by Age Periods—(a) By Locality—The general discussion on variations of the female index by age-periods may be now resumed. The margin gives the proportion of females in the age periods, 0-15 and 50 and over calculated on 1,000 males. It also shows comparative

DIVISION	FEMALE INDEX						
	0-15	15-50	50 and over	1931		1921	
				0-30	30-	0-30	30-
Baroda State ..	929	955	928	948	932	927	941
Baroda City ..	876	733	963	803	792	836	839
Central Gujarat ..	903	906	844	913	870	889	881
North Gujarat ..	935	1,002	966	963	986	930	994
South Gujarat ..	963	1,015	952	1,013	945	1,009	956
Kathiawad ..	934	956	1,019	949	961	931	939

comparative figures for 0-30 and 30 and over for two censuses. The average for the whole population is 942 females per 1,000 males. In the middle age-group, however, the sexes approach equality in North and South Gujarat so that an increase in birth rate may at first sight be presumed in the near future in those areas. Taking a middle line at 30 the female index above and below this age is instructive. Everywhere the index for below 30 has increased, and for above 30, has declined except in the City where both age-groups show a decline in the female index, indicating that the increase recorded there has been largely through male immigrants of young as well as of adult ages.

(b) *The Child Population*—The figures here are of great interest for many reasons. In the first place they serve to show how far masculinity at birth is operative in different communities; secondly they help to throw light on the truth or otherwise of the allegation that infanticide still prevails and serves as a potent cause for the smallness of the figures of female children. The proportions for the different religions are reckoned on quinary groups (Subsidiary Tables II and III), while those for different castes are based on septenary and ternary ages (0-6, 7-13, 14-16, 17-23, 24-43 and 44 and over). The female proportions

RELIGION	FEMALE INDEX IN			
	0-5		5-10	
	1921	1931	1921	1931
Hindu	1,007	977	895	897
Jain	1,004	946	933	925
Muslim	1,019	977	928	912
Tribal	1,040	1,085	898	969

in children under 10 in the four principal religions are compared in the margin for the last two censuses. For the two ages combined together, the female index may be compared to the proportion of female births to male in the last two decades. Thus in 1911-21, the female ratio of births was 890, while the female index for the average child population of the decade was 1,005, and the corresponding ratios for 1921-31

are 895 and 991, showing that if the census record of age was at all correct, and the margin of error in registration of births was the same for both these sexes, the masculinity at birth was relatively very high compared to the ratio of survival. But both these assumptions require large reservations. Female births, it is notorious, escape registration, more than male, while the proper age distribution of persons living at these ages below 10 would require correction of the heaping which occurs in the crude returns at 5 and 10 years. The Life Table (*vide* Tables D and E of Part II-Chapter IV) gives specific mortality rates for individual ages up to 10. The margin gives these rates and also the female index for age-periods, 0-1, 1-5 and 5-10 and 0-10 from smoothed frequencies in each sex as calculated in Table VI of the above-mentioned Life Table Report (*vide* para 130 *supra*). These frequencies have been reduced to absolute figures and the female index calculated thereon. The specific mortality rates per cent of females, it will be seen, are higher than males for every year of these, except for the infant periods (0-1), when males are more exposed to risk of death than females. But this advantage with the female sex is only temporary as the specific mortality rate for that sex becomes greater in the succeeding years of life almost till the end of the period under consideration (*i.e.*, age-group 9-10) when the death rate for females becomes slightly lower than for males. With a lower mortality rate, the female index at 0-1 is 971, so that at birth the sex ratio must be presumed to be even more weighted against females than this. Applying

AGE	Normal mortality Rate per cent for		Female Index
	Males	Females	
0- 1	25.76	25.08	971
1- 2	7.62	10.29	
2- 3	3.98	6.49	
3- 4	3.20	4.32	
4- 5	2.13	3.07	980
5- 6	1.64	2.38	
6- 7	1.42	1.91	
7- 8	1.28	1.63	
8- 9	1.26	1.36	901
9-10	1.19	1.12	
Absolute figures of age distribution			
0- 1	42,791	41,553	945
1- 5	141,768	138,952	
5-10	161,164	145,162	
0-10	345,723	326,667	

the distinctive death rates for each sex at 0-1 and calculating on the basis of the sex ratio of 971 we get the following equation for the Female Index at Birth:—

Female Index at Birth = $\frac{971}{74.98} \times 74.24$ or 961.4. This ratio may be compared with 945, the female index for 0-10, i.e., for the survivors of the births in the decade. These proportions are important to remember, when we correlate sex ratios of the census with vitality returns. The second point of interest in connection with the child population concerns the allegation about infanticide. It was suggested recently by a writer in *The Times of India* that the practice of infanticide (*dudhpiti*) was still prevalent amongst certain castes, because otherwise the paucity of females amongst them could not be accounted for. In the marginal table the proportion of females per 1,000 aged 0-6 in the present census is compared to similar proportions for the age-period 0-5 in the Censuses of 1921 and 1911. It is to be seen that the female proportion in these ages is sensibly rising in the castes amongst whom infanticide is said to have been once rife. The Rajput proportions are almost the same as in any other caste,—whatever difference there is may be ascribable more to reasons of race, social conditions, the greater neglect of female life, the effect of early marriage, and the like than to infanticide. Amongst the Lewa Patidar, the almost universal prevalence of education in Charotar has extinguished the custom of infanticide. It is possible that a case or two may occur amongst the poorest and the most improvident sections of the community, but these are so rare that they do not affect the figures at all. But the deficiency of females in that caste is still serious and deserves a far more closer study than this Report can give.

CASTE	FEMALE INDEX		
	Aged 0-6 (1931)	Aged 0-5 (1921)	Aged 0-5 (1911)
Lewa Patidar ..	912	886	909
Rajput	925	928	904
Wagher	1,085	1,020	766

(c) *The Adolescent Age Groups*—Coming to age-periods 10-15 and 15-20 in the different religions and 7-13, 14-16 and 17-23 in the different castes, we find the female index rising amongst Hindus and Muslims since 1911. Jains show an increase in the latest census. The Tribals show a decline in 10-15 and increase in 15-20. It was the depression at this point that occasioned von Mayr's famous *tirade* against the Indian Census which he suspected of being vitiated by large omissions of females of nubile ages. But this depression is largely due to misstatements of age (more wilful than accidental) which result in deliberate heaping at the earlier age group in the case of unmarried and similar excess for the married at the next higher group. The marginal table, if compared with figures of 0-5 given above shows definite heaping at the younger age-group. The depression in the age-group 10-15 was more marked in the earlier censuses than in the later when it seems to have transferred itself to the higher age-group, i.e., 15-20, thus showing that the age of marriage is rising. The inflation at 5-10 seems to have declined a little also, possibly due to the fact that girls really aged 5-10 were returned in the next higher group in the fond hope of avoiding the penal provisions of the Infant Marriage Prevention Act. On the other hand, there is a smoother progression in the ages 0-30 in the last five censuses, showing that the female index is sensibly rising in those ages. But that there is still a marked deficiency which is real in some cases in the age-group 10-20 cannot be doubted and is illustrated in the figures of castes in age-groups 7-13, 14-16 and 17-23. The

YEAR	HINDU			MUSLIM		
	10-15	15-20	0-30	10-15	15-20	0-30
1891	778	822	920	790	870	938
1901	822	842	898	833	906	936
1911	802	839	904	844	881	936
1921	888	799	917	898	928	952
1931	897	963	945	910	988	955

CASTE	FEMALE INDEX			
	7-13	14-16	17-23	All ages
<i>Advanced</i>	888	892	941	920
Brahman	919	904	927	929
Lewa Patidar	854	858	893	872
Sutar	944	891	1,002	956
<i>Intermediate</i>	929	959	1,010	962
Baria	845	757	987	892
Kadwa Patidar	1,051	1,033	1,037	977
Chamar	917	1,052	1,060	1,038
Talabda	936	969	1,033	1,009
Vankar	919	994	1,086	1,027
<i>Illiterate</i>	874	889	1,032	935
Raniparaj	897	952	1,166	962
Thakarda	841	817	897	900
<i>Purdah Castes</i>				
Maratha	780	839	765	799
Rajput	847	996	865	909
Pathan	826	922	812	825
Shaikh	879	937	875	868

female index in these groups is compared in the margin with the general female index in these castes. The Advanced, Intermediate and Illiterate sections are separately compared with each other, typical castes under each being also shown. A separate group of typical *purdah* castes is also included. The 17-23 group is generally overstocked with females, while the lower ones show a depletion. In the general population, taking the smoothed returns by sex, the proportion of females is uniformly less than males from 12 onwards, until 17, when the female index is higher than that of

males right on till the 30th year (*vide* Table VI of the Life Table Report—Part II of Chapter IV). The specific mortality rate per cent for females in individual ages in the adolescent group is also uniformly less than that for males. That is why the general female index is higher as the age grows higher: this feature is seen in the caste groups collected above, except amongst the *purdah* castes. The Pathan and Maratha ratios are complicated by the migration factor and therefore

AGE PERIOD	Mortality Rate per mille amongst Females	
	1931	1921
12-13 ..	6.4	7.2
13-14 ..	5.2	7.3
14-15 ..	4.6	7.8
15-16 ..	4.8	8.6
16-17 ..	5.5	9.5
17-18 ..	6.1	10.5

cannot be considered. In the Rajput there is a heaping at 14-16 and also at 24-43 as a reference to Subsidiary Table IV will show. The Lewa index shows that there is a general deficiency in all groups, but the least so in the ages 7-13 and 14-16 than in any other. The greatest deficiency occurs in those castes (i) where *purdah* and early motherhood are practised and (ii) where the race factor selects adversely to females. Comparison with previous censuses in respect of castes is not possible as the age-groups now selected are different, but the marginal figures generally show that the mortality rates are less now in

the nubile ages than before (Table E of 1931 and Table D of 1921), proving that the age of effective marriage is getting more and more postponed.

(d) *Adult Ages*—We may now see in the adult age-periods how the proportion of women works out in the three censuses. The proportion of women below 30 has risen, as already shown, but the female index for ages 30 and over has declined from 945 in 1911 to 941 in 1921 and 932 in this census. In the age-group 30-40

AGE PERIODS	FEMALE INDEX		
	1911	1921	1931
20-25	979	1,024	989
25-30	944	934	968
30-40	925	926	945
40-50	922	957	918
50-60	929	869	896
60 and over	1,132	1,067	978
Total 30 and over ..	945	941	932

alone, the proportion shows a rise, but in the other groups there are fluctuations. Amongst the aged, (60 and over) women preponderated until the latest year when they again fell below the number of males. The female index of 1931 however generally shows an improvement on the state of things in 1911 except among persons aged 50 and over. The rise in the female index below 30 is no doubt due at least in part to improvement in health conditions, the greater facilities for medical relief to women generally and for maternity relief in

greater facilities for medical relief to women

particular. The absence since 1919 of epidemics with a selective tendency against females has also helped to bring about this result. Coming to individual social groups, longevity amongst females is marked in castes that enforce widowhood on their women and it declines amongst the poorer and less educated sections, where through greater neglect of female life, the aged women do not get a reasonable chance to live. Thus the Vania, Luhana and Rajput show the highest female index amongst persons aged 44 and over. The Raniparaj, by nature a short-lived people, show that their women are even less long-lived than their men.

CASTE.	FEMALE INDEX	
	All ages	44 and over
<i>Advanced</i>	920	901
Brahman	929	911
Vania	954	959
Luhana	955	964
Sayiad	937	959
<i>Intermediate</i>	962	938
Shaikh	868	886
Rajput	909	940
<i>Illiterate</i>	935	829
Raniparaj	962	814
Bhangi	955	885

§ 3. CORRELATION WITH VITALITY RETURNS

158. The Female Index at Birth—It will be of interest now to compare the sex ratio in vital occurrences. First we shall consider long term figures for births. As they are not compiled here for religions and castes separately, the variations in the female index in different localities will alone be considered. Subsidiary Table V gives the absolute figures of registered births since 1901 and the variations in the female index of births in the different divisions in the last decade. In the margin a summary of the principal proportionate figures is given. As they are calculated on registration figures, their value has to be discounted in view of the known inaccuracy of registration. If births generally are omitted from registration, female births suffer much more from this defect than males. But as the improvement in registration may be assumed to be progressive from decade to decade, the rise in the female index indicated in the margin must be put down to greater accuracy of record. Similarly the City ratio, which would, as it stands, imply a lower masculinity at birth than in other parts of the State, is entirely the result of better record there. On an accurate basis of births, masculinity at birth should be highest in the City instead of being the lowest as the registration figures would have us believe. Rejecting therefore the birth records as valueless, we must give greater attention to the female index at birth calculated from the corrected returns of age in para 157 (b) above. The female index as reckoned there—961.4 is more correct than 895 obtained from recorded births. Broadly reviewing the figures of four censuses, Prof. Mukherji in his Life Table graduated the age returns so that in his opinion, 36,555 female, and 36,209 male infants living in age 0-1 would be required to keep alive a population of the strength of this State. This gives a female index of 1,010. On this proportion, the sex ratio at birth would give a femininity of 1,000.03 (or almost sex parity). Similar calculations from the Life Table Report of 1921 give a rather low female ratio of 938. This would give a female index at birth of 939 on the infant mortality rates for the different sexes calculated in that year. Thus the long term tendency in the sex ratio of births seems to be towards parity. From the comparison of the two Life Table Reports one would imagine that this movement towards parity was accelerated in the last 10 years. But some allowance must be made for the difference in the methods pursued on the two occasions. Prof. Vaidyanathan in 1921 took the average of female births to male, then drew a smooth curve as suggested by the female index at birth, and also at successive age-groups. This method of procedure was different from Prof. Mukherji's on the present occasion, who has distributed the graduated returns of quinary groups by independent investigation of the returns of females. If this was done for 1921, possibly the female index would have been a little higher at birth than above indicated. In any case the movement towards parity is a fact which is worth remembering at the next census. Beyond this circumstance

Decade and Natural Division	Female Index at Birth
Decade	
1901—10 ..	881
1911—20 ..	890
1921—30 ..	895
Natural Division	
Central Gujarat ..	877
City ..	912
North Gujarat ..	877
South Gujarat ..	947
Kathiawad ..	912

there is little from the birth returns, that goes to confirm Mr. S. de Jastrzebski's theories (i) that masculinity at birth is affected by race, and (ii) that it is greater in rural than in urban population. We shall see whether any further light is thrown on this subject in the next part by the facts disclosed by our special enquiry into comparative fertility.

159. The Sex Ratio at Death—The mortuary returns are relatively more accurate than the record of entrances to life. A study of long term figures of registered deaths does not however disclose any special features. The decade closed by the present census was not remarkable for the incidence of any epidemics that had a selective tendency against females. The small-pox deaths at the end of the decade indeed showed a slightly higher rate for females than for males. But the general female index for deaths in the year of the small-pox epidemic (1930) was only 894. The general index for the decade was only 875. The decade previous was marked by influenza and plague, both of which were fatal to women. The recorded death rates respectively from these causes for females were 36.3 and 14.5 per mille, while the male proportions were 34.3 and 12.6. These ratios however

AGE PERIOD	Female Index in average number of deaths	
	1931	1921
0— 1 ..	861	869
1— 5 ..	917	906
5—10 ..	914	942
10—15 ..	965	1,019
15—20 ..	1,110	992
20—30 ..	1,133	1,062
30—40 ..	905	1,010
40—50 ..	684	781
50—60 ..	646	767
60 and over ..	895	999
All ages	875	904

were by no means illustrative of the specially selective virulence of these visitations as the registration was defective in the matter of female deaths. The City registration is the most accurate in the State and in 1911-21 the female index was 987; in 1921-31, the female index was 917. Thus the lives of women seem to be proportionately less exposed to the risk of death now than in previous decades. Studying the figures by age-periods, for two censuses, this diminishing liability of women to death becomes more evident: while the general female index is reduced by 29 per 1,000 males in the last ten years, the lower female index in the ages 10-15 and the higher one in the next age-group in 1931 is clearly indicative of the postpone-

ment of the age of effective marriage from 10-15 to 15-20. Beyond this general conclusion, the figures in the margin cannot be pressed to yield more definite results.

160. Variations in the Female Index in Normal Mortality Rates since 1921—But if the registered returns of death are riddled with defects which

AGE PERIOD	Normal Mortality Rates per cent			
	1931		1921	
	Male	Female	Male	Female
0— 1 ..	25.76	25.08	29.66	29.59
1— 5 ..	4.35	6.28	6.11	6.02
5—15 ..	1.05	1.20	1.31	1.16
15—50 ..	2.09	1.93	2.54	2.53
50 and over ..	7.23	7.06	7.71	7.43
All Ages ..	3.62	3.81	4.46	4.37
Female Index at death	989		913	

preclude them from becoming useful, it will be of interest to turn to the variation in the mortality rates calculated in the Life Table Reports of 1921 and 1931. In the margin are collected rates of mortality as normalised through a long term of years and calculated for the two censuses. In 1931, the advantage of the relatively healthy conditions is seen in the distinct improvement

in mortality rates at all periods particularly at the beginning and end of life. That this benefit has accrued more largely to women than to men is seen in the great improvement in the female index.

ADDITIONAL SUBSIDIARY TABLES

SUBSIDIARY TABLE II

NUMBER OF FEMALES PER 1,000 MALES AT DIFFERENT AGE PERIODS BY
RELIGION AT EACH OF THE LAST THREE CENSUSES

AGE	ALL RELIGIONS			HINDU		
	1931	1921	1911	1931	1921	1911
1	2	3	4	5	6	7
0—1	975	1,001	977	978	1,000	978
1—2	992	1,035	1,025	991	1,030	1,033
2—3	1,024	1,074	1,003	1,022	1,068	1,000
3—4	985	1,064	1,077	983	1,077	1,079
4—5	918	910	936	912	893	924
Total 0—5	978	1,018	1,000	977	1,007	999
5—10	901	899	846	897	895	835
10—15	900	889	817	897	888	802
15—20	968	827	854	963	799	839
20—25	989	1,024	979	985	982	962
25—30	968	934	944	969	929	939
Total 0—30	948	927	914	945	917	904
30—40	945	926	925	946	925	920
40—50	918	957	922	915	962	928
50—60	896	869	929	891	870	932
60 and over	978	1,067	1,132	978	1,080	1,031
Total 30 and over ..	932	941	945	930	943	945
Total all ages (Actual Po- pulation)	942	932	925	940	927	919
Total all ages (Natural Po- pulation)	920	922	927	Not available		

AGE	MUSLIM			TRIBAL			JAIN		
	1931	1921	1911	1931	1921	1911	1931	1921	1911
1	8	9	10	11	12	13	14	15	16
0—1	945	1,005	960	1,019	1,011	999	925	933	954
1—2	983	1,019	983	1,111	1,110	969	937	1,105	1,136
2—3	1,013	1,078	1,034	1,180	1,144	1,041	981	1,033	970
3—4	991	1,044	1,048	1,095	993	1,085	962	1,008	1,060
4—5	959	959	985	1,033	1,009	1,004	914	1,014	1,005
Total 0—5	977	1,019	1,002	1,085	1,040	1,023	946	1,004	1,009
5—10	912	928	884	969	898	909	925	933	878
10—15	910	898	844	942	895	955	915	876	899
15—20	988	928	881	1,161	1,030	1,083	953	894	852
20—25	1,008	1,027	1,007	1,167	1,338	1,221	993	1,059	1,059
25—30	946	927	966	967	965	947	1,008	976	988
Total 0—30	955	952	936	1,040	996	1,007	952	949	948
30—40	938	953	966	889	889	896	1,005	1,028	1,009
40—50	923	947	876	807	864	812	995	1,032	1,033
50—60	917	808	900	778	874	809	1,011	970	993
60 and over	975	1,031	1,116	943	858	1,028	990	1,156	1,316
Total 30 and over ..	935	934	944	848	876	870	1,001	1,035	1,048
Total all ages (Actual Po- pulation)	948	945	939	978	955	961	970	984	987
Total all ages (Natural Po- pulation)	Not available			Not available			Not available		

SUBSIDIARY TABLE III

NUMBER OF FEMALES PER 1,000 MALES AT DIFFERENT AGE PERIODS BY
RELIGIONS AND NATURAL DIVISIONS

AGE	CENTRAL GUJARAT					BARODA CITY					NORTH GUJARAT	
	All Religions	Hindu	Muslim	Jain	Christian	All Religions	Hindu	Muslim	Jain	Christian	All Religions	Hindu
1	2	3	4	5	6	7	8	9	10	11	12	13
0-1	956	964	882	839	921	995	926	978	1,130	900	976	979
1-2	970	972	945	986	959	974	968	1,004	1,143	833	992	994
2-3	1,012	1,009	1,045	984	1,184	952	969	867	1,036	866	1,022	1,023
3-4	963	958	1,039	884	1,000	924	949	835	882	750	985	985
4-5	887	880	972	840	918	877	890	864	812	470	913	911
TOTAL 0-5	957	957	969	902	979	949	958	912	1,006	767	977	978
5-10	874	869	887	901	1,222	847	853	809	1,085	568	905	905
10-15	868	865	861	889	1,302	822	826	825	852	441	915	913
15-20	924	924	916	856	1,053	767	773	821	702	471	985	977
20-25	942	942	945	922	948	735	745	752	728	600	1,019	1,010
25-30	914	914	915	912	952	696	712	620	896	1,000	1,027	931
TOTAL 0-30	913	912	917	897	1,082	803	812	790	860	604	963	949
30-40	897	894	916	897	1,021	703	730	589	793	679	1,014	1,009
40-50	865	863	882	898	873	770	800	686	684	439	974	969
50-60	820	817	841	911	786	885	905	834	796	516	936	929
60 and over	881	882	895	835	597	1,094	1,111	1,007	1,266	818	1,014	1,014
Total 30 and over	870	868	889	892	893	792	817	698	799	585	986	982
Total all ages (Actual population)	897	896	907	895	1,022	800	814	756	838	598	971	967
Total all ages (Natural population)	880	..	..	..	..	..	..	..	..	..	943	..

AGE	NORTH GUJARAT		SOUTH GUJARAT					KATHIAWAD			
	Muslim	Jain	All Religions	Hindu	Muslim	Jain	Zoroastrian	Tribal	All Religions	Hindu	Muslim
1	14	15	16	17	18	19	20	21	22	23	24
0-1	958	915	989	982	1,015	1,324	855	1,018	993	996	984
1-2	997	887	1,029	1,026	1,003	1,322	792	1,111	1,001	998	1,006
2-3	1,034	951	1,070	1,062	1,011	1,131	910	1,180	997	997	1,000
3-4	979	1,006	1,039	1,036	1,008	902	972	1,094	964	960	1,000
4-5	933	945	974	964	1,014	805	895	1,033	942	933	1,000
TOTAL 0-5	978	936	1,020	1,013	1,010	1,079	896	1,084	984	978	977
5-10	918	913	939	931	969	858	979	969	913	908	940
10-15	947	921	939	934	970	946	1,048	942	896	893	914
15-20	1,084	1,047	1,096	1,089	1,069	766	1,424	1,161	950	945	991
20-25	1,122	1,085	1,113	1,105	1,105	727	1,735	1,166	992	984	1,057
25-30	1,044	1,087	1,028	1,029	1,069	788	1,793	966	982	973	1,077
TOTAL 0-30	1,002	985	1,013	1,007	1,024	880	1,217	1,040	949	944	985
30-40	1,054	1,088	956	953	1,043	772	1,746	888	952	944	1,011
40-50	982	1,101	920	910	1,072	667	1,788	806	911	904	962
50-60	956	1,092	917	907	1,036	922	1,695	778	975	977	976
60 and over	989	1,059	1,004	992	1,066	842	1,290	942	1,079	1,091	1,022
Total 30 and over	1,005	1,089	945	939	1,053	767	1,618	848	961	957	992
Total all ages (Actual population)	1,003	1,024	990	984	1,034	839	1,379	978	953	948	987
Total all ages (Natural population) .. ..	..	..	976	..	..	..	..	..	861	..	..

SUBSIDIARY TABLE IV

NUMBER OF FEMALES PER 1,000 MALES FOR CERTAIN SELECTED CASTES

CASTE	NUMBER OF FEMALES PER 1,000 MALES						
	All Ages	0-6	7-13	14-16	17-23	24-43	44 and over
1	2	3	4	5	6	7	8
Advanced	920	941	888	892	941	938	901
Bhavsar	999	1,091	802	976	818	1,144	1,077
<i>Brahman</i>	<i>929</i>	<i>957</i>	<i>919</i>	<i>904</i>	<i>927</i>	<i>940</i>	<i>911</i>
Anavala	926	994	894	775	938	996	861
Audich	974	936	924	951	1,032	997	982
Deshastha	868	1,012	1,002	759	705	892	808
Mewada	882	1,003	829	878	757	921	875
Nagar	1,015	946	966	957	1,029	1,155	965
Tapodhan	998	964	878	957	1,085	1,016	1,087
Ghanchi	952	910	915	853	995	971	1,015
Lewa Patidar	872	912	854	858	893	887	827
Luhana	955	923	888	770	978	1,072	964
Maratha Kshatriya	799	859	780	839	765	705	993
Prabhu	981	1,085	1,043	1,188	804	1,020	802
Soni	933	901	901	992	978	906	989
Sutar	956	927	944	891	1,002	998	927
<i>Vania</i>	<i>954</i>	<i>982</i>	<i>927</i>	<i>868</i>	<i>1,120</i>	<i>973</i>	<i>959</i>
Disawal	955	855	870	916	1,034	1,036	955
Khadayata	899	1,117	942	934	828	845	819
Lad	897	924	916	892	793	897	944
Shrimali	1,018	1,048	958	938	1,042	1,048	1,015
<i>Muslim</i>	<i>1,023</i>	<i>991</i>	<i>907</i>	<i>1,051</i>	<i>1,152</i>	<i>1,087</i>	<i>988</i>
Memon	1,016	1,090	898	953	1,119	1,078	927
Saiyad	937	964	875	991	1,001	898	959
Vohra	1,062	981	930	1,136	1,229	1,167	1,010
Parsi	1,321	899	996	1,115	1,542	1,652	1,443
Intermediate	962	948	929	959	1,010	985	938
Anjana Chaudhari	954	1,005	927	970	885	913	1,052
Baria	892	934	845	757	987	949	807
Chamar	1,038	985	917	1,052	1,060	1,213	959
Kadwa Patidar	977	891	1,051	1,033	1,037	980	925
Kumbhar	978	975	925	933	984	1,039	963
Luhar	1,020	934	866	964	1,064	1,114	1,137
<i>Primitive and Forest Tribes (Hindu and Tribal)</i>	<i>952</i>	<i>1,034</i>	<i>896</i>	<i>928</i>	<i>1,122</i>	<i>931</i>	<i>824</i>
Chodhra	944	1,024	906	963	1,125	914	802
Dhodia	970	1,060	876	863	1,119	968	874
Rajput	909	925	847	996	865	916	940
Talabda	1,009	983	936	969	1,033	980	1,152
Valand	1,030	1,040	922	1,019	1,024	1,131	990
Vankar (Dhed)	1,027	976	919	994	1,086	1,158	987
<i>Muslim</i>	<i>911</i>	<i>944</i>	<i>886</i>	<i>955</i>	<i>1,024</i>	<i>848</i>	<i>900</i>
Molesalam	905	861	799	905	922	987	915
Pathan	825	954	826	922	812	753	812
Shaikh	868	919	879	937	875	810	886
Indian Christian	891	890	1,171	826	936	675	1,038
Illiterate	935	992	874	889	1,032	965	829
Bhangi	955	916	839	931	1,064	1,067	885
Bharwad	943	896	950	936	992	936	961
<i>Primitive and Forest Tribes (Hindu and Tribal)</i>	<i>962</i>	<i>1,038</i>	<i>897</i>	<i>952</i>	<i>1,166</i>	<i>944</i>	<i>814</i>
Bhil	963	1,113	910	1,007	1,094	920	778
Dubla	1,000	1,009	953	920	887	1,107	959
Nayakda	950	987	860	843	1,312	908	866
Talavia	967	960	869	1,006	1,151	1,089	765
Thakarda	900	988	841	817	897	974	784
Vagher	937	1,085	888	756	959	948	858
Vaghri	906	955	858	796	1,011	965	770

SUBSIDIARY TABLE V

ACTUAL NUMBER OF BIRTHS AND DEATHS REPORTED FOR EACH SEX DURING
THE DECADES 1901-1910, 1911-1920 AND 1921-1930

YEARS	NUMBER OF BIRTHS			NUMBER OF DEATHS			Difference between columns 2 and 3. Excess of latter over former (+) Defect (—)	Difference between columns 5 and 6. Excess of latter over former (+) Defect (—)	Difference between columns 4 and 7. Excess of latter over former (+) Defect (—)	Number of female births per 1,000 male births	Number of female deaths per 1,000 male deaths
	Male	Female	Total	Male	Female	Total					
1	2	3	4	5	6	7	8	9	10	11	12
1901	7,330	6,091	13,421	65,231	50,976	116,337	— 1,239	— 14,385	— 102,916	831	780
1902	22,422	19,598	42,020	30,684	27,214	57,898	— 2,824	— 3,470	— 15,878	874	887
1903	19,219	16,876	36,095	31,556	30,162	61,718	— 2,343	— 1,394	— 25,623	878	956
1904	20,994	16,736	39,730	33,262	31,630	64,892	— 2,258	— 1,632	— 25,162	892	951
1905	22,967	20,617	43,584	24,724	23,503	48,227	— 2,350	— 1,221	— 4,643	898	951
1906	22,782	20,101	42,883	24,352	21,869	46,221	— 2,681	— 2,483	— 3,338	882	898
1907	22,434	19,766	42,200	33,013	31,099	64,112	— 2,668	— 1,914	— 21,912	881	942
1908	24,986	22,347	47,333	25,455	22,275	47,730	— 2,639	— 3,180	— 397	894	875
1909	25,937	22,666	48,603	22,666	20,037	42,703	— 3,271	— 2,629	— 5,900	874	884
1910	25,860	22,648	48,508	23,742	20,794	44,536	— 3,212	— 2,948	— 3,972	876	876
Total 1901-1910 ..	214,931	189,446	404,377	314,815	279,559	594,374	— 25,485	— 35,256	— 189,997	881	888
1911	28,349	25,275	53,624	26,565	23,966	50,531	— 3,474	— 2,599	— 3,093	892	902
1912	30,926	27,179	58,105	24,506	21,344	45,850	— 3,207	— 3,162	— 12,795	896	871
1913	28,321	25,180	53,501	27,759	24,901	52,660	— 3,141	— 2,858	— 841	889	897
1914	33,179	29,789	62,968	26,948	23,604	50,552	— 3,390	— 3,344	— 12,416	898	876
1915	32,951	29,328	62,279	24,654	21,663	46,317	— 3,623	— 2,991	— 15,962	890	879
1916	33,911	29,959	63,870	25,363	22,219	47,582	— 3,952	— 3,144	— 16,288	883	876
1917	33,301	29,477	62,778	28,839	25,366	54,205	— 3,824	— 3,473	— 8,573	885	880
1918	32,366	28,495	60,861	41,143	40,045	81,188	— 3,871	— 1,098	— 20,327	880	973
1919	24,803	22,195	46,998	66,508	62,624	129,132	— 2,608	— 3,884	— 82,134	895	941
1920	29,057	25,809	54,866	29,176	24,862	54,038	— 3,248	— 4,314	— 828	888	852
Total 1911-1920 ..	307,164	273,226	580,390	321,461	290,594	612,055	— 33,938	— 30,867	— 31,665	890	904
1921	28,412	25,318	53,730	22,671	19,324	41,995	— 3,094	— 3,347	— 11,735	891	852
1922	28,282	25,403	53,685	20,447	17,436	37,883	— 2,879	— 3,011	— 15,802	898	853
1923	29,848	26,335	56,183	25,965	22,541	48,506	— 3,513	— 3,424	— 7,677	882	868
1924	31,688	28,535	60,223	22,807	19,597	42,404	— 3,153	— 3,210	— 17,819	894	859
1925	29,787	26,448	56,235	23,795	20,633	44,428	— 3,339	— 3,162	— 11,807	888	867
1926	31,999	28,365	60,364	22,485	19,953	42,438	— 3,634	— 2,532	— 17,926	886	887
1927	27,550	24,588	52,138	21,826	19,875	41,701	— 2,962	— 1,951	— 10,437	891	911
1928	31,202	28,165	59,367	24,494	21,422	45,916	— 3,037	— 3,072	— 13,451	903	875
1929	30,229	27,407	57,636	25,794	22,602	48,396	— 2,822	— 3,192	— 9,240	907	876
1930	33,760	30,339	64,099	29,148	26,046	55,194	— 3,421	— 3,102	— 8,905	899	894
Total 1921-1930 ..	302,757	270,903	573,660	239,432	209,429	448,861	— 31,854	— 30,693	— 124,799	895	875
NATURAL DIVISION											
Central Gujarat ..	90,114	79,033	169,147	73,774	64,421	138,195	— 11,081	— 9,353	— 30,952	877	873
Baroda City ..	16,972	15,471	32,443	15,999	14,667	30,666	— 1,501	— 1,332	— 1,777	912	917
North Gujarat ..	111,346	97,649	208,995	91,231	77,087	168,318	— 13,697	— 14,144	— 40,677	877	845
South Gujarat ..	53,114	50,274	103,388	36,392	34,037	70,429	— 2,840	— 2,355	— 32,959	947	935
Kathiawad ..	31,211	28,476	59,687	22,036	19,217	41,253	— 2,735	— 2,819	— 18,434	912	872

NOTE.—This table includes only the registered deaths up to 1st August 1930. The official year is between 31st July to 1st August. In Subsidiary Table XI of Chapter I, the figure of births and deaths given there is from March 1st, 1921, till the end of February 1931.

SUBSIDIARY TABLE VI

NUMBER OF DEATHS OF EACH SEX AT DIFFERENT AGES

AGE-PERIOD	1921-22		1923-24		1927-28		1928-29		1929-30		Total		Average number of female deaths per 1,000 male deaths
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
0-1 ..	4,351	3,574	5,013	4,239	4,738	3,987	4,922	4,327	6,551	5,886	25,575	22,013	861
1-5 ..	3,317	3,028	4,467	3,935	4,720	4,313	5,345	4,835	7,101	6,767	24,950	22,878	917
5-10 ..	901	803	1,007	887	1,196	1,151	1,277	1,165	1,959	1,789	6,340	5,705	914
10-15 ..	588	497	595	563	690	646	636	678	750	762	3,259	3,146	965
15-20 ..	520	542	585	607	608	790	664	709	718	790	3,095	3,438	1,110
20-30 ..	1,592	1,606	1,550	1,660	1,521	1,904	1,596	1,887	1,580	1,821	7,839	8,878	1,133
30-40 ..	1,875	1,712	1,890	1,653	1,850	1,749	1,888	1,705	1,846	1,645	9,349	8,464	905
40-50 ..	2,038	1,392	2,019	1,412	2,226	1,485	2,276	1,571	2,214	1,506	10,773	7,366	684
50-60 ..	2,275	1,523	2,310	1,510	2,573	1,590	2,820	1,735	2,379	1,624	12,357	7,082	646
60 and over ..	2,990	2,759	3,371	3,131	4,372	3,807	4,370	3,990	4,050	3,456	19,153	17,143	895

CHAPTER V—SEX

PART II

THE SIZE AND SEX CONSTITUTION OF FAMILIES

§ 1. GENERAL

161. Reference to Data—In this part are dealt with the results of two enquiries, one of which details the variations in the Size of the Normal Household, and the second relates to the allied question of the Size and Sex Constitution of Families in the State. The first enquiry was undertaken at the time of the preliminary count, when the last column of house register had to show the number of persons comprised in the normally resident households. The totals in the different parts of the State have been already utilised in the first chapter as indicative of the normally resident or *de jure* population. In this section, we shall deal with the results in so far as they throw any light on the variations in the size of household in the last two censuses. The second enquiry was conducted distinct from the general census and concerned itself mainly with the various aspects of the problem of comparative fertility and in that respect, the size of families was correlated with (i) the sex constitution of children, (ii) the ages of parents, (iii) the duration of marriage and lastly (iv) with the ratio of survival. Begun tentatively in 1921, with a limited questionnaire, the scope of the enquiry was extended in this census to all parts of the State, and in particular an attempt was made to determine the prevalence of birth control, through the frequency of births correlated with the caste and occupation of individual families. Altogether 352,020 slips were served out and *parwanas* were issued to 4,897 persons selected with special reference to their influence and tact—experienced school teachers, talatis and tajvijsars of good standing, sub-assistant surgeons, members of municipalities and other local and caste leaders of status, and as many women teachers and nurses as we could train specially for the purpose. We had altogether 429 women enquirers. The majority of responses received from town areas—roughly about 50,000—were collected by these women workers. In the town of Patan—second in the State—a whole band of volunteer women workers—mostly non-official—was organised by the woman medical officer of the place. In the City of Baroda, over 100 women workers were engaged for this purpose. The work was spread over six months, and by the first week of July, the compilation of tables was begun.

162. Accuracy of the Data received : Their Relative Value—Altogether 205,628 slips were accepted for compilation after final scrutiny. Wherever the least doubt was entertained as to the genuineness of the responses, the slips were freely rejected. As the enquiry was conducted for the second time in the State, there was less popular objection to the queries. Besides, as the greater part of the enquiry in town areas was left to women-workers, there was less objection to the procedure. But little difficulty was experienced from the people themselves. The enquiry was entirely optional in its character : the responses were to be recorded entirely with the consent of the people. Wherever heads of families were inclined to show objection, persuasion was first to be used, the beneficent objects behind the investigation were to be explained, and where even such efforts were fruitless, the queries were not to be pressed. People however were quite willing to give replies. The vernacular school mistresses were remarkably successful almost everywhere ; but the City was an exception as the responses there were not so numerous. This was due not so much to the lack of workers, as to the indifference of the local municipality which thought that its duty ended with the general census and did not extend to this operation. Little help was given to the women teachers when they went out in the *mohollas* : no inspection by the municipal staff was undertaken ; the return of books was seriously delayed and in other respects the City's outturn of work was poor. Most of the women-workers were very painstaking and assiduous in their duties, except some of the women teachers in the Girls' High School in the City who were very stupid and seemed to be terrified

at the idea of undertaking social investigations of this kind. The data received are more accurate than at the pioneer enquiry of 1921 for the following reasons :—

- (i) there was greater popular appreciation of the nature and results of this enquiry ;
- (ii) in 1921, only about 50 women were employed over this work. In 1931, we had over 400 women workers, and they were responsible for over 43,000 cases out of 206,000 ;
- (iii) in the villages, there was the least difficulty, as the village school master and talati knew local conditions well ; and
- (iv) with more experience, the slips were filled in far more accurately than in 1921. My inspections convinced me of this fact. The inspecting staff specially appointed for this census also scrutinised these slips. As the organisation for this enquiry was started at the same time as the census, the instruction meetings from the very first included this item. In 1921, the time for giving instructions was much shorter, and the local staff did not all quite realise what was expected of them. Some of them were frightened even at the very idea of the enquiry and predicted dire consequences. The enquiry was however completed in 1921 with moderate success and without any untoward results. The 1931 enquiry was far happier in this respect and the success achieved was much more complete as evidenced in the much smaller proportion of rejected slips than ten years ago.

163. Nature of the Slips received—The enquiry started with the married woman in each household. The responses were to be received direct from the woman herself, if possible, but otherwise the details were filled in from enquiry from the husband or other grown-up male member of the family. The questionnaire for 1931 contained an item about the number of the house, from which each response could be traced and tested by the inspecting officers. The women workers of course approached the married female direct of each family visited. The enquiry limited itself to three kinds of women. Normally only the woman who was continuously married to one husband and was not widowed at the time of the enquiry was the type of cases most frequently taken up, as the data concerning her were the most useful for casting results in comparative fertility. But the case of a woman who had become a widow before attaining maturity, *i.e.*, before 13 years, but had remarried and was continuously married since, was an important exception and had to be taken up. So also is the other case of a woman who, being continuously married, had become a widow after she had attained 45 years of age, *i.e.*, after her child bearing period was over. Single women of course did not form part of the enquiry and divorced females living single were also excluded ; as to females married to more than one husband, the particulars of duration of marriage, number of children born, etc., were to be entered only for her last marriage. Husbands with two wives living had to fill in particulars for each wife singly. If they were successively married to more than one wife, the particulars of the last marriage alone were to be entered. The utmost tact in the conduct of the enquiry was specially enjoined ; only carefully selected persons were employed for this purpose and the police were specifically excluded from this work. The following table shows the number of responses received. From the total number of slips, obvious mistakes were rejected, and of the remainder two heaps were made, one consisting of slips in respect of married women who had completed 45 years of age, and the second concerning married women below that age. The first were called “ completed fertility slips ” and the second, “ continuing fertility slips.”

DIVISION	Number of married women of whom slips were received after deducting rejected slips	Number of married women aged 15 and over according to Imperial Table VII	Continuing fertility slips	Number of married women over 45 according to Table VII	Completed fertility slips*
1	2	3	4	5	6
Baroda State	205,238	533,919	165,470	63,737	39,768
Baroda City	7,223	22,294	6,175	1,853	1,048
Baroda Division	63,272	160,316	51,677	20,072	11,595
Mehsana Division	77,620	218,130	62,279	24,870	15,341
Navsari Division	37,524	90,704	29,574	11,926	7,950
Kathiawad	19,599	42,475	15,765	5,016	3,834

164. Distribution of Slips by Caste—From the above table it is apparent that the net was widely cast. In 1921, only 131,235 responses were tabulated. Over 38 per cent of the married women of the State in this census responded to our appeal: and in regard to completed fertility cases, the responses were over 60 per cent. As the marginal table shows, the completed fertility slips were representative of all sections of the community. As the town slips represented a goodly proportion of the total, (and women workers naturally limited themselves mostly to the higher sections of the community), the "Advanced" slips came to nearly 40 per cent of the total, but the "Intermediate" and "Illiterate" slips are also fairly representative, there being 2,969 slips from the Depressed Classes and 4,512 slips from the Primitive and Forest Tribes. Muslims of all sections contributed 2,494 cases, while Koli and allied castes had 4,421.

SECTION OF SOCIETY	Completed Fertility slips compiled	Proportion per mille
All Grades	39,768	1,000
<i>Advanced</i>		
Hindu	15,661	394
Muslim	702	18
Parsi	338	8
<i>Intermediate</i>		
Hindu	10,381	261
Muslim	779	18
Indian Christian ..	45	1
<i>Illiterate</i>		
(Hindu and Tribal) ..	9,190	231
<i>Rest</i>		
Hindu	1,659	42
Muslim	1,013	27

165. Nature of the Sex Tables compiled—This enormous body of material was dissected into 11 Sex Tables printed at the end of this chapter. From their nature some of the Sex Tables could only be prepared from the completed fertility slips, and the others were prepared from both kinds of the data received. Thus the Size of Family could only be gathered from families of completed fertility, as continuing cases did not help to give a final idea about it. The Sex of the First Born has, as we shall see presently, an interesting reaction on the sex constitution of the completed

SEX TABLES		
Number	Name of Table	Prepared from
I	Sex of the First Born	Completed Fertility slips only
II-A	Size of Families by Division	" "
II-B	Size and Sex Constitution of Families ..	" "
III	Size of Families by Occupation of Husband ..	" "
IV	Size of Families by Caste or Religion of Family.	" "
V	Variation in Size of Family by Age of Mother at Marriage.	" "
VI	Correlation of Ages of Parents	" "
VII	Size of Family by Duration of Marriage in different castes.	Both kinds
VIII-A	Proportion of Fertile and Childless Marriages (all cases).	" "
VIII-B	" " " Continuing Fertility only ..	" "
VIII-C	" " " Completed Fertility only ..	" "
IX	Age of Mother at First Birth	" "
X	Frequency of Births	" "
XI	Duration of childless period	Completed Fertility slips only

* These included 3,133 slips from married women who were widowed after they attained to 45 years of age.

family and it was necessary therefore to limit the compilation to completed fertility cases only. Only Tables VII-X were compiled from both heaps. The object of the last table is to find out further evidence of birth control showing the lapse of time since the last born child and as only such families as had completed their reproductive period and could be expected to have no more children, could furnish such data, the table was limited to completed cases only. Lastly, Tables IX-XI were limited to such cases only in which the children born *were all alive at the time of enquiry*. It will be seen from the margin that compared to 1921, we have now three more tables and we have divided Tables II into two and VIII into three parts. In Table II, we have added details by division, as the size and masculinity at birth are questions on which locality may be expected to have some influence. In Table VIII we have specially published details separately for two kinds of cases.

166. Varying Accuracy of the Record—The general accuracy of the sex enquiry has been already appraised. The Tables themselves vary in respect of their statistical value. The details about size and sex of families are the most accurate. There was no motive to falsify, most parents knew the number of their children accurately but probably infants dying in child birth were often omitted. The returns of the age of husband and wife are vague, like all age-returns generally, but the duration of marriage we have found to be far more accurately recorded. The age at marriage is not directly asked in the questionnaire, but is inferred from the present age and the duration of marriage—both only rough approximations. The age of the mother at birth—which is very important as affording a clue to the beginning of effective marriage—was itself reckoned at the time of compilation from *the age of the eldest born son*. These two data are unsatisfactory in their nature and can only be accepted as broadly true. Lastly as to choice of samples, the 1921 Report noted the relatively small proportion of childless families recorded and put this fact down to the reason that the enumerators may not have bothered much about these, thinking presumably that the enquiry did not concern itself about families without children. This time, the point was pressed at instruction meetings, and it was emphasised that it was just as important to know facts about childless families as about others. The proportion of families without children to the total examined is now however 6.4 as against 7 in 1921, so that either our lectures were unavailing or the assumption made in 1921 was not correct.

§ 2. GENERAL RESULTS SUMMARISED

167. The Size of the Normal Household—Reverting to the first of the two enquiries to which reference was made in the opening paragraph of this section, we will here invite the reader's attention to State Table XI in which statistics are compiled from entries made in the Block List of the number of persons normally

SIZE OF HOUSEHOLD	1931		1921	
	Number	Proportion	Number	Proportion
One Person	69,807	12.4	63,604	13
Two Persons	79,341	14.1	79,022	16
Three Persons	86,182	15.3	83,729	17
Four Persons	89,197	15.8	84,078	17
Five Persons	79,134	14.1	72,578	14
Six Persons	61,601	10.9	51,932	10
Seven Persons	41,240	7.3	31,587	6
Eight Persons	24,479	4.4	7,031	3
Nine Persons	13,148	2.3	8,755	2
Ten Persons and over.	18,598	3.4	11,516	2

residing at the time of the preliminary enumeration, excluding guests and non-resident servants. Comparative figures of the last two censuses are given in the margin. Like 1921, the *mode* in size of households consists of four persons. This figure is true not only for the State generally, but also for all the divisions except the City. The average size is 4.3. In 1921, the average was 4.1. The

proportion of smaller sized households is less now than in 1921, while the largest

proportionate increase has occurred in households of seven and eight persons; which at once point to two causes—the large increase of semi-permanent immigrants, and the return of Baroda-born emigrants to their homes. The above proportions may be compared lastly with the distribution of households in the City in the two censuses. Here again, as in 1921, the mode is the one person household—the typical immigrant family. But the proportion of large sized households (six persons and over) has distinctly increased in this census again pointing to the phenomenon of the returned emigrant and also to lack of house room.

SIZE OF HOUSEHOLDS	Proportion in	
	1931	1921
One Person	21	23
Two Persons	20	21
Three Persons	16	16
Four Persons	13	13
Five Persons	10	10.5
Six Persons and over..	20	16.5

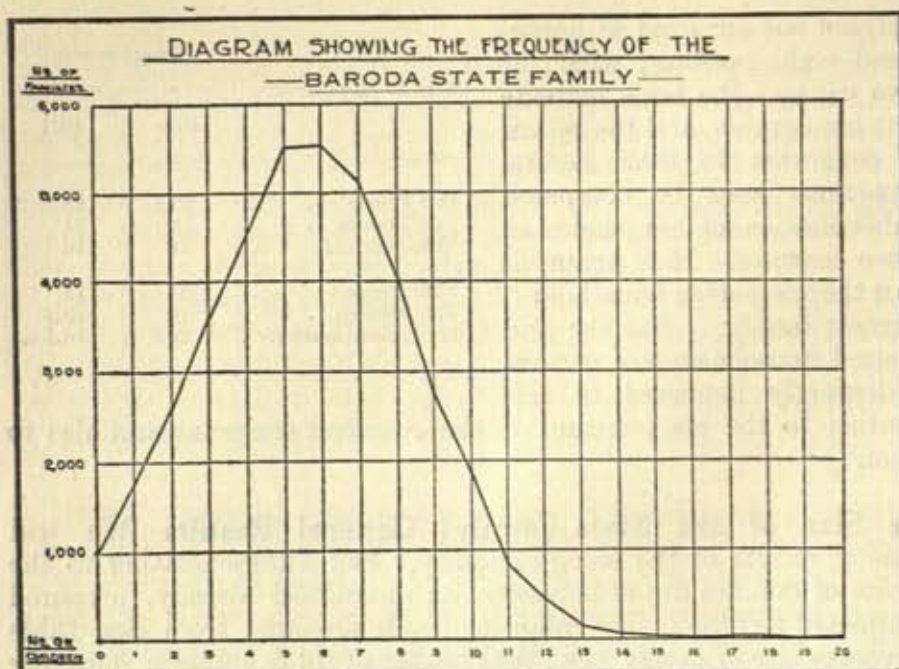
168. The Size of the State Family: General Results—We will now give the general results of the second enquiry. Sex Tables relating to the variation in the size of families are of necessity, as mentioned already, prepared from cases of completed fertility. The following Table prepared from Sex Table II-A shows the average size of family (*i.e.*, the number of total children born per married woman in the completed family) in the City and each division :—

DIVISION	Number of families	No. of Children born			Size of families	Proportion of female children per 1,000 male	Size of survived family	Ratio of survival per thousand children born
		Total	Male	Female				
Baroda State	39,768	226,456	121,719	104,737	5.69	860	3.43	604
Baroda City	1,048	6,236	3,429	2,807	5.95	819	2.94	494
Baroda Division	11,595	64,474	35,071	29,403	5.56	838	3.23	581
Mehsana Division	15,341	86,660	46,412	40,248	5.65	867	3.57	632
Navsari Division	7,950	44,680	23,990	20,690	5.62	862	3.60	648
Kathiawad	3,834	24,406	12,817	11,589	6.37	904	3.62	560

The size of family is largest in Kathiawad where the female ratio amongst children born is also the highest. Femininity is lowest in the City, adding one more evidence to the theory that in urban areas more male children are born than elsewhere. In the whole State, 569 children are born to a hundred completed families: of these 343 survive showing a survival ratio of over 6 out of 10. The survival rate is lowest in the City and highest in Kathiawad which is the healthiest portion of the State.

169. Size of Family by Number of Children—Having found what the number of children is per family in the different parts of the State, we shall see what the curve of the State family is like. Sex Table II-B gives the frequency of families of different sizes. The marginal table as well as the diagram show that the most favoured size or the *Mode* is of six children, which forms 13.9 per cent of the total number of completed families. The average (5.69) is near the *Mode*; while the *Median* is also in that neighbourhood. The Table also compares the distribution of the different sizes in the two censuses. The 1921 enquiry brought out more or less the same results, in respect of the sex-ratio in larger-sized families. The average size in 1921 was 5.28, the *Mode* was of 5 children, while the *Median* (11 children) was remote. The average size of families seems to have risen a

SIZE OF FAMILY	Number of families	Percentage of such families to total	
		1921	1931
Childless	974	3.1	2.2
One child	1,749	5.1	4.4
Two children	2,550	7.8	6.4
Three children	3,591	10.3	9.3
Four children	4,541	13.8	11.2
Five children	5,498	14.9	13.8
Six children	5,518	13.5	13.9
Seven children	5,097	11.4	13.0
Eight children	4,066	8.3	10.2
Nine children	2,773	5.6	7.0
Ten and over	3,411	6.2	8.6



little, possibly due to a larger number of births in the last ten years and partly perhaps because the 1931 enquiry dealt with a larger number of families and perhaps gave a complete result.

170. Size of the State Family compared with that of Normal Household

We will now try and correlate the above figures of the size of families with the size of the normal household. A normal household should consist of the husband, wife and children so that with two resident children the size of the household should be *four persons*. The one or two person-households should correspond

SIZE OF HOUSEHOLD	Proportion	Size of completed family	Proportion
One and two Persons.	26.5	Childless ..	2.2
Three Persons ..	15.3	One child ..	4.4
Four Persons ..	15.8	Two children..	6.4
Five Persons..	14.1	Three children.	9.3
Six and over Persons.	28.3	Four and over.	77.7

except in case of the semi-permanent immigrants to the childless families. On this basis the marginal table may be of interest to the reader. The smallest size households include those of adult bachelors and widowers and widows who live separate from the parent family. Apart from this circumstance, the childless element in the

State is much larger than the sample of completed families would indicate. The largest sized households are only a little more than a fourth of the total, while the largest sized families are more than three-fourths of the families examined. Thus this want of correspondence would point to one of two things, or both :—

(i) either that the samples were wholly weighted in favour of large sized families and therefore were not representative of all classes of families ; or

(ii) that in the large sized families, as soon as the children become adult, the tendency is for them to live separately or to emigrate outside for business.

SIZE	Female Index	
	1931	1921
Childless .. ..	..	..
One child	631	657
Two children	743	800
Three children	747	770
Four children	822	805
Five children	812	852
Six children	862	903
Seven children	870	900
Eight children	900	891
Nine children	902	950
Ten children	912	889
All Sizes	860	872

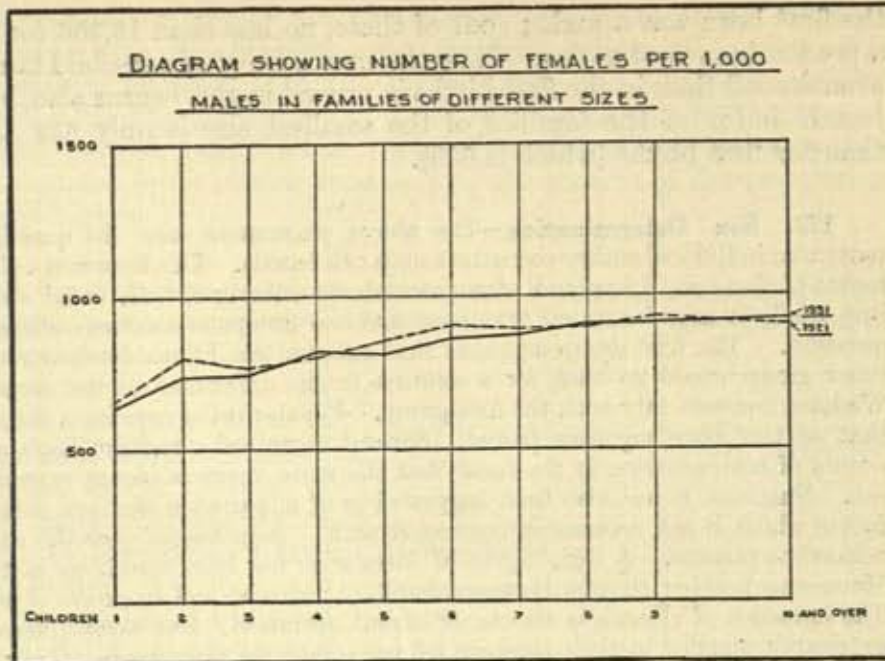
171. Sex Constitution of Families—

The accompanying table and diagram illustrate the varying female indices in different sized families. The female index at birth of children to all completed families is 860 in 1931, as against 872 in 1921, but as in the latest enquiry the samples taken were much larger, this variation does not point to anything in particular : on the general results of the two enquiries, the following conclusions may however be hazarded :—

(i) The female index in one child

families is much lower than the mean for all families, and relatively to other sizes, it is decidedly the lowest;

(ii) The tendency to femaleness increases until about the ninth child and for a while there is a kind of alternation up to fourteenth or fifteenth child: masculinity thereafter rises in the families of next higher sizes—i.e., sixteen or seventeen children. It falls again rather sharply in the families of the largest sizes, nineteen, twenty or twenty-one children.

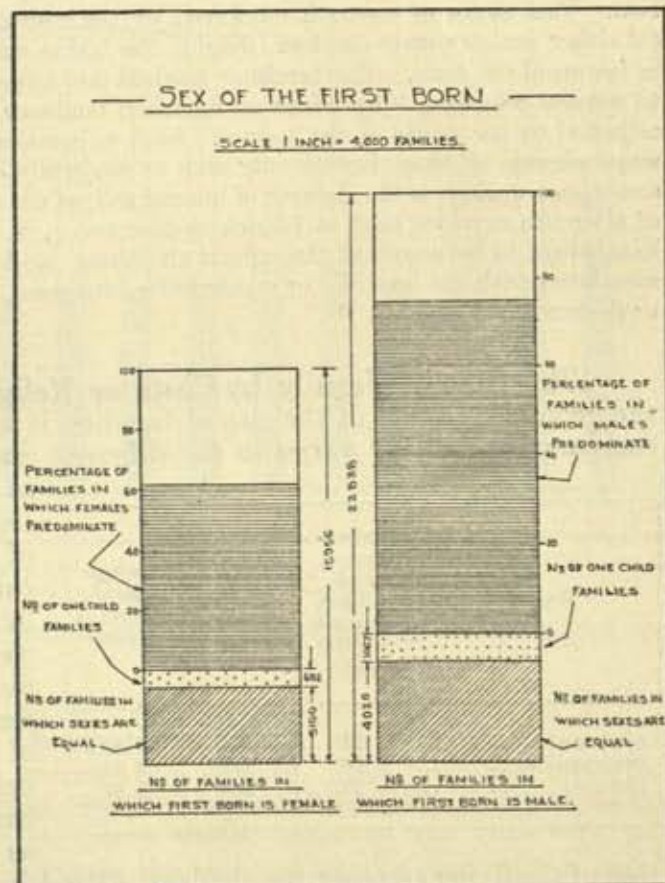


172. The Sex of the First Born—Connected with the above question of the female index in families is the sex of the first born, of which the results are compiled in Sex Table I and II-B. It has been long believed that the sex of the first born child is the governing factor in certain social phenomena of interest. In 1921, it was found that

(i) the first births in families showed a decided preference for males, there being only 718 female first born to 1,000 males first born as against the general average of 872 girls to every 1,000 boys born;

(ii) in one child families, masculinity was even more noticeable, there being only 657 female children to 1,000 male in such families; and lastly

(iii) the sex of the first born child, especially if it was a male, largely determined the sex of the rest of the family. The above propositions have been definitely established by the results of this census also. The total number of families examined (of completed fertility) was, as we know, 39,768. Out of these 974 were childless families. From the remainder, the one-child families have also to be deducted. Thus we get 12,174 families in the State, where the first born was a girl. In these families, no less than 7,477 (or 61 per cent) show a predominance of females. Similarly, by a parity of calculation, there are 17,751 families in which



the first born was a male; out of these, no less than 13,356 (or 75 per cent) show a predominance of males. That the masculinity of one-child families is even more pronounced than in the first births is proved in this census also, by the fact that the female index of the families of the smallest size is only 632 and is much lower than for first births (which is 699).

173. Sex Determination—The above phenomena raise the question why it is that a particular individual embryo becomes a male or a female. This Report is a plain and unvarnished record of facts and I have no wish therefore to cumber it with weird and fantastic theories. But briefly it may be stated that there are two groups of solutions offered as answers to the question. The first group supposes that external conditions determine the result; and the other group would go back for a solution to the differences in the sexual cells themselves. We have concern only with the first group. Popular belief associates the sex of the child with that of the more vigorous parent. Several untrained observers have also interpreted the events of sex-causation in the sense that the more vigorous parent reproduces his or her own sex. Nutrition it has also been suggested is of importance as a sex determinant. Here is a factor which is not necessarily connected with "prepotency" or the comparative vigour of respective parents. A high degree of correlation has been found, by materialists like Young, Maupas and others, to exist between abundant nutrition and an excess of production of females. The influence of climate is also to an extent operative. But these different factors are so inextricably mingled in their conjoint influence that the importance of any one of them cannot be properly gauged except by isolating and analysing each factor through reliable data. But the fact that prepotency does have an important bearing is shown by the high masculinity in one-child families in the sex of the first born. There is no doubt that the higher female index in larger families is due to the waning operation of this prepotency in later years of life. Thus it was pointed out shortly after the war, that the return of a large body of young men hardened by war conditions to civil life resulted in a predominance of male births. In this connection Dr. Jivanji Jamshedji Modi in a recent letter to the Press (dated 15th September 1931 last) refers to this theory of prepotency in determination of sex at birth as being supported by old Iranian belief. The Pehlevi Bundeshesh supports the belief that "there are greater chances of the children being born male," if the father is stronger than the mother at the time of conception. This factor of strength reinforced by the constantly reiterated wish of Indian parents (of either sex) for male children, weights the births and certainly the first (and early births) in favour of the male. This tendency hardens into a race character, the process being analogous to natural selection, "by which an inherited tendency to produce female or male offspring is adjusted to the needs of the species. Such adjustments may be brought about in countless ways wherein all these factors may each or conjointly operate. Over these factors, operating, sometimes weakly, is the element of human will, as the outcome of which sex becomes a system of alternate rhythms such as Patrick Geddes and J. A. Thompson speak of, 'of anabolism and katabolism to be observed throughout the living world,' the female principle being specially associated with the anabolic or constructive processes, and the male the outcome of katabolic or destructive processes."*

174. Size of Family by Caste or Religion of Husband—Before we leave the general question of the size of families, it will be of interest to know how far comparative fertility varies in the different social groups in the State. Here

GROUP	Proportion of male children aged 0-6 to 1,000 males	Ratio of survival in size of family	Average size of completed family
Advanced	165	599	5.81
Intermediate	187	606	5.52
Illiterate	207	617	5.67

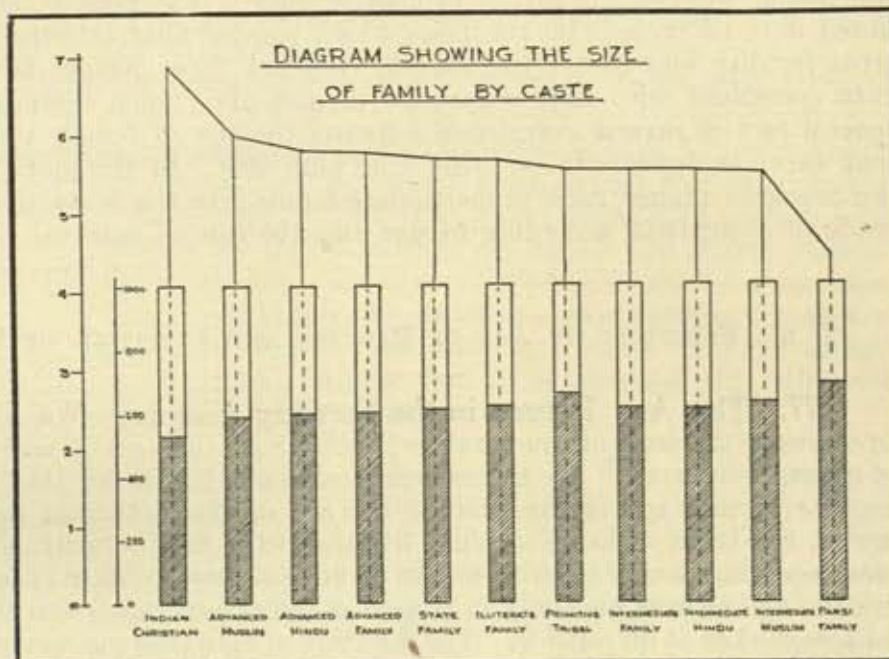
as we have seen, we have fairly representative data from all sections of the people. The question of comparative fertility is always of interest. In the Chapter on Age, we have seen how fertility (as disclosed in the proportion of children) varied in the different grades of society and that population is being gradually restocked by the hardier but less intellectual strata as is evidenced by the lower proportion of the living amongst the children of the Advanced sections. These proportions are compared with the different ratios of survival in the three groups. There is therefore a correspondence: and the melancholy fact seems true that the more advanced educationally is a caste or a group of castes, the less chance is there for its children to survive into adult ages. The size of the family does not show great

* Baroda Census Report, 1921, page 214.

correspondence, presumably therefore the educational equipment of the different castes has little to do with it. In 1921, the typically advanced groups also showed a smaller rate of survival than the Intermediate and Illiterate sections. The average size of a Brahman family was 5.26, lower than the State average. The Raniparaj family ranged from 5.44 to 7.01. The ratio of survival also then indicated, as now that the lower classes were helping the growth of the population much more than the higher.

175. Inverse Correlation between Size and Ratio of Survival—But there is an interesting point about survival in relation to size which deserves to be noted. An almost exactly inverse correlation seems to exist between the size of family and the proportion of survival as the marginal table will show. The Parsis with the lowest number of children have the highest proportion of survival. The size of the Indian Christian family as indicated therein is not representative as the number of Christian slips was only 45, and did not adequately represent that community. Most of their number belong to the so-called Depressed Classes, the size of whose family is 5.72. The Primitive and Forest Tribes marry late and have usually large families. The size of their family is 5.77 and the proportion of survival is 648, which is also high, not because the size is large, but presumably because they have adult marriages. A diagram is attached herewith to show the variations in the size of families in the different castes. It illustrates graphically also the inverse correlation between size and survival, which is almost exact except for the Raniparaj for the reason just mentioned.

NAME OF CASTE OR RACE	Order according to size	Order according to survival
Indian Christian	1	7
Muslim Advanced	2	6
Hindu Advanced	3	5
Illiterate	4	3
Hindu Intermediate	5	4
Muslim Intermediate	6	2
Parsi	7	1



Note.—Each column represents 1000 children born—the shaded portion showing the number of survivors out of total born. The two sets of data are shown to illustrate the inverse correlation.

176. Size of Family by Occupation—Coming to occupations, let us see if these have any bearing on comparative fertility. The marginal table has been prepared from the compilation registers of Sex Table III. Nowhere in the State is the occupational distribution more varied than in the City. It will be of interest, therefore, to compare the size of family and rate of survival amongst the City families with the corresponding figures for the whole State. The marginal table gives the details. The City has, as a whole, a much lower rate of survival, compared to the State average of 604. The largest size of families in the State is seen in the liberal arts and professions, where affluence or at least relatively easy conditions of existence

would seem to encourage large families. Independent means would ordinarily have on this basis large families, but persons in this category have not the same

KIND OF OCCUPATION	In State		In City	
	Size of family	Ratio of survival	Size of family	Ratio of survival
Agriculture	5.65 (6)	626 (1)	5.46 (10)	483 (8)
Industry	5.79 (4)	579 (6)	5.58 (9)	546 (2)
Trade	5.99 (3)	544 (8)	5.97 (5)	515 (4)
Public Force, etc. ..	5.65 (6)	615 (2)	6.57 (1)	457 (9)
Public Administration ..	6.03 (2)	509 (10)	6.02 (4)	446 (10)
Liberal Arts and Professions	6.10 (1)	551 (7)	6.27 (3)	495 (6)
Independent means ..	5.59 (7)	542 (9)	5.69 (7)	514 (5)
Domestic Service	4.70 (9)	600 (4)	6.44 (2)	520 (3)
Others	5.49 (8)	590 (5)	5.60 (8)	576 (1)
All Occupations ..	5.69 (5)	604 (3)	5.95 (6)	494 (7)

settled outlook as professions or public administration. Besides "independent means" is merely an euphemism as we shall learn in the Chapter on Occupation to cover a miscellaneous group of earners who for want of a more definite designation are lumped there for convenience. Agriculture would seem to rule a relatively low sized family but with a high ratio of survival; general and agrestic labour shows on the other

hand, as in other parts of the world, a high average of children. Religion encourages—and here we see a world-wide tendency—a high fertility, with a high rate of survival due doubtless to its sheltered ease and lack of toil. The Scottish fertility census of 1911 on the other hand showed that professional and other skilled occupations ruled a low rate of fertility, while agriculture, mining and labour were among groups of high fertility. The Punjab census in 1921 collected data of occupation fertilities which showed that artisans had the highest gross fertility and clerics the lowest. Beyond these general facts, occupational data correlated with size of families do not give much illumination. But the general fact of inverse correlation between the size of family and the proportion that survives appears to be fairly true here also. In the marginal table above, the brackets against each proportionate figure give the respective order of each grade of occupation according to size and the rate of survival.

§ 3. FERTILITY BY AGE OF PARENTS AND DURATION OF MARRIAGE

177. The Age Return in the Fertility Enquiry—We shall now attempt to correlate the facts of comparative fertility with the ages of parents, the duration of marriage and so on. We have already cautioned the reader that the data regarding the present age of the parents, the age of the mother at marriage, and her age at the birth of her first child together with such returns as the duration of marriage, the spacing of births and so on are not very accurate: the most inaccurate are the age returns and only in respect of Advanced castes can this record of age be accepted as at all reliable. The duration of marriage was not always accurately returned, but as mentioned already the record here is relatively more reliable. The age for Intermediate and Illiterate sections was in the bulk of instances guessed from the appearance of the women. As the staff employed were mostly experienced teachers and local revenue officials, their entries can be accepted as roughly true. With these caution the returns of the age at marriage in different castes may be considered. Sex Table IV (last columns) distributes the number of families according to the age at marriage of the mother. No conclusions can however be drawn from the marginal table prepared from Sex Table IV of the two years, as to whether the age of formal marriage has risen. This Table is prepared from completed marriages, so that persons dealt with in 1931 would give ages at marriage 20 to 30 years ago. As these last columns of Sex Table IV are not prepared from continuing fertility cases, it is not possible to determine how far modern influences are tending in the direction of postponement of marriage. The effect of certain legislation on the marriage age will be discussed in the next chapter. In the meantime it is sufficient to remember that the age of marriage here is merely the age of formal marriage: only as regards a woman married *before she was*

13 it was provided in the instructions that for the purpose of calculating the duration of marriage, the time was to be reckoned from her thirteenth year, the period of formal marriage before that age being neglected. This is a very important point. The duration of marriage was calculated from an age at which a girl could begin her period of effective marriage, i.e., after she had begun menstruating. But it did not mean that *she began her effective marriage from that year*. In the 1921 enquiry, we did not enquire at all when a woman actually began her effective married life. That could not even be inferred from the facts elicited: yet many readers of my Report of 1921 (including Miss Mayo) were led to suggest on the basis of my figures that the bulk of marriages dealt with in the enquiry were consummated or effectively begun on or about the married woman's thirteenth year. All that could be said from the last enquiry that 80 per cent of marriages examined in 1921 took place on or before the thirteenth year of age of the woman; from this age effective marriage was merely assumed to begin for purposes of the calculation of duration of marriage. In the present census, we are attempting to find out the actual age of effective marriage from the age of the eldest child, and we shall be able to see presently from the results compiled how far out of the real truth in this matter were Miss Mayo and other writers of her kind. Apart from these observations which seem necessary as a general caution to outside readers not to use the census material except with the utmost circumspection, there is very little to add by way of comment on Sex Table IV. The Parsi, the Vohra, the Raniparaj, the Memon—in order of mention—show the greatest addiction to adult marriage: while the Intermediate groups generally and the Brahman, Patidar and Vania amongst the Advanced have the greatest proportion of early marriage.

CASTE	Percentage of Families with wife married at					
	0-14		15-19		20 and over	
	1931	1921	1931	1921	1931	1921
Advanced						
Brahman	84	88	12	7	4	5
Patidar	85	86	10	9	5	5
Vania	84	87	13	10	3	3
Vohra	59	70	28	15	13	15
Memon	65	48	26	35	9	17
Parsi	52	29	22	34	26	37
Intermediate						
Rajput	85	76	11	18	4	6
Vankar	77	75	14	15	9	10
Momna	64	75	28	18	8	7
Illiterate						
Bhangi	82	80	12	12	6	8
Raniparaj	69	67	20	17	11	16
Thakarda (Koli) ..	71	78	21	14	8	8
All Castes	78	80	15	12	7	8

178. Size of Family correlated with the Age of Wife at Marriage—With the caution noted already, we now discuss the important results arrived at by correlating the age of wife at marriage with the number of children born. The following Table is prepared from Sex Table V of 1921 and 1931 :—

AGE OF WIFE AT MARRIAGE	Proportion of families to total		Average size of family per 100 mothers		Size of survived family per 100 mothers		Ratio of survival	
	1931	1921	1931	1921	1931	1921	1931	1921
1	2	3	4	5	6	7	8	9
0-14	78	80.1	574	524	346	308	602	589
15-19	15	12.1	584	554	358	330	612	596
20-24	5	6.0	535	540	330	329	617	609
25-29	1	1.6	463	497	271	311	599	626
30 and over	1	0.2	351	372	189	223	540	600
All Families	100	100	569	528	343	312	604	592

179. Conclusions from the above Table—This table confirms the following conclusions arrived at tentatively in the pioneer enquiry of 1921 (*vide* paras 247 and 253 of the Census Report of 1921) :—

- (i) If the age at marriage is changed from 13 or 14 up to 20, the rate of fertility is substantially raised. In 1921, the figures showed that if the marriage was postponed on an average by four years, the rate of fertility, instead of diminishing, increased by about three children per ten families. In 1931, the size of the family rises by 10 children for 100 mothers. Further raising of the age, of course, reduces fertility because of the diminution in the period of effective reproduction.
- (ii) The raising of the age at marriage up to 20 also enhances the rate of survival from 7 to 10 per 1,000 born. The number of children surviving rises from 346 to 358 or 12 children per 100 marriages. In 1921, the data then received, gave the rate of 22 additional children (per 100 marriages) saved for the race by this means.
- (iii) By raising of the age at marriage to beyond 20, say 24, the size of the family diminishes slightly and the number of children surviving also declines correspondingly, but the ratio of survival is raised substantially. In 1921, the proportion rose from 592 to 609. In 1931, the respective ratios are 602 and 617.

180. Size of Family correlated with Age of Parents—So much for the age of the mother only. The age of the father correlated with that of the female parent has also some important bearings on the problem of fertility. In 1921, we found that the age of the parents had a distinct effect on fertility, and that disparate marriages lowered, as parity in ages of parents raised fertility (*vide* para 247, Census Report 1921). On the present occasion also the data compiled into Sex Table VI more or less confirms these conclusions. The following statement prepared from that Table gives the main results :—

AGE	AGE OF WIFE								
	13-20	Average of children		20-30	Average of children		30 and over	Average of children	
		Born	Surviving		Born	Surviving		Born	Surviving
13-20	18,860	5.95	3.63	66	4.95	2.86	1	7	..
20-30	12,237	5.78	3.51	1,181	5.40	3.51	23	3.04	1.70
30 and over ..	1,566	5.64	3.44	717	5.05	3.19	268	2.98	1.87

Thus we see the parity of ages of parents gives not only the highest fertility but also the greatest number of children surviving. This is particularly true of the age-group 13-20; in the next higher group, *i.e.* 20-30, husbands marrying women of the same age-period have indeed a slightly less average of children than if they married wives of the ages 13-20; but even then the number of survived children is the same in both cases, while the survival rate actually rises from 607 in the latter event to 650 in the case of parity. It is interesting to note also that husbands aged 30 and over marrying wives aged 20-30 have a higher fertility rate of 5.05 than young husbands (13-20) with wives (aged 20-30), who have only 4.95. It is also necessary to point out that the above figures disclose a very wide prevalence of the practice of disparate marriages. 42.3 per cent of wives married at 13-20 are mated to husbands who are on the average at least 10 years older than they are. Nearly 5 per cent of them have husbands who are older on an average by 20 years. 1,964 women amongst the cases sampled were married between 20 and 30. Of these 717 or 36.5 per cent had husbands much older than they were. Altogether 42 per cent of the cases examined belonged to the category of disparate marriages.

181. Size of Family by Duration of Marriage—Sex Table VII is the first table so far discussed in which the whole of the material—completed and continuing cases taken together—is compiled. The cases of continuing marriage

number 165,470 as against only 103,174 in 1921. Altogether 603,244 children were born up to the time of the enquiry to these continuing marriages giving an average of 36 children per ten mothers. In 1921 the average was the same. The following Table gives the proportionate figures for the principal castes :—

Duration of present marriage in years	Average number of children born alive per 100 mothers								
	Total	Brahman	Pati-dar	Rajput	Vankar	Other Hindu	Muslim	Parsi	Tribal
Below 10	149	140	149	149	133	144	153	165	170
10 years	259	275	247	243	287	260	277	240	266
Over 10 and under 20 ..	372	367	378	350	383	372	381	386	365
Between 20 and 31 ..	548	556	548	530	559	554	539	471	555
32 years	600	641	645	577	604	592	556	397	578
33 and over	559	575	541	500	560	576	564	462	579

The above Table may yield some useful results if used with caution. The Parsi ratios are fairly representative, as 754 Parsi slips were filled in. A sufficiently large number of slips were also filled in for the castes above selected to make the results worth compiling. On the assumption that in the bulk of cases, the date of marriage is at thirteen, the number of children born for five years, on an average, after marriage, is 149 or 28 per year, to 100 mothers. At ten complete years of marriage, the annual average *addition* to the number of children is only 22. A subsequent addition of 5 years to the average duration of marriage yields an annual crop of 23 births. The greatest intensity of fertility or "force of issue" is between 20-31, when on an average 176 children are added. But in the last period before 32 years are completed the "force of issue" falls to only 52. Thereafter there is a drop, signifying exhaustion in fertility. This exhaustion is shared by all castes, except the Muslims whose physique is superior and the Raniparaj who usually marry later than other sections. In the first class, *i.e.*, of marriages of less than 10 years' duration, Brahmans and Vankars are below the mean average for the State, but Parsis, Muslims and Raniparaj show a higher figure for fertility, indicating that these latter, although they have a later age for marriage, usually begin cohabitation soon after, while with other cases, effective marriage is postponed to a more suitable age. Parsis also show an acceleration of fertility, till the 32nd year but the rate is slower and more gradual than in other castes or races. Thus we have in this table the first of our clues to the operation of economic motive in the restriction of births. Where parental control is fairly effective, there one would suppose that the consummation of marriages is deferred till after the attainment of physical maturity.

182. Proportion of Childless and Fertile Marriages—In Sex Table VIII, we make further researches into the problem of birth control. Taking completed cases first, where there is less evidence of modern influences than in marriages of more recent date, there are 39,673 cases of married women whose present marriage has lasted at least 15 years. Of these 948 or 2.4 per cent are childless. In completed families numbering 30,915, the age of the mother at marriage was 13-14 (or earlier). Here the proportion of childlessness is 2.3. In families numbering 5,708, where the wife married between 15 and 20, the sterile ratio is 1.8 pointing to higher fertility. But in families numbering 2,816 where the age of the wife at marriage was 20 and upwards, the childless constitute 4 per cent, pointing to the operation perhaps of economic motive in the limitation of families. When a husband is an earner and has married after he has started his livelihood, there the economic motive is a factor of some strength. But where he is not an earner, but living on his elders as a dependent, and yet being married is of an age

that fits him for producing children, there apparently he behaves more irresponsibly. The following Table prepared from Sex Table VIII-A is of interest. The table is comprehensive dealing with all the 205,238 cases.

Age of Wife at Marriage	Proportion of childless to 100 marriages lasting				
	Below 5 years	Between 5 and 10 years	Between 10 and 15 years	At least 15 years	All cases
All Cases	51	12	3	2	6
13-14	62	12	3	2	7
15-19	47	8	3	1.6	6
20 and over	29	9	6	4	7

The above table shows that childlessness is greatest when the duration of marriage is the least : particularly so if the mother was aged 13-14 at the time of her marriage. This childlessness diminishes progressively as the age at marriage of the mother increases. The bulk of the cases examined were of mothers married at 13-14. But those married at 15-19 number 25,093 and thus form a substantial sample (12.2 per cent of the slips compiled). The adult marriages (20 and over) under review are only a few, being 6,760 in number, but in the general population, the proportion of such marriages is also very small, and the above ratios in respect of adult fertility can be accepted also as representative. Sex Table VIII is fairly accurate and reliable, as both the data of duration and childlessness are relatively more accurate than the rest of the material.

183. Age of Mother at First Birth—There are other ways of gauging the extent of modern influences on the limitation of families, but the main figures regarding the age of the mother at birth (Sex Table IX) will be of the greatest interest as throwing light on how far parental control or other salutary influences are operative, in spite of the prevalence of early marriage, to postpone the date of motherhood. The following Table is prepared from amongst completed families to show the ages of the mother in different ranks of society at the birth of her first child. Only such families, in which all the children born were surviving at the time of the enquiry, have been compiled. There are altogether 70,765 such families dealt with, of which 9,403 are completed cases and the remainder continuing :—

CASTE OR RACE	Age of mother at first birth (distribution of 1,000 cases in each class)					
	Below 13	13	14-15	16-20	21 and over	Total cases examined
<i>Advanced</i>	24	143	531	302	22,576
Brahman	20	166	595	219	4,100
Patidar	24	128	509	339	15,254
Vania	35	183	582	200	2,028
Jain	19	161	573	247	846
Parsi	3	61	352	580	348
<i>Intermediate</i>	24	148	498	330	27,337
Rajput	20	143	485	352	2,765
Indian Christian	31	141	469	359	64
Vankar	21	126	460	393	2,914
Other Hindu	26	149	506	319	16,855
Muslim	21	162	500	317	4,739
<i>Illiterate</i>	22	116	485	382	20,852
Koli and allied castes	20	117	494	369	12,539
Primitive and Forest Tribes	25	112	472	391	8,313
Total	23	136	505	336	70,765

184. Consideration of the above Table—As it deals with more than a third of the total number of slips, the proportions set out may be taken as roughly representative of the present day situation in the State regarding the age of effective marriage. As in families of continuing fertility the age of the eldest son is more likely to be correctly returned than in completed ones, the figures have been separately calculated also for the two kinds of cases. Such as they are, the figures can be safely accepted in one respect. No cases of motherhood below 13 came to light. Pains were taken to find out through local officers and census committees whether any such cases of premature consummation came to their knowledge. But no such occurrence was reported. As the figures show, only 1,637 cases of married girls becoming mothers at 13 have been compiled. These form 23 per mille of the total of 70,765 cases examined. To these child mothers, the Advanced Hindu and Jain groups contribute nearly a third, although they themselves are only a fifth of the population. The child mothers of the Intermediate groups form another third, while the remainder are Muslims and Tribal aborigines. The contribution of the Raniparaj is open to suspicion, as few of them even marry at that age; possibly the ages returned of their eldest children were more unreliable than of the others. The figures of continuing fertility on the whole give more trustworthy results which are therefore summarised in the inset table. The ratios are slightly smaller than for all cases (continuing and completed taken together). But the Illiterate shows the greatest evidence of adult consummation and the Intermediate the least. On a broad view of the figures the general conclusion seems to be that although most women are married either at 13 or thereabouts, 8 out of 10 who are so married do not bear children until they are at least 16 and over. Three out of 10 married women defer the cares of maternity till they are 21 and over. It is curious that the Advanced groups are more inclined for earlier motherhood (*i.e.* between 16-21) than the Intermediate or the Illiterate; the highest proportion of adult motherhood (21 and over) obtains amongst the Parsis with whom 6 out of 10 wives become mothers after 21. After the Parsis, come the Raniparaj, although they are the lowest in the educational scale. The Brahmans and Vantias however show the least inclination to defer motherhood so late as 21. Six out of ten mothers amongst them would rather bear children between 16 and 21. These two castes show the highest incidence of motherhood in that age group in the whole State. This may be contrasted with the state of things in the Intermediate groups where parental control is more effective, although their formal age of marriage is actually much lower than in the Advanced castes, in deferring motherhood amongst their married daughters to a later and more suitable age. Generally parental control, economic motive as well as lack of fertility operate cumulatively in the bulk of cases. In the Advanced group, the second and third causes are mainly in evidence—perhaps as the age of marriage rises amongst them, the intervening period before motherhood tends to diminish. In the Intermediate group, parental control still largely obtains. In the Illiterate section, specially amongst primitive tribes, with whom adult marriages are the rule, consummation is not long deferred.

Continuing Cases	
GROUP	Proportion of cases where the mother was aged 16 and over at first birth
Total ..	829
Advanced	824
Intermediate	815
Illiterate	853

185. The Spacing of Births—This brings us to the definite question of birth control. Sex Tables X and XI make a direct attempt to find out how far prudential checks are operative. This is best seen in two ways: (*i*) from the period intervening between the different births, first and second, second and third and so on; and (*ii*) from the time of the childless period after the birth of the youngest child. Sex Table X is concerned with the first of these ways, and pursues the spacing of births up to the coming of the fourth child. Only 9,403 cases of completed fertility have been taken up for this purpose; these are cases where all the children born had survived at the time of the enquiry. Of these 1,275 were one-child families, 1,477 had two children only and 1,621 had three children. Therefore, in finding out the spacing between the first and second child the number

of one-child families had to be excluded ; similarly the two-children group should

GROUP	Proportion of longest interval (4 years and over) to total number of intervals		
	Between 1st and 2nd child	Between 2nd and 3rd child	Between 3rd and 4th child
Hindu and Allied ..	574	497	412
Advanced	567	473	414
Intermediate	557	473	415
Illiterate	598	551	408
Muslim	549	409	407
Parsi	416	484	415

be omitted while considering the interval between the second and the third child and so on. On this basis the marginal table prepared from Sex Table X should be considered. The Parsi slips in this table numbered only 135, and therefore they are too few to judge. The Illiterate figures are again suspect, as the age-returns are based largely on guess work. With these exceptions two propositions can be hazarded :—

- (i) the Advanced groups show more evidence of long

spaced births than others generally ;

- (ii) the spacing is longer in the early births than in the later : the proportion of longest intervals (4 years and over) being the largest for the first and second births (570), that for the second and third births (490) coming between this and the ratio for the third and fourth births (412). This diminishing series persists in all grades and amongst all the castes and religions dealt with. This points somewhat convincingly to the waning of the economic motive with the increase in the size of the family.

186. Duration of Childless Period—Lastly there remains Sex Table XI and the marginal table prepared therefrom shows the proportions of families,

CASTE	Total Families	Proportion of families where the childless period after birth of youngest child is	
		Between 1 and 4 years	5 years and over
Hindu, Jain and Tribal			
Advanced	2,360	48	952
Intermediate	2,343	91	909
Illiterate	2,475	90	910
Other Hindu	410	61	939
Muslim	675	82	918
Parsi	135	7	993
Indian Christian	5	..	1,000
Total ..	9,403	72	928

where the childless period is (1) between 1-4 years and (2) 5 years and over in the different sections. The Parsis show the greatest proportion of childlessness. The few cases of Indian Christians may be neglected. The Advanced Hindus come next. Other Hindus, Muslims, Illiterate and Intermediate Hindus follow in order. The Parsi ratio confirms what is generally reported that there is amongst them wide prevalence of birth control methods. In the Advanced group, the sections most influenced by English education, are beginning to practise contraception or at least abstinence ; but the childless ratio amongst them, as in other groups, is governed largely by other consider-

ations,—lack of physique, unnatural conditions of living and the increasing vogue,—so it is alleged by medical authorities consulted—of venereal diseases.

SEX OF THE FIRST BORN

DIVISION	Number of females first born	For female first born		Number of males first born
		Number of families in which male and female children are equal	Percentage of families where female births predominate	
1	2	3	4	5
Baroda State	15,956	3,100	61.418	22,838
Baroda City	410	83	61.905	617
Amreli Division	1,366	256	64.585	1,797
Baroda Division	4,509	889	59.521	6,743
Mehsana Division	6,168	1,210	60.906	8,838
Navsari Division	3,284	627	64.198	4,509
Okhamandal	219	35	56.818	334

DIVISION	For males first born		Number of females first born per thousand males first born	Number of childless families	Number of families examined
	Number of families in which male and female children are equal	Percentage of families where female births predominate			
	6	7	8	9	10
Baroda State	4,020	75.241	698	974	39,768
Baroda City	107	75.214	664	21	1,048
Amreli Division	315	71.691	760	97	3,260
Baroda Division	1,189	77.302	668	343	11,595
Mehsana Division	1,567	75.098	697	335	15,341
Navsari Division	782	76.798	728	157	7,950
Okhamandal	60	74.231	655	21	574

SEX TABLE II—A
SIZE OF FAMILIES BY DIVISIONS

[illegible]

SEX TABLE II—B
SIZE AND SEX CONSTITUTION OF FAMILIES

Size of family (Number of children born to a marriage)	Number of families	Number of males first born	Number of females first born	NUMBER OF CHILDREN BORN			Number of female children per 1000 males	Percen- tage of families to total
				Total	Males	Females		
1	2	3	4	5	6	7	8	9
Total	39,768	22,838	15,956	226,456	121,719	104,737	860	100
No children	974	..	..	..	..	..	..	2.2
One child	1,749	1,067	682	1,749	1,067	682	631	4.4
Two children	2,550	1,596	954	5,100	2,926	2,174	743	6.4
Three children	3,591	2,189	1,402	10,773	6,168	4,605	747	9.3
Four children	4,541	2,769	1,772	18,164	9,971	8,193	822	11.2
Five children	5,498	3,268	2,230	27,490	15,171	12,319	812	13.8
Six children	5,518	3,209	2,309	33,108	17,783	15,325	862	13.9
Seven children	5,097	2,969	2,128	35,679	19,081	16,598	870	13.0
Eight children	4,066	2,291	1,775	32,528	17,121	15,407	900	10.2
Nine children	2,773	1,595	1,178	24,957	13,124	11,833	902	7.2
Ten children	1,847	1,002	845	18,470	9,570	8,900	930	4.7
Eleven children	827	461	366	9,097	4,824	4,273	886	2.0
Twelve children	448	266	182	5,376	2,832	2,544	898	1.13
Thirteen children	174	88	86	2,262	1,169	1,093	935	.43
Fourteen children	60	33	27	840	444	396	892	.2
Fifteen children	33	18	15	495	273	222	813	.08
Sixteen children	15	10	6	240	130	110	846	.042
Seventeen children	2	2	..	34	23	11	478	.005
Eighteen children	3	3	..	54	21	33	1,571	.008
Nineteen children .. .. .	..	..	..	..	..	..	..	..
Twenty children	2	2	..	40	21	19	905	.005

SEX TABLE III
SIZE OF FAMILIES BY OCCUPATION OF HUSBAND

Serial No.	OCCUPATION OF HUSBAND	Number of families examined	Total number of chil- dren born	Average per family	Total number of children surviving	Proportion of surviv- ing to total thou- sand born
1	2	3	4	5	6	7
I	Total	39,768	226,456	5.69	136,795	604
	<i>Exploitation of animals and vegetation</i>	24,391	137,864	5.65	86,333	626
1	Income from rent of land	159	859	5.40	471	548
2	Cultivators of all kinds	22,145	124,821	5.64	78,619	630
3	Agents, managers of landed estates, rent collectors, etc.	2	11	5.50	1	91
4	Field labourers and wood-cutters, etc.	1,399	8,223	5.88	5,014	610
5	Raisers of livestock, milkmen and herdsmen. <i>Industry</i>	836	3,950	5.76	2,228	564
III	1 Artisans and other workmen	4,823	27,912	5.79	16,150	579
2	Sweepers and scavengers	4,602	26,666	5.79	15,453	580
		221	1,246	5.64	697	559
IV	<i>Transport</i>	184	1,108	6.02	679	613
1	Sailors	97	614	6.33	391	637
2	Palkhi bearers, etc.	87	494	5.68	288	583
V	<i>Trade</i>	3,272	19,609	5.99	10,678	544
VI	<i>Public force and others</i>	320	1,809	5.65	1,112	615
VIII	<i>Public Administration</i>	913	5,509	6.03	2,806	509
1	Religions	1,048	6,376	6.08	3,495	642
2	Lawyers, Doctors, Teachers	151	937	6.21	547	584
3	Others	35	213	6.09	102	479
IX	<i>Persons living on their income</i>	239	1,337	5.59	724	542
X	<i>Domestic Service</i>	178	836	4.70	502	600
XI	<i>Insufficiently described occupations</i>	4,115	22,366	5.41	13,341	596
1	Contractors, clerks, cashiers, etc., otherwise unspecified	466	2,507	5.38	1,462	583
2	Labourers unspecified	3,649	19,859	5.44	11,879	598
XII	<i>Unproductive</i>	99	580	5.89	326	562
1	Beggars, prostitutes, criminals, inmates of jails and asylums	90	517	5.74	288	557
2	Occupation unspecified	9	63	7.00	38	603

SEX TABLE IV

SIZE OF FAMILIES BY CASTE OR RELIGION OF FAMILY

Serial No.	CASTE OR RELIGION	Number of families examined	Total number of children born	Average per family	Number of children surviving	Proportion of surviving to thousand born	Number of families with wife married at			
							13—14	15—19	20—29	30 and over
1	2	3	4	5	6	7	8	9	10	11
	Total	39,768	226,456	5.69	136,795	604	30,915	5,819	2,586	448
	<i>Advanced</i>	<i>16,701</i>	<i>97,148</i>	<i>5.81</i>	<i>58,197</i>	<i>599</i>	<i>13,787</i>	<i>1,939</i>	<i>832</i>	<i>143</i>
	<i>Hindu</i>	<i>15,661</i>	<i>91,329</i>	<i>5.83</i>	<i>54,597</i>	<i>598</i>	<i>13,188</i>	<i>1,683</i>	<i>679</i>	<i>111</i>
1	Bhavsar	129	688	5.33	322	468	112	13	2	2
2	Brahman	2,520	14,923	5.92	8,011	537	2,125	289	96	10
3	Brahmabhatt	219	1,297	5.92	703	542	184	21	13	1
4	Ghanchi	400	2,350	5.87	1,276	543	325	42	31	2
5	Kachhia	106	580	5.47	308	531	92	9	4	1
6	Luhana	317	2,072	6.53	1,229	593	247	46	20	1
7	Maratha	150	805	5.36	416	517	130	9	11	..
8	Patidar	9,172	52,241	5.69	33,515	642	7,768	926	399	79
9	Prabhu	61	530	8.68	317	598	53	7	1	..
10	Soni	231	1,533	6.63	791	516	198	21	11	1
11	Suthar	535	3,141	5.87	1,705	543	426	64	41	4
12	Vania	1,821	11,169	6.13	6,004	538	1,528	236	50	7
	<i>Muslim</i>	<i>702</i>	<i>4,333</i>	<i>6.02</i>	<i>2,572</i>	<i>594</i>	<i>423</i>	<i>182</i>	<i>81</i>	<i>16</i>
13	Khoja	40	314	7.85	179	570	16	15	7	2
14	Memon	102	735	7.20	433	589	66	26	7	3
15	Pinjara	68	361	5.31	204	565	51	7	9	1
16	Saiyad	67	391	5.84	246	629	40	15	12	..
17	Vohra	425	2,532	5.96	1,510	596	250	119	46	10
18	<i>Parsi</i>	<i>338</i>	<i>1,486</i>	<i>4.40</i>	<i>1,028</i>	<i>692</i>	<i>176</i>	<i>74</i>	<i>72</i>	<i>16</i>
	<i>Intermediate</i>	<i>11,205</i>	<i>61,862</i>	<i>5.52</i>	<i>37,508</i>	<i>606</i>	<i>8,661</i>	<i>1,646</i>	<i>788</i>	<i>110</i>
	<i>Hindu and Tribal</i>	<i>10,381</i>	<i>57,284</i>	<i>5.51</i>	<i>34,655</i>	<i>605</i>	<i>8,073</i>	<i>1,478</i>	<i>728</i>	<i>102</i>
19	Baria	1,361	7,041	5.17	4,522	642	1,182	137	38	4
20	Bava	226	1,261	5.57	712	565	171	33	20	2
21	Chamar	479	2,745	5.73	1,570	572	387	64	26	2
22	Darji	357	2,081	5.82	1,106	531	282	39	31	5
23	Garoda	116	729	6.28	391	536	85	14	15	2
24	Gola	109	565	5.18	316	559	101	7	1	..
25	Karadia	122	674	5.52	460	682	73	31	14	4
26	Kumbhar	962	5,388	5.60	3,226	599	759	128	68	7
27	Luhar	373	2,066	5.53	1,108	536	290	61	19	3
28	Mochi	191	1,092	5.71	633	580	159	19	9	4
29	Patanwadia	321	1,707	5.31	1,074	629	283	25	12	1
	<i>Primitive and Forest Tribes :—</i>									
30	Chodhra	899	4,939	5.49	2,992	606	431	289	165	14
31	Dhanka	44	227	5.16	133	586	27	13	3	1
32	Dhodia	152	916	6.02	632	690	79	42	26	5
33	Rajput	1,400	7,323	5.23	4,476	611	1,187	151	56	6
34	Sathawara	84	445	5.29	255	573	82	2	..	..
35	Talabda	653	3,570	5.46	2,254	631	556	51	40	6
36	Targala	135	864	6.41	475	550	78	34	22	1
37	Valand	493	2,791	5.66	1,558	558	389	67	32	5
38	Vankar (Dhed)	1,904	10,860	5.70	6,762	623	1,472	271	131	30
	<i>Muslim</i>	<i>779</i>	<i>4,267</i>	<i>5.48</i>	<i>2,689</i>	<i>630</i>	<i>548</i>	<i>167</i>	<i>56</i>	<i>8</i>
39	Fakir	62	322	5.19	204	630	44	13	5	..
40	Ghanchi	38	203	5.34	128	631	26	9	3	..
41	Malek	67	318	4.76	222	698	48	16	3	..
42	Molesalam	128	728	5.68	468	643	112	11	4	1
43	Momna	219	1,244	5.68	852	685	139	62	17	1
44	Pathan	97	536	5.53	322	601	65	25	4	3
45	Shaikh	106	573	5.41	262	457	75	15	14	2
46	Sindhi	35	185	5.28	130	703	21	9	4	1
47	Tai	27	158	5.85	101	624	18	7	2	..

SEX TABLE IV
SIZE OF FAMILIES BY CASTE OR RELIGION OF FAMILY—concl'd.

Serial No.	CASTE OR RELIGION	Number of families examined	Total number of children born	Average per family	Number of children surviving	Proportion of surviving to thousand born	Number of families with wife married at			
							13—14	15—19	20—29	30 and over
1	2	3	4	5	6	7	8	9	10	11
48	Indian Christian ..	45	311	6.91	164	527	40	1	4	..
	<i>Illiterate (Hindu and Tribal)</i>	<i>9,190</i>	<i>52,165</i>	<i>5.67</i>	<i>32,205</i>	<i>617</i>	<i>6,530</i>	<i>1,787</i>	<i>737</i>	<i>136</i>
49	Bhangi	357	2,026	5.67	1,234	609	294	42	18	3
50	Bharwad	957	5,400	5.64	3,183	589	694	177	76	10
51	Chunvalia	47	279	5.93	157	563	25	14	6	2
	<i>Primitive and Forest Tribes :—</i>									
52	Bhil	765	4,533	5.93	2,983	658	566	141	50	8
53	Dubla	974	5,661	5.81	3,658	646	779	103	67	25
54	Gamit	873	5,138	5.89	3,366	655	382	327	150	14
55	Nayakda	93	583	6.27	385	660	66	18	8	1
56	Tadvi	287	1,660	5.78	1,096	660	239	37	10	1
57	Talavia	166	895	5.39	604	676	127	23	13	3
58	Vasava	259	1,496	5.77	1,040	697	212	25	19	3
59	Ravalia	426	2,241	5.26	1,377	614	311	64	34	17
60	Shenva	113	609	5.38	328	546	78	16	14	5
61	Thakarda-Koli ..	3,400	18,720	5.50	10,952	585	2,404	724	232	40
62	Vagher	81	515	6.35	336	652	34	34	10	3
63	Vaghri	392	2,409	6.14	1,506	625	319	42	30	1
	<i>Others</i>	<i>2,672</i>	<i>15,281</i>	<i>5.71</i>	<i>8,885</i>	<i>579</i>	<i>1,937</i>	<i>447</i>	<i>229</i>	<i>59</i>
64	Hindu others ..	1,659	9,941	5.99	5,700	573	1,193	283	151	32
65	Muslim others ..	1,013	5,340	5.27	3,185	596	744	164	78	27

SEX TABLE V
VARIATIONS IN SIZE OF FAMILY BY AGE OF MOTHER AT MARRIAGE

Age of wife at Marriage	Number of families	Number of children born	Average observed	Number of children surviving	Average observed
1	2	3	4	5	6
Total	39,786	226,456	5.69	136,795	3.43
13—14 ..	30,915	179,369	5.74	106,887	3.46
15—19 ..	5,819	33,982	5.83	20,807	3.58
20—24 ..	2,082	11,145	5.35	6,881	3.30
25—29 ..	504	2,284	4.53	1,369	2.71
30 and over ..	448	1,576	3.51	851	1.89

SEX TABLE VI
CORRELATION OF AGES OF PARENTS

Age of wife at last marriage		AGE OF HUSBAND AT LAST MARRIAGE														
		13-19			20-29			30-49			50 and over			Dead		
		Number of husbands	No. of children		Number of husbands	No. of children		Number of husbands	No. of children		Number of husbands	No. of children		Number of husbands	No. of children	
Born	Surviving		Born	Surviving		Born	Surviving		Born	Surviving		Born	Surviving			
Age periods	Number of wives	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
13	29,718	17,232	102,103	62,182	8,306	47,418	28,627	1,040	5,799	3,455	7	49	25	3,133	15,010	8,264
14	1,197	549	3,367	2,137	457	2,685	1,619	41	259	161	1	12	8	149	767	409
15-19	5,819	1,079	6,710	4,194	3,474	20,626	12,699	473	2,690	1,734	4	21	8	789	3,935	2,172
20-24	2,082	55	272	167	1,089	5,941	3,846	472	2,552	1,610	11	56	40	455	2,324	1,218
25-29	504	11	55	22	92	441	303	229	991	630	5	20	8	167	777	406
30 and over	448	1	7	..	23	70	39	233	736	458	35	64	42	156	699	312
Total	39,768	18,927	112,514	68,702	13,441	77,181	47,133	2,488	13,027	8,048	63	222	131	4,849	23,512	12,781

SEX TABLE VII

SIZE OF FAMILY BY DURATION OF MARRIAGE IN DIFFERENT CASTES

Serial No.	CASTE OR RELIGION OF HUSBAND	DURATION OF MARRIAGE WITH THE PRESENT WIFE					
		BELOW 10		10		11—19	
		Number of families	Number of children	Number of families	Number of children	Number of families	Number of children
1	2	3	4	5	6	7	8
	Total	43,535	64,952	6,035	15,627	63,656	236,943
1	Brahman	3,322	4,637	360	989	3,888	14,286
2	Koli and allied castes	5,960	9,047	828	2,098	10,055	36,516
3	Patidar	8,898	13,264	1,271	3,139	14,703	55,528
4	Rajput	1,603	2,386	227	551	2,574	9,030
5	Vania	1,716	2,566	187	523	1,997	7,990
6	Vankar	1,789	2,383	244	601	2,941	11,250
7	Other Hindu	11,833	17,039	1,531	3,988	15,261	56,843
8	Jain	625	687	92	248	797	3,096
9	Muslim	2,975	4,560	438	1,213	3,752	14,299
10	Parsi	79	130	20	48	182	702
11	Primitive and Forest Tribes	4,681	7,977	832	2,214	7,428	27,087
12	Indian Christian	54	96	5	15	78	316

Serial No.	CASTE OR RELIGION OF HUSBAND	DURATION OF MARRIAGE WITH THE PRESENT WIFE					
		20—31		32		33 and over	
		Number of families	Number of children	Number of families	Number of children	Number of families	Number of children
1	2	9	10	11	12	13	14
	Total	56,764	311,147	9,497	56,971	25,751	144,060
1	Brahman	3,272	18,191	578	3,707	1,790	10,300
2	Koli and allied castes	8,888	46,727	1,486	8,229	3,577	19,356
3	Patidar	13,280	72,804	2,360	15,219	6,109	33,053
4	Rajput	2,036	10,801	414	2,389	976	4,877
5	Vania	1,602	7,790	252	1,575	881	5,461
6	Vankar	2,824	15,780	513	3,097	1,165	6,519
7	Other Hindu	13,916	77,074	2,377	14,062	6,516	37,503
8	Jain	763	4,465	133	852	434	2,546
9	Muslim	3,445	18,552	494	2,747	1,591	8,970
10	Parsi	204	960	38	151	231	1,068
11	Primitive and Forest Tribes	6,401	35,552	840	4,859	2,452	14,207
12	Indian Christian	73	452	12	84	29	200

SEX TABLE VIII

PROPORTION OF FERTILE AND CHILDLESS MARRIAGES

A—All Cases Examined

AGE OF WIFE AT MARRIAGE	DURATION OF MARRIAGE YEARS							
	0—4		5—9		10—14		15 and over	
	Fertile	Childless	Fertile	Childless	Fertile	Childless	Fertile	Childless
1	2	3	4	5	6	7	8	9
Total	3,983	5,379	30,163	4,010	33,346	1,157	124,721	2,479
13—14	2,668	4,382	25,854	3,645	28,294	977	105,512	2,053
15—19	968	854	3,519	286	4,065	114	15,026	261
20—24	232	90	588	46	722	31	3,290	90
25—29	73	22	130	10	168	14	587	28
30 and over	42	31	72	23	97	21	306	47

SEX TABLE VIII
PROPORTION OF FERTILE AND CHILDLESS MARRIAGES
B—Cases of continuing fertility only

AGE OF WIFE AT MARRIAGE	DURATION OF MARRIAGE YEARS							
	0—4		5—9		10—14		15 and over	
	Fertile	Childless	Fertile	Childless	Fertile	Childless	Fertile	Childless
1	2	3	4	5	6	7	8	9
Total	3,979	5,376	30,151	4,001	33,293	1,143	85,996	1,531
13	2,217	3,915	23,952	3,448	26,592	930	71,682	1,271
14	451	467	1,902	197	1,702	47	3,629	68
15—19	968	854	3,519	286	4,065	114	9,318	150
20—24	232	90	588	46	722	31	1,258	40
25—29	73	22	130	10	168	14	109	2
30 and over ..	38	28	60	14	44	7	..	..

SEX TABLE VIII
PROPORTION OF FERTILE AND CHILDLESS MARRIAGES
C—Cases of completed fertility only

AGE OF WIFE AT MARRIAGE	DURATION OF MARRIAGE YEARS							
	0—4		5—9		10—14		15 and over	
	Fertile	Childless	Fertile	Childless	Fertile	Childless	Fertile	Childless
1	2	3	4	5	6	7	8	9
Total	4	3	12	9	53	14	38,725	948
13 .. ..	..	..	..	..	..	..	29,033	685
14 .. ..	..	..	..	..	..	..	1,168	29
15—19 .. ..	..	..	..	..	..	..	5,708	111
20—24 .. ..	..	..	..	..	..	..	2,032	50
25—29 .. ..	..	..	..	..	..	..	478	26
30 and over ..	4	3	12	9	53	14	306	47

SEX TABLE IX
AGE OF MOTHER AT FIRST BIRTH

CASTE OR RACE	AGE OF MOTHER AT FIRST BIRTH						Total number of cases			
	Below 13	13	14	15	16—20	21 and over				
<i>Part A—All cases dealt with</i>										
<i>Advanced</i>	538	949	2,219	11,990	6,880	22,576			
Brahman	80	192	489	2,441	898	4,100			
Patidar	372	600	1,358	7,759	5,165	15,254			
Vania	69	119	253	1,181	406	2,028			
Jain	16	34	102	485	209	846			
Parsi	1	4	17	124	202	348			
<i>Intermediate</i>	649	1,190	2,850	13,615	9,033	27,337			
Rajput	54	114	281	1,342	974	2,765			
Indian Christian	2	3	6	30	23	64			
Vankar	60	115	255	1,339	1,145	2,914			
Other Hindu	435	731	1,770	8,535	5,384	16,855			
Muslim	98	227	538	2,369	1,507	4,739			
<i>Illiterate</i>	450	694	1,723	10,111	7,874	20,852			
Koli and allied castes	246	407	1,070	6,190	4,626	12,539			
Primitive and Forest Tribes	204	287	653	3,921	3,248	8,313			
Total	1,637	2,833	6,792	35,716	23,787	70,765			

SEX TABLE IX

AGE OF MOTHER AT FIRST BIRTH—*concl'd.*

CASTE OR RACE	AGE OF MOTHER AT FIRST BIRTH					Total Number of cases
	Below 13	13	14	15	16 and over	
1	2	3	4	5	6	7
<i>Part B—Cases of continuing fertility only</i>						
<i>Advanced</i>	524	921	1,932	16,082	19,509
Brahman	76	184	448	2,910	3,618
Patidar	365	587	1,214	10,958	13,124
Vania	67	116	227	1,410	1,820
Jain	15	32	88	599	734
Parsi	1	2	5	205	213
<i>Intermediate</i>	627	1,168	2,600	19,367	23,762
Rajput	52	109	260	1,951	2,372
Indian Christian	2	3	6	48	59
Vankar	58	112	224	2,129	2,523
Other Hindu	419	720	1,627	11,978	14,744
Muslim	96	224	483	3,261	4,064
<i>Illiterate</i>	434	671	1,561	15,425	18,091
Koli and allied castes	240	394	957	9,310	10,901
Primitive and Forest Tribes	194	277	604	6,115	7,190
Total	1,585	2,760	6,143	50,874	61,362
<i>Part C—Cases of completed fertility only</i>						
<i>Advanced</i>	14	28	237	2,788	3,067
Brahman	4	8	41	429	482
Patidar	7	13	144	1,966	2,130
Vania	2	3	26	177	208
Jain	1	2	14	95	112
Parsi	2	12	121	135
<i>Intermediate</i>	22	22	250	3,281	3,575
Rajput	2	5	21	365	393
Indian Christian	5	5
Vankar	2	3	31	355	391
Other Hindu	16	11	143	1,941	2,111
Muslim	2	3	55	615	675
<i>Illiterate</i>	16	23	162	2,560	2,761
Koli and allied castes	6	13	113	1,506	1,638
Primitive and Forest Tribes	10	10	49	1,054	1,123
Total	52	73	649	8,629	9,403

SEX TABLE X

THE FREQUENCY OF BIRTHS

CASTE OR RELIGION	DIFFERENCE (IN YEARS) BETWEEN THE BIRTHS OF									NUMBER OF FAMILIES WITH			
	1st and 2nd child			2nd and 3rd child			3rd and 4th child			Total	One child only	Two child- ren	Three child- ren only
	1—2	3	4 and over	1—2	3	4 and over	Total	One child only	Two child- ren				
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total	1,762	1,732	4,634	1,847	1,542	3,262	1,661	1,297	2,072	9,403	1,275	1,477	1,621
HINDU JAIN AND TRIBAL													
Advanced	589	670	1,654	645	615	1,134	578	464	737	3,360	447	519	615
Intermediate	451	425	1,112	470	358	762	399	309	513	2,343	355	398	378
Illiterate	450	435	1,327	460	371	1,018	469	380	585	2,475	263	363	415
Other Hindu	85	69	184	100	53	118	79	44	71	410	72	67	77
Muslim	138	114	307	143	121	183	108	95	139	675	116	112	105
Parsi	47	19	47	25	24	46	26	12	27	135	22	18	30
Indian Christian	2	..	3	4	..	1	2	2	..	5	..	..	1

SEX TABLE XI

DURATION OF CHILDLESS PERIOD

Serial Number	CASTE OR RELIGION						Duration (in years) of the childless period after the birth of the youngest child		
							1—2	3—4	5 and over
1	2						3	4	5
	Total ..						306	370	8,727
1	Hindu Jain and Tribal								
	Advanced						74	86	3,200
	Intermediate						103	100	2,130
	Illiterate						93	129	2,253
	Other Hindu						10	15	385
2	Muslim						25	30	620
3	Parsi						1	..	134
4	Indian Christian .. .. .						..	..	5

CHAPTER VI

CIVIL CONDITION

§ I. GENERAL ANALYSIS OF FIGURES

187. Reference to Statistics—The Imperial and State Tables utilised for the use of Chapters IV and V are again the basis for the figures of marriage and widowhood, with which this chapter is concerned. At the end of this chapter will be found the following five Subsidiary Tables which are prepared from the above Tables giving the requisite proportionate figures :—

SUBSIDIARY TABLE	I—Distribution by Civil Condition of 1,000 of each sex, religion, and main age-period at each of the last five censuses.
„ „	II—Distribution by Civil Condition of 1,000 of each sex at certain ages in each Religion and Natural division.
„ „	III—Distribution by main Age-periods and Civil Condition of 10,000 of each Sex and Religion.
„ „	IV—Proportion of the Sexes by Civil Condition at certain ages for Religions and Natural divisions.
„ „	V—Distribution by Civil Condition of 1,000 of each sex at certain ages for selected castes.

188. Scope of the Chapter—On this occasion, as in 1921, the scope of this chapter will be severely limited to the statistics of marriage, together with such aspects of social reference which are connected with the figures as influences explanatory of the variations. As the question of fertility has been dealt with separately, the figures of marriage and widowhood as two aspects of civil condition will now be analysed. The large amount of descriptive matter regarding social customs connected with marriage, widowhood and divorce which used to figure in Census Reports prior to 1921, will be again omitted on general grounds that they are not strictly relevant to a statistical report. There is little need for such matter of sociological interest in a Census Report, particularly as there are gazetteers and other literature extant, in which all this is embodied. Recently Rao Bahadur Govindbhai Desai, under orders of the Huzur, has prepared a handy manual entitled “Hindu Families in Gujarat” in which a great deal of information, popularly dressed up, is compiled for the general reader. Certain special statistics, regarding the prevalence of divorce in the different castes, will be dealt with in an appendix to Chapter XII.

189. Accuracy of the Record—The instructions regarding the entry of details of civil condition were precise and elaborate. The civil condition of every person, whether infant, child or grown up was to be entered. Only three kinds of civil condition were recognised: *single*, *married* or *widowed*. The question was what was to be the test of marriage. As before, the full formal ceremony such as social custom recognised as the binding form of marriage was taken as the test. Included under marriage were the Musalman's *nikah*, the widow's remarriage under the *natra* form and the levirate or *diyar vatu* (marriage of the widow with the deceased husband's younger brother). But mere betrothal or *vagdan*, *sagai* or *vivah* was not considered adequate for the civil condition of marriage. Presumably marriages of brides below eight years of age declared invalid recently under the Infant Marriage Prevention Act of the State would not be entered as such. Prostitutes and hermaphrodites were to be shown as unmarried. Un-

married women, even though with children, should be treated as if they were single. Similarly the previous civil condition of kept women and concubines was to be entered. Divorced persons were to be entered as widowed. Finally there was a special provision in this State about *khandhadiyas* among the Raniparaj. These are probationer *fiancés* who are adopted into the household pending approval by the prospective father-in-law and even of the bride herself. A *khandhadiyo*, during probation, may live with his chosen bride-to-be and even propagate before the formal ceremony of marriage takes place. Such cases were treated as *single*. These instructions were clearly understood. As the details on the present occasion were to be filled in by ticks and crosses in books of slips, instead of the Enumeration Schedules of other censuses, it is possible that a few inefficient enumerators may have been confused and put a cross where an affirmative sign was necessary. But these mistakes were mostly corrected during inspections. A few were detected at the sorting stage and local enquiries supplemented the record. Occasionally some enumerators did not know the implication of the formal ceremony of marriage. supplementary instructions giving details of mock marriage, as when a girl is first married to a bunch of flowers and then remarried as a "widow" or a bachelor, to enable him to marry a widow, is first "married" to a *Shami* tree and so on. The ceremony of *saptapadi* or *mangalphero* was considered necessary for a valid marriage of a virgin, while the *natra* form was specifically included under marriage in the instructions. But apart from unintentional errors due to inexperience or doubt about instructions, we had also to contend with the factor of wilful misstatement. The census is still looked upon as a mysterious agency with the magic property of turning a person's caste, civil condition, age or even sex. Not only this, but the deliberate falsifier supplies a false return in the fond hope that the census record may be utilised at some future date for an ulterior purpose to his benefit. He does not realise however that the census slips after being compiled into tables which have no individual interest, are sold as rubbish or destroyed. We noticed in the chapters on Age and Sex how heaping in certain ages is due to the operation of certain laws like the Infant Marriage Prevention Act. In the chapter on Literacy, we shall also notice the reactions in this respect of the provisions of compulsory education in this State. In this way a certain proportion of the errors are of an intentional character. Thus prostitutes and kept women may have deliberately called themselves married. Leper women and such like, who are unmarried on account of their infirmities, may have wished to call themselves married or at least widowed. Adult spinsters, who have become unsaleable through their want of good looks, may have similarly passed off as widowed. I do not think however that the Infant Marriage Prevention Act had any special influence in encouraging *falsification* of the civil condition return. As pointed out in the 1921 Report, it was hardly likely that married girls below 12 would be shown as unmarried, for if any falsification was necessary they could resort to the readier expedient of entering a wrong age. Errors were therefore very few indeed, and next to the return of sex, the civil condition statistics are the most accurate details of the census figures.

190. Main Features of the Return—Of the total population of 2,443,007 persons, 1,222,750 or nearly 50 per cent are married and 259,258 or 10.6 per

AGE	MALE			FEMALE		
	Un-married	Married	Widowed	Un-married	Married	Widowed
All Ages ..	454	479	67	329	524	147
0—5 ..	996	4	..	989	10	1
5—10 ..	916	79	5	798	197	5
10—15 ..	810	182	8	580	412	8
15—20 ..	443	540	17	108	872	20
20—40 ..	143	804	53	12	885	103
40—60 ..	42	708	190	2	526	472
60 and over ..	32	576	392	2	169	829

cent are widowed. The marginal table summarised from Subsidiary Table I gives the main proportionate figures of civil condition for each sex in the main age-groups. These figures at once point to certain main features, which mark off the State civil condition return in common with all-India figures, from the cor-

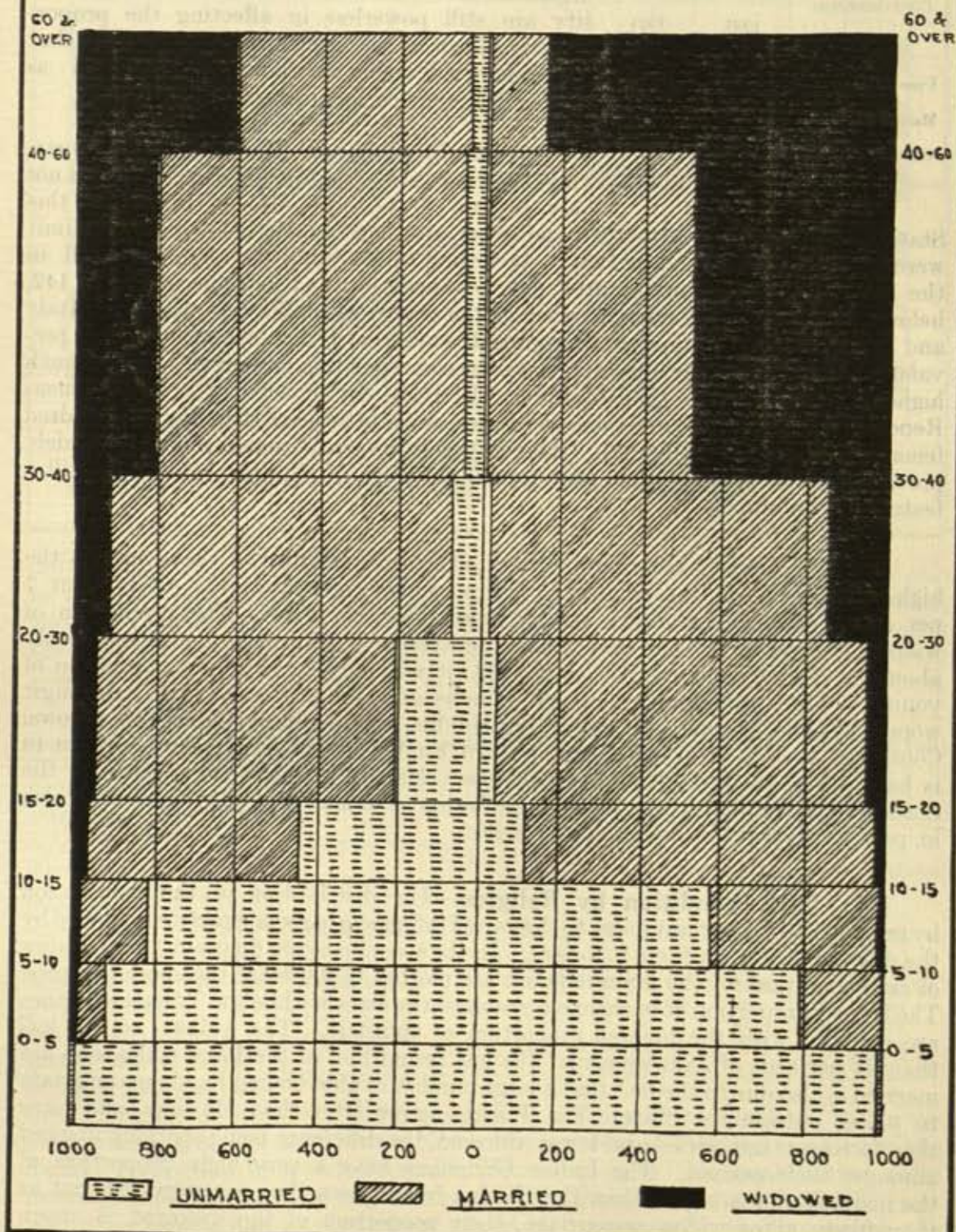
responding statistics of European countries.

DIAGRAM SHOWING THE PROPORTION PER MILLE

WHO ARE MARRIED AT EACH AGE PERIOD

— MALES —

— FEMALES —



(a) *Universality of Marriage*—The previous Census Reports have laid emphasis first and foremost, on the universality of marriage in India. Hinduism through its religious sanctions still exerts a paramount influence in favour of the married state. Jainism, although in essence it is a monastic system founded on the ideal of celibacy cannot escape the all pervasive influence of Hinduism in this regard as in other respects. The Tribal faiths are fast giving place to these ideas. Islam through its Neo-Muslims and other local converts is affected by these ideas, so much so that recent converts from Hinduism still retain their old attitude towards caste and social practices like prohibition of remarriage of widows. The Indian Christian convert is still a victim to the characteristic social attitude of his

Civil Condition	Per 100 in	
	1931	1921
Unmarried ..	39	40
Married ..	50	48
Widowed ..	11	12

Hindu caste fellows. The Parsis are now coming out of these influences, although marriage remains still a most important feature of their social organisation. That education and economic necessity are still powerless in affecting the proportions is shown in the inset in which it is seen that the unmarried ratio has actually decreased as that of the married has increased since 1921.

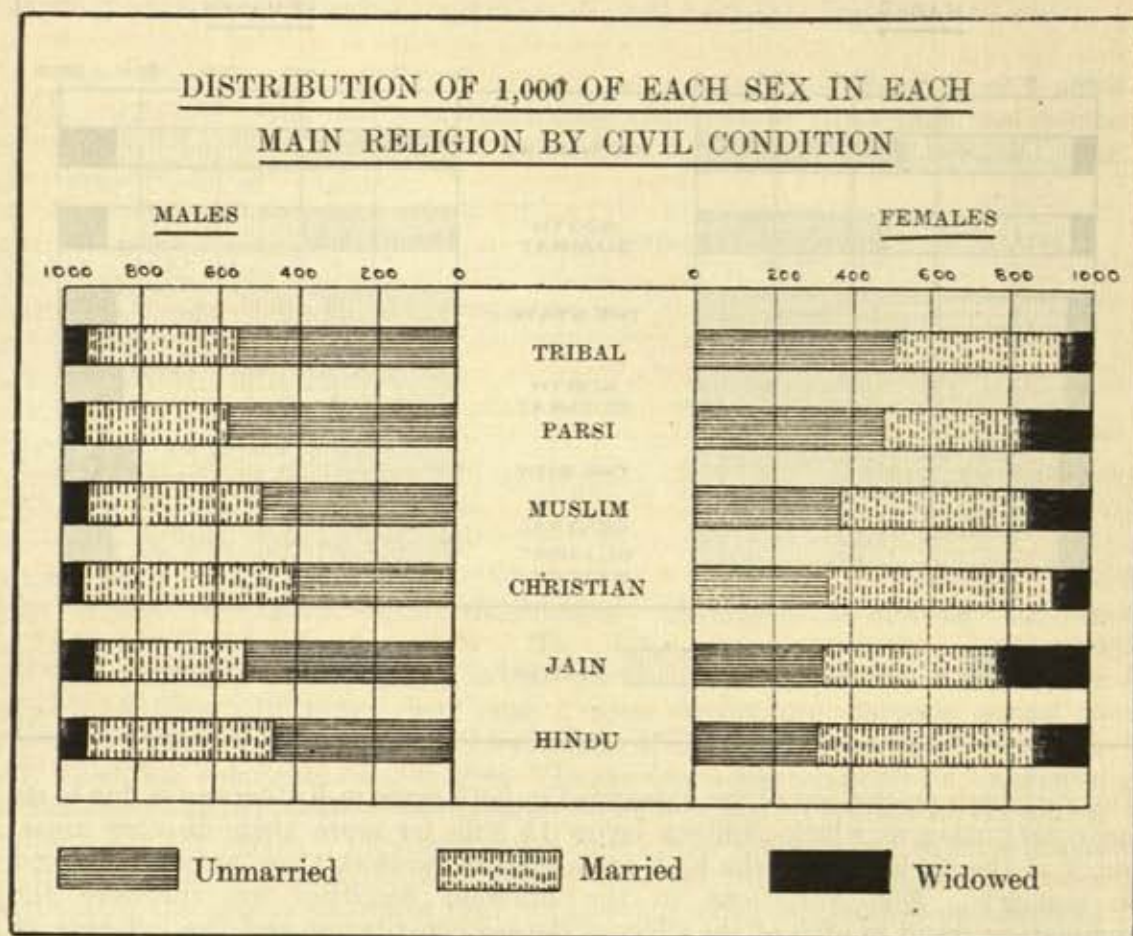
(b) *Early Marriage*—The early age of marriage still persists as a feature of the returns not only in this State, but also in India. In this

State, one male in six below 20, and every alternate female below that age limit were returned as married in 1931. According to M. Sundbärg's figures quoted in the Indian Census Report of 1911, only one male in 2,147 and one female in 142, below 20 years of age, were married in the countries of Western Europe. Italy and Russia may be supposed to approach somewhat Indian conditions in the prevalence of early marriage, but even there the corresponding proportions show a much higher age at marriage than in India. In Italy (as shown in the India Census Report of 1921) only one in a thousand males, and a little more than one in a hundred females, are married before 20. Here in this State, early marriage is very widely prevalent in all classes, while the formal marriage of children below 5 is still a feature of the returns.

(c) *The Large Number of Widows*—The third feature of the returns is the high proportion of the widows. The proportion of widowers is only about 7 per cent and does not differ greatly from other countries. The proportion of widows is however 15 per cent, while the average in European countries is only about 9. In England and Wales in 1911, it was only 7. But the proportion of young widows particularly amongst Hindus and Jains is very high. Amongst women of child bearing ages, one in ten Hindus, and one in five Jains, are widows. Compared to this ratio, the proportion in England amongst women aged 20-40 is hardly one in 200. The large widowed element amongst the women in the State is due mainly to the Hindu prohibition of remarriage of widows and also in part as a result of disparate marriages.

191. Civil condition by Religion—The distribution of the population by religion is an important index to the varied influences of social practices enjoined by the different faiths on their followers. In the accompanying diagram, the statistics of civil condition for the main religions are plotted to illustrate the special factors. The largest proportion of bachelors is amongst the Parsis, while the Tribal aborigines are credited with the highest proportion of spinsters. The widows are no less than 23 per cent of Jain women. The low proportion of the Parsi males who are married is also due to the fact that a large number of able-bodied Parsi men emigrate to places outside the State. The Tribals marry later than Muslims, and have therefore more unmarried and fewer widowed, the difference being specially marked amongst their women. The Indian Christians have a very high proportion of the married, much higher than the Hindus from whom they are recruited, but as they freely allow widow remarriage, their proportion of the widowed is much less than in other religions, except the Tribal. The Muslims and Parsis, although allowing widow remarriage, have a higher proportion of widowed females than

Hindus. That is because the proportion of Hindu widow has fallen considerably in this census, owing to the absorption of the bulk of the Raniparaj, who had previously been returned as Animist or Tribal. In reality the Muslim ratio of the widowed females was 171 in 1921, so that the strength of Muslim widows has greatly declined. The high average of the unmarried amongst the Tribal, it must be

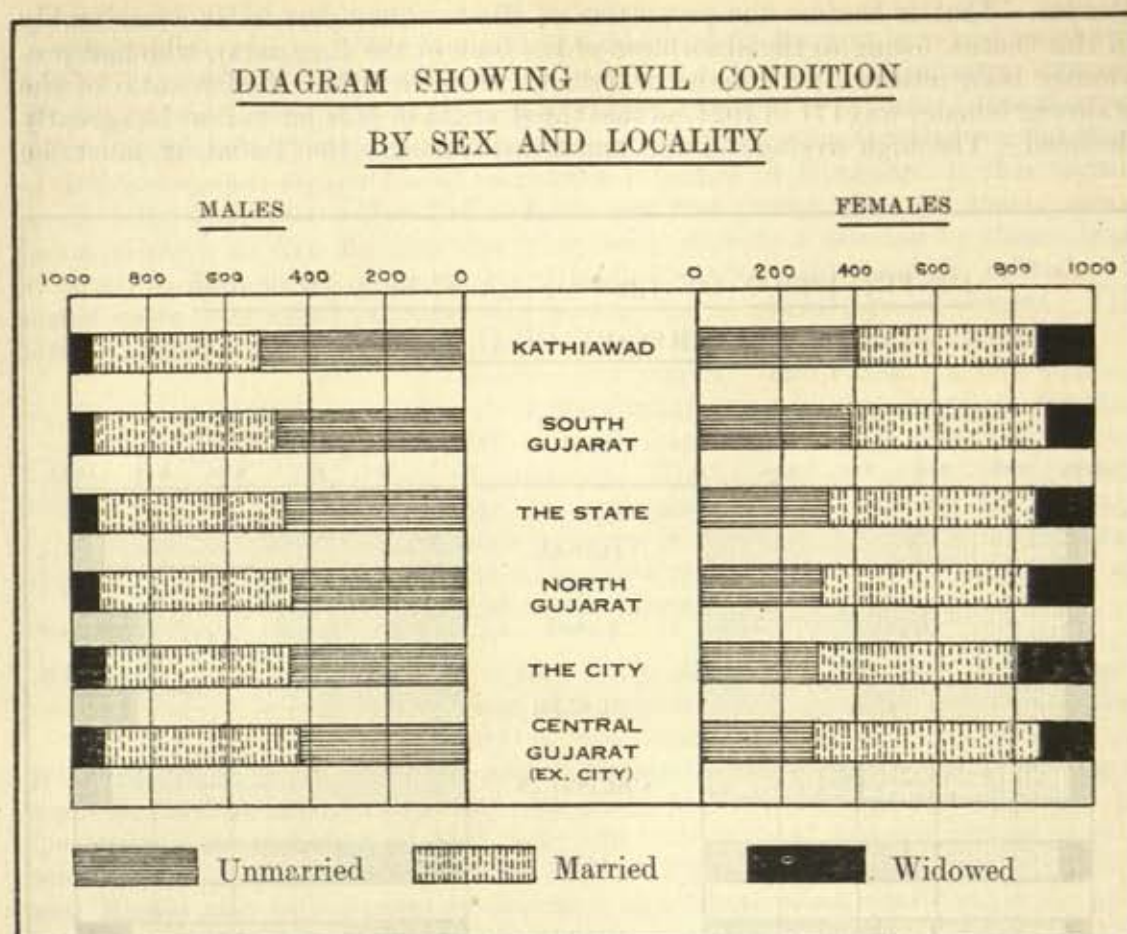


remembered, is not merely ascribable to its practice of adult marriage, but also to the very high proportion of its child population, which gives it a low mean age (*vide* Chapter IV—Part I). The relatively high proportion of widows amongst the Parsis in the State is remarkable showing that emigration in that community affects a large number of married Parsi women who are away with their husbands.

192. Civil condition by Locality—The marginal table and diagram give the main facts regarding civil condition in the different divisions. The City shows the largest proportion of widows, because the composition of its inhabitants has a preponderance of advanced Hindu groups which sternly set their face against

NATURAL DIVISION	Ratios by Locality					
	Male			Female		
	Un-married	Married	Widowed	Un-married	Married	Widowed
Baroda State ..	45	48	7	33	52	15
The City ..	45	48	7	31	50	19
Central Gujarat ..	43	50	7	29.4	56.2	14.4
Kathiawad ..	53	41	6	40	46	14
North Gujarat ..	45	48	7	31	53	16
South Gujarat ..	49	45	6	39.4	49.3	11.3

the remarriage of widows. South Gujarat on account of its Raniparaj shows the least relative strength of widows. North Gujarat next to Central Gujarat has the highest proportion of married females, because it is in this locality that early marriage is most rife. The preponderance of the married amongst Central Gujarat women is chiefly due to contiguous migration with females predominating, the balance in which has largely increased in favour of this division in the last 10 years.



The very high proportion of the unmarried in both sexes in Kathiawad is due to its age-constitution in which children below 15 bulk far more than in other areas, but it is the result also of the high proportion of widows that are not allowed to remarry. The variations in the different localities are therefore the cumulative result in each of the effect of the age constitution and the influence of social practices prevailing in the different religious groups.

§ 2. ANALYSIS BY AGE PERIODS

193. Civil condition by Sex and Age: The Proportion of the Unmarried—The variations by religion are better understood if figures are presented in broad age groups by sex. Subsidiary Tables I and II give proportions in the different religions of persons who are unmarried, married or widowed per mille of each sex at each age period. The age-periods selected for this purpose in these Tables are 0-5, 5-10, 10-15, 15-40 and 40 and over. It is not necessary here to carry the analysis by religion to the different localities, as the variations by age and religion in the divisions are too minute to justify any deductions of far reaching character. It will be best to confine ourselves to the State as a whole. In that connection it will be more convenient to study this statistical material in so far as they relate to certain special features. First let us see how the variations in the proportions of the unmarried work out in the main religions. The following Table collects the principal figures from Subsidiary Table II:—

RELIGION	Proportion of the Unmarried per mille									
	Male aged					Female aged				
	0-5	5-10	10-15	15-40	40 and over	0-5	5-10	10-15	15-40	40 and over
ALL RELIGIONS ..	996	916	810	217	40	989	798	580	36	2
Hindu	996	909	795	203	40	988	781	551	28	2
Tribal	1,000	996	987	319	18	1,000	991	941	166	8
Muslim	997	962	913	294	38	987	903	760	67	4

In the above table the Hindus generally show a lower rate of the unmarried than other religions, but amongst females, the Hindu rate in the higher age-groups is even much lower than amongst the Muslim and the Tribal. Nearly one in five of adult females amongst the Raniparaj is a spinster, while hardly 3 per mille of Hindu females of these ages are unmarried. The Jain figures are omitted from the above table as they are very like the Hindu proportions, except that they show a much higher proportion of aged bachelors (aged 40 and over).

194. Early marriage—The problem of married children requires a more detailed analysis. The results of this census conclusively prove that the spectre of early marriage dies hard and still remains an ugly feature of the returns. But the proportion of children below 5, who are married is getting happily smaller year after year. In 1891, no less than 41 per mille of the boys, and 92 per mille of girls under 5, were married. The margin sets out the variations since then. The proportionate increase all round in 1911 was due to the abnormal conditions prevailing in the child population as a result of the great famine of 1900, which discouraged marriages, accounting for the lowness of the ratios for 1901. The later years caused a rebound and the children were married as fast as their parents could, as if to make up for lost time. In 1921, there was a very satisfactory decrease owing to the stricter operation in the previous decade of the Infant Marriage Prevention Act, which had come into force in 1904. In the first seven years of its existence, it was very lightly worked, presumably because it had to encounter the sullen opposition of the people. Popular opinion in the later years veered to its side and the provisions were thereupon more strictly enforced. These circumstances were reflected in the census returns of 1921. Since that date, enlightened opinion had crystallised definitely in the direction of further stiffening of the provisions of the Act. A committee was appointed by His Highness's Government in 1926, which reported in favour of raising the age limits and making the penal provisions more stringent. Concurrently with these contemplated changes in this Act, the age of consent was raised in 1928 to fourteen within, and 18 outside, the marital relationship. The Infant Marriage Prevention Act, as amended three years ago, declares that (i) marriages of parties wherever the age of one or both of the parties is below 8 years are void; (ii) raises the maximum limit of fines from Rs. 50 to Rs. 200; and (iii) punishes parties abetting in the bringing about of unions of persons below 8 years with imprisonment and fine. The date of the coming into operation of these new changes was widely advertised, so that castes which are addicted to early marriage took advantage of that fact and married off their children in hot haste before the law could declare their marriages illegal. Thus the marriages below the minimum ages according to the old law jumped up from 3,877 to 5,024 before the new official year began on the 1st August 1929, on which date the new amendments came into force. As a result the Census of 1931 showed a large increase of married children aged 5-10 from 23,390 in 1921 to 41,174 in 1931 or by 76 per cent. The marginal table above shows that there is a fall in the age-groups 0-5 and 10-15, but a steep rise significantly in the age-group 5-10. This is evidently due to the circumstances above related. That such marriages in the age-group 5-10 were mostly confined to the Hindu and Jain sections and did not extend to Muslims and others is shown by the fact that while the Muslim and Tribal ratios of the unmarried in the age period 5-10 have only been slightly modified since 1921, the Hindu proportion for females has decreased from 872 to 781.

YEAR	Proportion of Married Children per mille of total children aged					
	0-5		5-10		10-15	
	Boys	Girls	Boys	Girls	Boys	Girls
1901 ..	24	36	94	154	245	485
1911 ..	39	83	111	188	236	515
1921 ..	8	15	50	112	185	441
1931 ..	4	10	79	197	182	412

195. The Operation of the Infant Marriage Prevention Act—The results of the Act deserve a little closer analysis. It has now existed for 28 years

and yet the annual average of offences, judging from the inset table increased till

Annual Average		
Year	Offences	Convictions
1904-11 ..	Not available	3,341
1911-20 ..	4,880	4,051
1921-30 ..	7,753	6,487
		(Estimated)
1931	2,520	2,122
		(Estimated)

1930 almost to the extent of proving that the provisions of the law had almost ceased to have any effect in changing the social conduct of the people. The peak of the offence curve was attained in 1923 when no less than 15,801 offences were recorded. Since then the decline in offences though slow has been continuous. The new changes came into force from the 1st of August 1929. The number of offences for the previous year under the old provisions was 6,622. Under the first year of the new Act, the number of offences declined to 5,517. The latest figure for 1931 shows that this number has further declined to only 2,520. A larger amount in fines was realised, but only 3 persons were sentenced to imprisonment in 1930. In 1931, the amount in fines decreased considerably because of the smaller number of offences, but Brahmans and Kshatriyas claimed more of the fines than in any previous year. Apart from offences the actual number of child marriages has also declined. In the last two years, under the operation of the new Act, this decrease is happily large and satisfactory. Whether this decline is the result of the more stringent provisions of the Act and will eventually lead to the eradication of this evil, it is too early yet to say. Much depends upon the local magistracy and how they enforce the provisions.

YEAR	NUMBER OF REGISTERED MARRIAGES		
	Marriages above age-limit	Marriages below age-limit	Proportion of marriages below age to total
1916-20 (Annual average)	6,773	3,365	33.2
1921	10,398	4,319	29.3
1922	8,484	3,181	27.2
1923	12,742	6,713	34.0
1924	12,489	6,487	34.0
1925	12,737	6,415	33.4
1926	10,304	5,463	34.7
1927	10,098	5,462	31.1
1928	11,663	6,577	36.1
1929	10,034	5,029	33.5
1930	11,315	3,877	25.5
1931	11,590	2,510	17.8

here without any opposition for nearly a whole generation ; in view of this circumstance and also of the fact that with them marriage is usually adult, it is surprising to find even enlightened Muslim opinion in British India ranging itself in opposition. At all events, the Sarda Act does not appear to have a very hopeful prospect for its future working. In the meantime steps are already under weigh in this State to bring our provisions in line with the limits set by the British Indian Act. So far the amendments in the State Law have led to the following results :—

(i) they have wiped off the figures of “ mock marriages ” of infants and other children below 3, which used to give to this State an evil pre-eminence in the eyes of India ;

(ii) they have certainly led to a marked decline both in offences and in the number and proportion of child marriages in the State ; and lastly

It cannot however be doubted that before the new Act was amended, the penal provisions were wholly ineffective. Magistrates were careless and indifferent, and the people looked upon the light fines imposed as only an added item to their marriage budget. But apart from the indifference of the magistracy the chief difficulty has been so far the fact that our territory is interlaced with British India and other States, and unless the whole area takes up the provisions in restraint of child-marriage, this State cannot hope for much success in the working of its own law. The Sarda Act in British India only came into force from the 1st April 1930 and has encountered opposition, not only from the ranks of Hindu orthodoxy which was expected, but also from the Muslims which indeed was entirely unexpected. The State Act has been worked amongst the Musalmans

(iii) the number of child marriages in the age-period 5-10 has indeed increased as a kind of short period effect of the changing of the law. But as a set off against this fact it may be mentioned that the proportion of the married has declined in the age-period 10-15 since 1891 almost continuously, showing that the age of marriage has risen in the last forty years.

YEAR	Proportion of the married amongst females aged 10-15
1891	542
1901	485
1911	515
1921	441
1931	412

196. Early marriage by Caste—It is interesting to compare the varying incidence of early marriage in the different castes and to see therefrom how far modern influences through education are operative in raising the age of marriage. In the following Table are collected certain typical castes which are notorious for their addiction to this evil:—

CASTE	Literacy per mille (5 and over)			Proportion of married and widowed aged			Proportion of married and widowed per 100 women who are aged		
				0-5		0-6	0-12		0-13
	1911	1921	1931	1911	1921	1931	1911	1921	1931
Anjana	81	74	144	44	28	71	133	148	303
Ghanchi	261	308	406	6	10	19	121	127	204
Kadwa	87	122	217	634	62	9	765	149	315
Lewa	214	259	395	31	18	25	114	123	161
Soni	371	412	517	16	7	6	88	58	82
Rajput	92	130	193	25	10	12	102	102	118
Sutar	170	215	343	16	12	74	122	135	228
Vankar	26	45	125	39	54	34	172	195	225

The literacy ratios of these castes for three censuses show a progressive, and even in some cases a phenomenal, growth since 1911. In each of these castes the proportion of married and widowed females aged 0-13 in the present census is compared to corresponding ratios in 1911 and 1921 among women aged 0-12. The difference in choice of age-periods does vitiate the comparison to some extent as the ages returned in this census are those nearest next birthday while the age returns of other censuses referred to last birthday, so that for 1931, the proportions had to include the marriages of girls at 12, while those for the previous two censuses did not do so. As is well known, the bulk of marriages in all castes take place at 12 or 13, so that the ratios of 1931 cannot be profitably compared to previous years. But the all round rise in the proportions is due no doubt also to a real increase in early marriages on account of the change in the State legislation; if we take the earlier period 0-6 for 1931 and compare with the proportions for 0-5 in the previous two censuses, we see also little improvement, except that the force of education aided by State effort has helped indefinitely breaking down the unnatural *en masse* marriage custom amongst the Kadwas (*vide* Caste Glossary). The very large increase of literacy amongst the Patidars has not been followed by any rise in the formal age of marriage, while artisan groups like Sutar and Ghanchi show that they are still as much addicted—even more so—to child marriage than before.

197. Early marriage and English education—Generally vernacular education has had little effect in these matters. But where English education is really effective, as in the "upper ten" of the Advanced groups, there we see a definite advance in the direction of adult marriage. Only those groups have been selected for the inset as show a high ratio of literacy in English amongst females. It is only where the women are highly educated that modern influences are said to have penetrated the home. The

CASTE OR GROUP	Order according to Female literacy in English	Unmarried males per males aged 24-43	Percentage of unmarried females aged		Females per 1,000 males aged 14-16
			14-16	17-23	
Parsi	1	277 (15-45)	84 (15-20)	68 (20-25)	1,381 (15-20)
Prabhu	2	245	87	30	1,188
Konkanstha	3	225	66	6	681
Deshastha	4	216	52	3	759
Nagar	5	232	43	6	957
Maratha	6	103	35	5	839
Anavala	7	206	32	1	775
STATE AVERAGE					
Advanced	1	143	25	2	892
Intermediate	2	67	19	4	959
Illiterate	3	64	33	5	889

notice that there is no paucity of females of marriageable age (15-20) amongst them. The Prabhus alone among the Hindu castes share this attitude with the

Proportion of widows per 1,000 males			
Age Period	Baroda 1931	India 1921	England and Wales 1911
All ages	147	175	73.2
0-5	1	0.7	..
5-10	5	4.5	..
10-15	8	16.8	..
15-20	20	41.4	..
20-25	30	71.5	1.5
25-35	95	146.9	13.1
35-45	270	325.2	50.1
45-65	595	619.4	193.3
65 and over	829	834	566

corresponding figures for India (1921) and England and Wales (1911). The proportion of widows is less in the State than in India generally, particularly in the younger ages. But there are in

CASTE	Proportion of widows among females aged	
	17-23	24-43
I Castes disallowing remarriage		
Brahman	70	303
Maratha	55	277
Rajput	42	201
Varia	48	284
Prabhu	27	234
II Castes allowing remarriage		
Patidar		
Lewa	28	161
Kadwa	28	174
Sutar	17	165
Luhar	19	184
III Castes and Tribes in which Brahmanic influence is practically nil		
Bhangi	20	132
Vankar	15	122
Thakarda	11	113
Raniparaj (Illiterate section)	13	91

amongst whom Brahmanic influence is practically non-existent. In the second

marginal table is of great interest, particularly when the state of things in these castes is contrasted with the State averages for Advanced, Intermediate and Illiterate sections. The Parsis are marked off from the rest by their high proportion of the unmarried adult males and their late age of formal marriage. This disinclination for the responsibilities of marriage is all the more remarkable, when we

198. Statistics regarding the Widowed—

The frequency of widowed females is as already pointed out one of the three marked features of the returns, which distinguish this State from western countries. The margin compares the Baroda ratios of widows in 1931 by age-periods with those of India generally, particularly in the younger ages. But there are in this State seven times as many widows to the total female population in the age period 25-35 as in England and Wales. The proportion of Hindu castes that allow remarriage of widows in this State is more than 80 per cent, and this proportion is higher, I believe, than in the rest of India.

199. Widows in the Child-bearing Period—

Of more immediate interest to the future progress of the different communities is the varying proportion of widowhood amongst adult females (aged 15-40). Nothing illustrates the truth of the statement that the growth of the population is more indebted to the intellectually less efficient classes than the state of things disclosed by the marginal figures. The castes selected are divided into three groups: (i) castes that prohibit, and (ii) those that allow, the remarriage of widows, and (iii) such tribes on the fringes of Hinduism,

group is included the Lewa Patidar, although the bulk of Central Gujerat Patidars, fancying themselves to be *kulins* have followed the Brahmanical practice in this regard. Maratha Kshatriyas and the *kulin* sections of certain artisan castes like Sonis now prohibit widow remarriage as stringently as any Brahman group.

200. Chief influences operative in regard to Remarriage of Widows—

The chief influences that operate against a general return to the practice of remarriage of widows are:—

(i) the snobbish instinct that leads the socially affluent sections within the intermediate and artisan groups to ape the distinctive customs of the advanced classes. The more educated the caste becomes, the more is its desire to conform to the “better Hinduism” of Brahmans and Vantias;

(ii) secondly the rise of *kulinism* within castes, a socially superior section which is hypergamous to the rest is a powerful factor against the general marriage of widows. A competition for husbands would result from this action of hypergamy. Widows would most certainly get left out (at least in India) in the hunt for matrimony, as in their case, the interests of the individual families would militate against their remarriage. Having paid a substantial “bride-groom price” for their daughters and sisters, they would certainly refuse to pay the same or even a higher price to get her married again. At the same time, *kulinism* would also require for its own selfish interest that the circle of marriageable women among itself should be kept as small and select as possible in order that the few bridegrooms left over without a bridegroom price may be provided for. The young widow therefore is condemned to remain without a second partner;

(iii) thirdly the anxiety of the early Hindu law-givers to restrict the women's rights to property has combined with the selfish interests of the family to keep the widow down and tended to forbid her to marry another so that her own circumscribed share in her late husband's property may not be alienated by this second husband from the first family. To this end marriage was surrounded with all the holy sanctions of religion, necessitating a solemn religious act of transfer of the ownership over the body of the woman from the father to the husband: and when the husband died, there being no body to give her,—the Hindu marriage being a form of religious gift, marriage became impossible for her;

(iv) against those influences is the growing consciousness of the fact that remarriage is becoming a social necessity in Gujarat. The 1911 Report mentioned a number of petitions from Sinor, Savli, Baroda and other places in which the Government of the State was actually requested to make remarriage of widows compulsory: the disgruntled bachelors recounted their woes in these petitions owing to the fewness of virgin brides in their castes. The local Arya Samaj in recent years has attempted to popularise the idea of remarriage of widows amongst higher castes. A permissive Act for the remarriage of widows has been in existence for many years and yet very few persons amongst the higher castes have so far taken advantage of it. Census Committees report very little change in the general attitude of the higher castes. The Porwads in South Gujarat however are understood to have given a general permit to the widows to remarry.

201. Volume of Remarriage of Widows estimated—

All marriages are registered in the State, but the *natras* practised amongst lower castes are not separately noted; it is not possible therefore to determine how many of these marriages are remarriages of widows. But assuming that prohibition of remarriage is confined only to Advanced group of Hindus and that the other two sections of Intermediate and Illiterate favour remarriage we find that 19.6 per cent of females in the Advanced group and 13 per cent in the Intermediate and Illiterate sections are widowed. If the widows were not allowed to remarry in these latter sections, at least 6.6 per cent of their women should have continued as widows instead of being remarried. Making allowances for different rates of mortality, we calculate that 48,073 women in castes and groups allowing remarriage must have been once widows and had remarried since. Distributing these in the age groups we give below the estimate of the extent to which the remarriage of widows has taken place among Hindu castes that permit such a custom. The proportions are necessarily rough approximations but they may be of interest:—

AGE PERIOD	Number per 1,000 females in each age period who are widowed		Number per 1,000 Intermediate and Illiterate females in each age period who are living as wives of second husbands
	Advanced Hindu and Jain	Intermediate and Illiterate	
All Ages	196	130	60.0
0-6	1	1	.25
7-13	5	7	1.0
14-16	13	13	4.0
17-23	43	19	13.0
24-43	214	127	67.0
44 and over	660	578	251.0

§ 3. CERTAIN OTHER FEATURES CONSIDERED

202. Distribution by Main Age Periods—Hitherto the proportionate figures which have been discussed are those reckoned on each age period, but if we distribute the absolute figures of the three classes of civil condition by age periods and proportion them to the total strength of each sex, we shall get some interesting data, correlating the age-constitution with the civil condition figures. Subsidiary Table III gives the main proportions per 10,000 of each sex and the accompanying diagram plots the distribution for the four main religions. Only four broad age periods are chosen for this purpose—children (0-10), adolescents (10-15), adults (15-40) and aged (40 and over). Widowhood hardly exists in the first two periods, there being only 16 females per 10,000 of that sex who are widowed and below the age of 15. Over 76 per cent of widows in all religions are “aged”. Amongst the Jains, 17 per cent of their women are widows above 40. Twice as many Jain women of the child-bearing age (adult group) are widows as there are in the general population. The high rate of natural increase amongst Muslims and Hindus is apparent from the very large proportion of married adult females amongst them. Adolescent married females amongst Hindus form nearly one-tenth of

RELIGION	Married women aged 10-40 per 10,000 females
Indian Christian ..	4,366
Hindu	4,122
Muslim	3,761
Jain	3,383
Tribal	3,272
Parsi	1,935

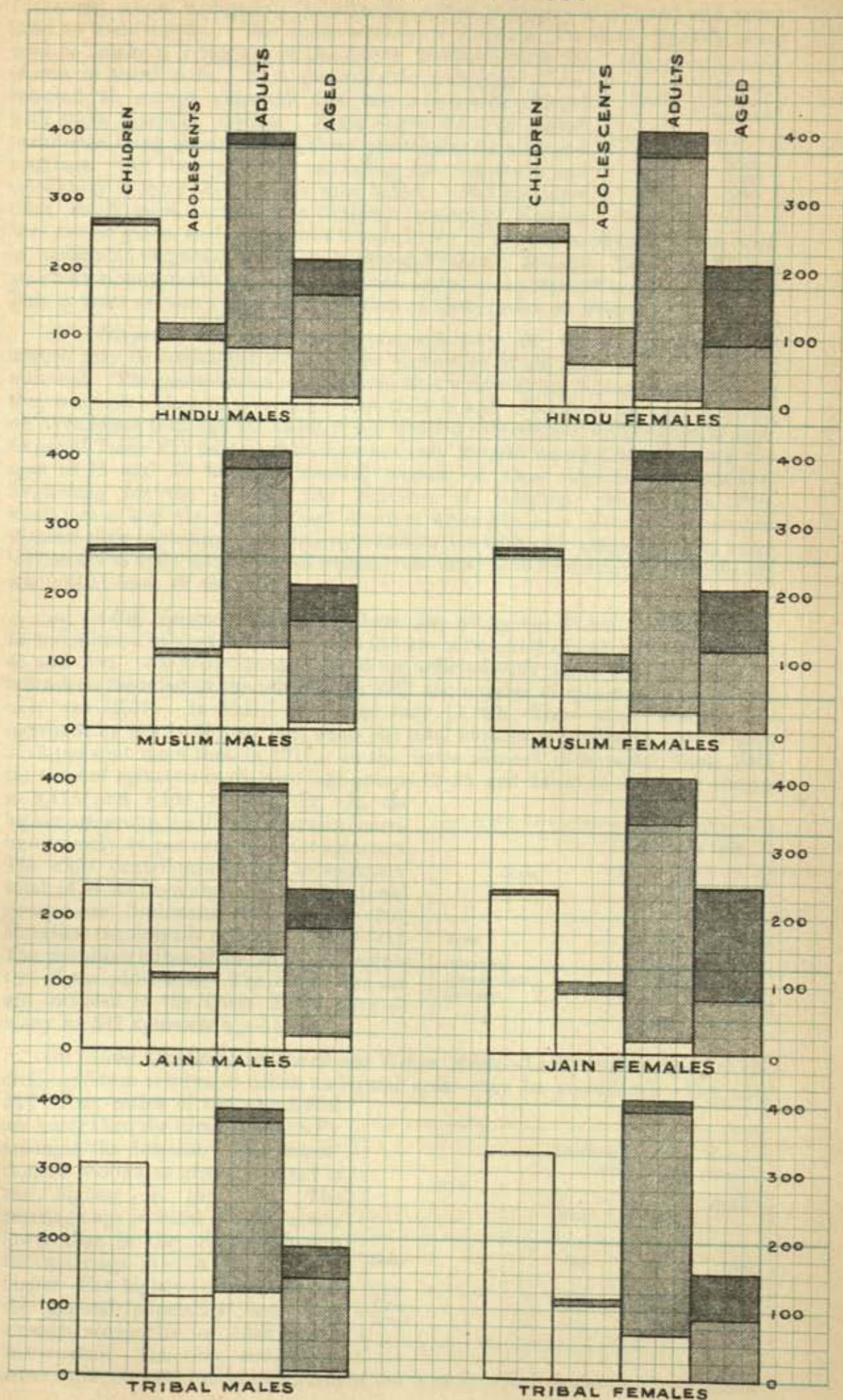
their married women, while amongst Muslims they are only one in forty-three. The Christians show one-eighth of their married women in the adolescent ages. This high proportion of juvenile marriages amongst them need not astonish readers as the Indian Christians are mostly converts from low castes which are the greatest culprits in this respect. Taking the adolescent and adult groups together we see the highest proportion of marriage amongst Indian Christians. The trend of births in the coming decade will follow perhaps in the order of arrangement indicated in the margin.

203. Proportion of the Sexes at Certain Ages—Subsidiary Table IV works out the female index by civil condition. At all ages there are twice as many widows as there are widowers; there are 7 spinsters to 10 bachelors, while amongst the married, the sexes approach equality, there being 1,031 married women to 1,000 married men. The higher female index amongst the married in the general population is due to the conjoint influence of emigration which selects against males and of contiguous immigration which is weighted in favour of females. The proportions vary in the different religions. Amongst the Parsis the widows outnumber their male counterparts by 4 to 1. Amongst the Jains the female index amongst the widowed is also nearly as high being 283 to 100 males. The Parsi wives outnumber the husbands by 13 to 10. As they are a monogamous community, this is entirely due to emigration of their able-bodied males. In the age period 15-40, one woman to six men is unmarried and nearly two to one are widowed. Amongst the widowed Jains of this age, the female index is 403 to 100 males. The Table goes on pursuing its researches in detail in the different divisions, but we need not follow its example.

204. Some Miscellaneous Items—Before this chapter ends some miscellaneous points may be noted:—

(a) *Evidence of Polygamy*—As a rule both Gujarat Hindus and Muslims are monogamous by strict practice. Some castes like the Nagar (particularly the Vadnagara section of it) specifically prohibit polygamy. Some Brahman castes (like Audich, Anavala, Tapodhan, etc.) and Vania groups (notably the

DISTRIBUTION OF 1000 OF EACH SEX IN EACH MAIN RELI- GION BY (1) FOUR AGE PERIODS AND (2) CIVIL CONDITION, BARODA STATE-1931



UNMARRIED
MARRIED
WIDOWED

The Four age periods are
0-10: Children, 10-15: Adolescents,
15-40: Adults, 40 and over: Aged.

Dishavals) allow polygamy. In all other castes polygamy is allowed and practiced to some extent. The *kulin sections* of Rajputs, Patidars, Anavils, etc., used to make a living out of the dowry received with the second or third wife. As a general rule, polygamy is not resorted to, except where the first wife is barren or afflicted with some incurable disease. Some castes insist on formal permission being obtained from their *panchayats* for a second marriage. But these practices are falling into desuetude and monogamy is more the rule now than before. But the inset table would seem to indicate a contrary tendency. Figures here are no guide, and the greater female index in 1931 is no doubt due to gain in contiguous migration which has a preponderance of females. Parsis and Nagars are strict monogamists and yet their female index of the married is 1,301 and 1,097. This is most certainly due to emigration of their males on business.

Year	Female index of married
1911	1,007
1921	1,028
1931	1,031

(b) *Disparate Marriages*—The preponderance of widows amongst old women may be contrasted with the low proportion of old men above 60 who are widowed. The presumption is inevitable that widowers try to marry as fast as they can with women much younger than them in age. Nearly 42 per cent of wives, we have found from the sex enquiry, are married to husbands with disparate ages. Imperial Table VII tells us that there are only 368,673 married men between the ages of 15 and 40 but the married women of these ages number 424,404. Neglecting for the moment the incidence of polygamy which is a very small factor and the equally small detail of wives who may have been counted without their husbands there are over 50,000 wives with an average age of 25 years (or one out of seven adult married women) who must have been married to husbands who are at least 40 and over.

(c) *Adult Spinsters by Caste*—There are altogether 17,860 spinsters aged 15 and upward in the State, of whom 4,616 are between 20 and 45, and 352 are aged 45 and over. 203 spinsters aged 15–40 are afflicted with one or other of the four infirmities recorded in the census. In 1921 the number of spinsters aged 15 and over was 15,375. In 1911, they were only 13,762. Thus their number has increased by nearly 30 per cent, while the total number of women in 1931 is only 21.3 per cent more than in 1911. In the castes selected in Imperial Table VIII the total of spinsters in the two age-groups 17–23 and 24–43 in the three classes is 5,178 and 1,109 respectively. In the higher age-group the Illiterate section contributes nearly 44 per cent of adult spinsters. The chief contributories to the spinsters' total of 24–43 from amongst the Advanced groups are Brahmans (19), Vantias (30), Marathas (8), Saiyads (10) and Vohras (41). The primitive tribes alone have 666 spinsters of the adult ages. The Parsis who are not included in the Caste Table have as many as 247 spinsters aged 25–45.

CLASS	Spinsters aged	
	17–23	24–43
Total	5,178	1,109
Advanced	932	158
Intermediate	2,389	471
Illiterate	1,857	480

(d) *Civil Condition in Rural and Urban Areas*—Lastly the contrast in the civil condition returns in urban and rural areas may be considered. The City and urban ratios of the unmarried are lower than the rural, particularly amongst the females. The proportion of widows as already stated is the highest in the City. The marriage age in rural areas is much lower than in the urban, although the marriage rate in the latter is higher. The higher female index in the general population has been already accounted for (*vide* para 203 *supra*). The City and urban areas show the effect of immigration of the type in which males predominate.

AREA	Unmarried per mille		Female index of the married
	Male	Female	
State	454	329	1,031
City	450	306	838
Urban	453	302	971
Rural	454	333	1,048

SUBSIDIARY TABLE I

DISTRIBUTION BY CIVIL CONDITION OF 1,000 OF EACH SEX, RELIGION, AND MAIN AGE-PERIOD AT EACH OF THE LAST FIVE CENSUSES

RELIGION, SEX AND AGE.	UNMARRIED					MARRIED					WIDOWED				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>All Religions</i>															
Males															
0-5	996	990	959	973	957	4	8	39	24	41	..	2	2	3	2
5-10	916	948	883	897	879	79	50	111	94	117	5	2	6	9	4
10-15	810	803	753	730	721	182	185	236	245	272	8	12	11	25	7
15-20	443	527	539	462	488	540	441	434	481	499	17	32	27	57	13
20-40	143	163	163	152	143	804	750	765	731	814	53	87	72	117	43
40-60	42	53	47	65	62	768	748	764	714	797	190	199	189	221	141
60 and over ..	32	45	49	66	57	576	555	554	551	618	392	400	397	383	325
Females															
0-5	989	985	915	961	907	10	15	83	36	92	1	..	2	3	1
5-10	798	886	807	836	763	197	112	188	154	234	5	2	5	10	3
10-15	580	547	464	477	446	412	441	515	485	542	8	12	21	38	12
15-20	108	132	111	127	103	872	840	856	786	875	20	28	33	87	22
20-40	12	14	11	16	14	885	862	862	786	891	103	124	127	198	95
40-60	2	4	5	5	6	526	519	467	487	530	472	477	528	508	464
60 and over ..	2	2	4	5	3	169	176	154	250	162	829	822	842	745	835
<i>Hindu</i>															
Males															
0-5	996	989	952	972	956	4	9	45	25	42	..	2	3	3	2
5-10	909	941	867	894	871	86	57	126	96	125	5	2	7	10	4
10-15	795	775	725	716	704	197	211	263	256	288	8	14	12	28	8
15-20	420	483	514	444	471	563	481	457	492	516	17	36	29	64	13
20-40	133	156	159	148	137	814	754	766	733	821	53	90	75	119	42
40-60	41	55	48	68	53	768	741	758	709	804	191	204	194	223	143
60 and over ..	32	45	52	73	58	575	550	546	555	616	393	405	402	372	326
Females															
0-5	988	982	902	956	899	11	18	96	40	100	1	..	2	4	1
5-10	781	872	777	826	744	215	126	218	162	252	4	2	5	12	4
10-15	551	494	405	438	415	441	492	570	518	572	8	14	25	44	13
15-20	89	81	83	106	97	891	890	882	799	881	20	29	35	95	22
20-40	8	5	8	10	13	890	868	863	784	894	102	127	129	206	93
40-60	1	3	3	6	6	529	510	458	469	533	470	487	539	528	461
60 and over ..	1	1	2	4	4	171	169	151	221	162	828	830	847	775	834
<i>Jain</i>															
Males															
0-5	999	994	992	959	952	1	5	8	29	47	..	1	..	12	1
5-10	990	985	980	889	942	10	13	19	78	57	..	2	1	33	1
10-15	956	955	890	750	847	43	41	107	229	150	1	4	3	21	3
15-20	644	671	658	508	569	349	320	33	455	423	7	9	9	37	8
20-40	270	281	269	218	267	680	650	664	676	689	50	69	67	106	44
40-60	105	105	95	96	121	676	672	677	685	714	219	223	228	219	165
60 and over ..	75	101	75	74	96	483	455	476	539	542	442	444	449	387	362
Females															
0-5	999	996	989	963	980	1	3	10	27	19	..	1	1	10	1
5-10	976	966	978	871	965	23	34	21	112	32	1	..	1	17	3
10-15	825	789	739	605	728	172	179	250	384	265	3	32	11	11	7
15-20	175	88	71	111	54	797	873	880	801	914	28	39	49	88	32
20-40	11	9	7	11	10	788	743	723	738	828	201	248	270	251	162
40-60	3	4	3	1	7	376	370	356	446	421	621	626	641	553	572
60 and over ..	4	3	7	1	..	107	109	110	217	135	889	888	883	782	865
<i>Tribal</i>															
Males															
0-5	1,000	998	996	997	991	..	2	4	2,9	9	..	..	..	..	..
5-10	996	989	979	951	984	3	11	20	48	16	1	..	1	1	..
10-15	967	963	945	834	945	12	36	54	163	54	1	1	1	3	1
15-20	734	804	736	541	641	255	188	252	439	344	11	8	12	20	15
20-40	210	163	119	134	97	737	765	842	763	870	53	72	39	103	33
40-60	20	30	22	22	20	800	808	863	777	855	180	162	115	201	125
60 and over ..	7	21	36	16	14	566	618	653	487	698	427	361	311	497	288

SUBSIDIARY TABLE I—*concl'd.*

DISTRIBUTION BY CIVIL CONDITION OF 1,000 OF EACH SEX, RELIGION, AND MAIN AGE-PERIOD AT EACH OF THE LAST FIVE CENSUSES

RELIGION, SEX AND AGE	UNMARRIED					MARRIED					WIDOWED				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Females															
0-5	1,000	997	998	998	990	..	3	2	1.8	10	..	..	..	0.2	..
5-10	991	954	980	929	983	8	44	19.9	70.6	17	1	2	0.1	0.4	..
10-15	941	820	850	671	823	58	177	148	325	176	1	3	2	4	1
15-20	422	476	388	226	279	567	507	604	739	714	11	17	8	35	7
20-40	87	86	33	38	30	860	845	928	836	918	53	69	39	126	52
40-60	7	8	9	5	12	671	694	700	684	652	322	298	291	311	336
60 and over ..	9	2	6	1	6	231	388	254	445	254	760	610	740	554	740
<i>Muslim</i>															
Males															
0-5	997	995	986.8	950	981	3	5	13	45	10	..	..	0.2	5	..
5-10	962	973	957	869	937	37	25	41	122	61	1	2	2	9	2
10-15	913	900	866	752	841	84	94	128	228	154	3	6	6	20	5
15-20	598	705	658	532	645	392	283	328	427	347	10	12	14	41	8
20-40	198	207	205	193	192	748	721	727	687	766	54	72	68	120	42
40-60	42	43	38	71	44	783	780	785	696	819	175	177	177	233	137
60 and over ..	96	40	31	68	43	602	580	585	576	642	372	380	384	356	515
Females															
0-5	987	993	969	946	972	5	7	30	50	27	8	..	1	4	1
5-10	903	941	914	822	886	86	58	83	166	112	11	1	3	12	2
10-15	760	743	635	602	630	236	252	356	375	364	4	5	9	23	6
15-20	204	224	158	197	141	778	745	814	724	836	18	31	28	79	23
20-40	23	15	19	43	20	870	870	858	760	876	107	115	123	197	104
40-60	4	6	12	20	9	507	521	467	498	497	489	473	521	482	494
60 and over ..	4	4	6	15	7	150	148	153	283	145	846	848	841	702	848
<i>Zoroastrian</i>															
Males															
0-5	1,000	1,000	1,000	1,000	983	..	..	..	..	17	..	..	..	..	..
5-10	1,000	1,000	995	983	986	..	..	5	17	14	..	..	..	..	..
10-15	1,000	991	996	958	932	..	9	4	40	68	..	..	..	2	..
15-20	967	983	951	808	734	33	17	49	185	254	..	..	..	7	12
20-40	502	370	352	241	126	472	582	622	707	854	26	48	26	52	20
40-60	76	54	29	25	8	820	839	880	814	908	104	107	91	161	84
60 and over ..	16	14	18	13	3	691	698	691	728	714	293	288	291	259	283
Females															
0-5	1,000	1,000	1,000	998	991	..	..	..	2	9	..	..	..	..	..
5-10	1,000	998	987	975	970	..	2	11	25	30	..	..	2	..	..
10-15	1,000	1,000	954	909	766	..	..	46	85	234	..	..	..	6	..
15-20	845	849	793	389	325	150	151	200	564	651	5	..	7	47	24
20-40	371	283	202	47	38	572	680	725	849	895	57	37	73	104	67
40-60	57	42	71	..	5	551	598	641	593	682	392	360	288	407	313
60 and over ..	10	..	88	..	..	305	274	182	224	288	685	726	730	776	712
<i>Christian</i>															
Males															
0-5	990	982	961	947	1,000	10	16	37	40	..	..	2	2	11	..
5-10	834	824	615	870	963	155	166	380	116	37	11	10	5	14	..
10-15	674	658	553	612	737	303	292	413	347	263	23	50	34	41	..
15-20	412	489	397	257	911	556	463	561	683	89	32	48	42	60	..
20-40	146	123	103	70	384	789	808	833	835	607	65	69	64	95	9
40-60	13	35	19	19	61	866	817	824	840	829	121	148	157	141	110
60 and over ..	..	36	18	23	..	650	565	613	701	1,000	350	399	369	276	..
Females															
0-5	962	937	858	917	970	36	61	132	67	30	2	2	10	16	..
5-10	638	627	462	540	840	347	350	418	443	120	15	23	120	17	40
10-15	499	510	323	260	937	481	456	662	692	63	20	34	15	48	..
15-20	270	364	204	86	714	708	620	690	828	286	22	16	6	86	..
20-40	71	40	35	13	141	874	901	900	887	798	55	59	65	100	61
40-60	33	8	7	..	..	557	604	574	505	790	410	388	419	495	210
60 and over ..	..	..	9	109	..	200	174	195	182	250	800	826	796	709	750

SUBSIDIARY

DISTRIBUTION BY CIVIL CONDITION OF 1,000 OF EACH SEX AT

RELIGION AND NATURAL DIVISION	MALES																	
	All Ages			0—5			5—10			10—15			15—40			40 and over		
	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Baroda State																		
<i>All Religions</i> ..	454	479	67	996	4	..	916	79	5	810	182	8	217	739	44	40	730	230
Hindu ..	447	486	67	996	4	..	909	86	5	795	197	8	203	752	45	40	730	230
Jain ..	524	396	80	999	1	..	990	10	..	956	43	1	303	598	39	99	635	266
Tribal ..	554	389	57	1,000	..	..	996	3	1	987	12	1	319	637	44	18	768	214
Muslim ..	497	439	64	997	3	..	962	36	2	913	84	3	294	662	44	38	744	218
Zoroastrian ..	586	356	58	1,000	..	..	1,000	..	..	1,000	..	..	623	358	19	55	775	170
Christian ..	412	531	57	990	10	..	834	155	11	674	303	23	216	728	56	11	833	156
Baroda City																		
<i>All Religions</i> ..	450	476	74	993	7	..	919	79	2	840	157	3	312	636	52	50	706	244
Hindu ..	444	482	74	991	9	..	910	88	2	819	178	3	302	647	51	51	704	245
Jain ..	489	427	84	1,000	..	..	949	43	8	944	56	..	391	560	49	54	669	277
Muslim ..	453	406	81	997	3	..	960	38	2	920	77	3	312	628	60	41	708	251
Zoroastrian ..	558	388	54	1,000	..	..	1,000	..	..	1,000	..	..	617	357	26	149	723	128
Christian ..	579	391	30	988	12	..	928	74	..	892	100	8	478	492	30	24	879	97
Central Gujarat																		
<i>All Religions</i> ..	425	503	72	996	4	..	905	92	3	778	217	5	194	760	46	52	718	230
Hindu ..	421	507	72	996	4	..	902	95	3	769	225	6	188	765	47	52	715	233
Jain ..	508	412	80	998	1	1	993	7	..	949	49	2	344	622	34	103	631	266
Muslim ..	461	477	62	997	3	..	941	56	3	861	135	4	248	713	39	33	758	209
Christian ..	330	601	69	988	12	..	763	219	18	518	448	34	90	845	65	4	809	187
Kathiawad																		
<i>All Religions</i> ..	527	415	58	999	1	..	980	19	1	933	65	2	282	680	38	36	741	223
Hindu ..	520	421	59	999	1	..	978	21	1	925	73	2	271	690	39	35	739	226
Muslim ..	569	383	48	999	1	..	997	2	1	987	12	1	349	619	32	28	785	187
North Gujarat																		
<i>All Religions</i> ..	443	484	68	995	4	1	898	94	8	778	209	13	198	759	43	36	731	233
Hindu ..	442	490	68	995	4	1	891	100	9	764	222	14	186	771	43	33	735	232
Jain ..	524	396	80	999	1	..	996	4	..	960	39	1	354	606	40	99	647	254
Muslim ..	513	421	66	996	3	1	963	36	1	918	78	4	298	658	44	50	724	226
South Gujarat																		
<i>All Religions</i> ..	487	453	60	998	2	..	945	54	1	878	119	3	238	720	42	29	754	217
Hindu ..	474	467	59	998	2	..	934	64	2	855	142	3	212	747	41	30	753	217
Jain ..	520	388	92	1,000	..	..	943	57	..	924	70	6	410	539	51	97	592	311
Tribal ..	554	389	57	1,000	..	..	996	3	1	987	12	1	319	637	44	18	768	214
Muslim ..	520	418	62	998	2	..	974	24	2	940	57	3	329	626	45	28	759	213
Zoroastrian ..	591	350	59	1,000	..	..	1,000	..	..	1,000	..	..	626	357	17	38	783	179

TABLE II

CERTAIN AGES IN EACH RELIGION AND NATURAL DIVISION

FEMALES																	
All Ages			0—5			5—10			10—15			15—40			40 and over		
Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
329	524	147	989	10	1	798	197	5	580	412	8	36	831	83	2	451	547
321	533	146	988	11	1	781	215	4	551	441	8	28	890	82	2	453	545
347	421	232	999	1	..	976	23	1	825	172	3	50	790	160	3	320	677
502	420	78	1,000	..	..	991	8	1	941	58	1	166	791	43	8	600	392
368	475	157	987	5	8	903	86	11	760	236	4	67	847	86	4	426	570
472	351	177	1,000	..	..	1,000	..	..	1,000	..	..	478	477	45	43	476	481
354	558	88	962	36	2	638	347	15	499	481	20	125	829	46	28	510	462
306	499	195	987	12	1	845	152	3	635	358	7	42	843	115	4	325	671
298	501	201	987	12	1	830	167	3	613	380	7	33	843	124	2	320	678
338	466	196	1,000	..	..	945	55	..	768	224	8	45	824	131	..	345	655
332	490	178	992	8	..	914	84	2	713	281	6	60	859	81	10	330	660
492	385	123	1,000	..	..	1,000	..	..	1,000	..	..	430	533	37	74	531	395
372	554	74	955	45	..	685	315	..	642	358	..	147	818	35	113	452	435
294	562	144	981	18	1	747	249	4	507	487	6	16	913	71	1	471	528
290	567	143	981	18	1	735	261	4	492	502	6	14	916	70	1	474	525
336	455	209	998	2	..	960	40	..	775	223	2	26	849	125	9	349	642
339	513	148	990	10	..	845	153	2	649	347	4	45	878	77	1	452	547
324	579	97	954	43	3	581	399	20	446	527	27	105	844	51	14	517	469
403	455	142	999	1	..	959	40	1	794	294	2	48	874	78	2	432	566
399	459	142	999	1	..	955	44	1	781	217	2	44	879	77	1	432	567
433	436	131	999	1	..	988	11	1	886	112	2	72	851	77	2	465	533
313	526	161	987	11	2	753	240	7	520	470	10	27	877	96	1	424	575
308	535	157	988	11	1	737	257	6	494	496	10	23	883	94	1	430	569
336	411	253	999	1	..	980	19	1	830	166	4	57	767	176	2	305	693
367	461	172	973	4	23	899	72	29	779	218	3	63	835	102	4	406	590
394	493	113	996	4	..	895	102	3	737	235	8	85	853	62	6	531	463
377	511	112	996	4	..	873	124	3	692	298	10	62	875	63	5	535	460
394	415	191	1,000	..	..	984	16	..	886	114	..	53	803	144	..	338	662
502	420	78	1,000	..	..	991	8	1	941	58	1	166	791	43	8	600	392
401	456	143	998	2	..	943	53	4	848	147	5	122	804	74	9	451	540
471	346	183	1,000	..	..	1,000	..	..	1,000	..	..	485	470	45	41	468	491

SUBSIDIARY TABLE III

DISTRIBUTION BY MAIN AGE-PERIODS AND CIVIL CONDITION OF 10,000 OF EACH
SEX AND RELIGION

RELIGION AND AGE	MALES			FEMALES		
	Unmarried	Married	Widowed	Unmarried	Married	Widowed
1	2	3	4	5	6	7
All Religions	4,541	4,787	672	3,289	5,237	1,474
0—10	2,618	106	7	2,468	256	7
10—15	978	221	9	670	476	9
15—40	860	2,931	175	146	2,581	336
40 and over	85	1,529	481	5	924	1,122
Hindu	4,466	4,859	675	3,207	5,330	1,463
0—10	2,613	115	7	2,451	279	6
10—15	964	239	10	639	511	10
15—40	806	2,978	176	114	3,611	332
40 and over	83	1,527	482	3	929	1,115
Jain	5,236	3,965	799	3,465	4,204	2,331
0—10	2,471	12	1	2,369	27	1
10—15	1,089	49	1	885	185	3
15—40	1,438	2,372	155	203	3,198	646
40 and over	238	1,532	642	8	794	1,681
Tribal	5,542	3,891	567	5,024	4,201	775
0—10	3,093	4	1	3,259	12	1
10—15	1,178	14	1	1,082	67	1
15—40	1,238	2,469	173	671	3,205	175
40 and over	33	1,404	392	12	917	598
Muslim	4,974	4,386	640	3,684	4,753	1,563
0—10	2,637	49	3	2,544	111	25
10—15	1,069	98	4	855	265	5
15—40	1,187	2,675	176	277	3,496	353
40 and over	81	1,564	457	8	881	1,180
Zoroastrian	5,858	3,562	580	4,722	3,508	1,770
0—10	2,403	..	..	1,709	..	..
10—15	1,179	..	..	930	..	..
15—40	2,110	1,214	65	1,943	1,935	182
40 and over	166	2,348	515	140	1,573	1,588
Christian	4,124	5,311	565	3,546	5,579	875
0—10	2,276	192	13	2,212	529	23
10—15	848	381	29	743	717	29
15—40	982	3,310	256	552	3,649	203
40 and over	18	1,428	267	38	684	620

SUBSIDIARY TABLE IV

PROPORTION OF THE SEXES BY CIVIL CONDITION AT CERTAIN AGES FOR RELIGIONS
AND NATURAL DIVISIONS

NATURAL DIVISION AND RELIGION	NUMBER OF FEMALES PER 1,000 MALES														
	All ages			0-10			10-15			15-40			40 and over		
	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Baroda State															
All Religions	682	1,031	2,067	888	2,272	1,055	645	2,033	899	160	1,151	1,806	49	570	2,199
Hindu	675	1,031	2,038	881	2,275	797	622	2,007	886	133	1,140	1,775	36	572	2,176
Jain	642	1,029	2,829	930	2,133	1,500	788	3,706	2,666	137	1,308	4,029	34	503	2,540
Tribal	887	1,056	1,337	1,030	2,889	1,000	898	4,656	667	530	1,270	992	351	639	1,492
Muslim	702	1,027	2,316	914	2,150	9,417	757	2,549	1,171	221	1,239	1,899	100	534	2,446
Zoroastrian	1,064	1,301	4,034	939	..	..	1,041	..	..	1,216	2,105	3,700	1,118	885	4,076
Christian	759	927	1,367	859	2,432	1,600	773	1,659	909	496	973	697	1,857	423	2,048
Baroda City															
All Religions	543	838	2,098	870	1,635	1,615	621	1,877	1,944	97	961	1,599	68	396	2,367
Hindu	545	848	2,217	876	1,602	1,900	619	1,771	2,071	82	966	1,770	22	403	2,454
Muslim	554	795	1,656	847	1,878	1,000	640	3,013	1,667	132	933	929	211	366	2,072
Central Gujarat															
All Religions	623	1,002	1,795	846	2,470	1,098	566	1,950	1,009	223	1,102	1,405	15	56	1,950
Hindu	390	1,004	1,761	840	2,471	1,125	552	1,936	1,000	61	1,099	1,358	11	566	1,921
Jain	592	988	2,339	889	4,600	500	726	4,034	1,000	66	1,222	3,370	70	491	2,141
Muslim	667	975	2,158	889	2,452	636	650	2,202	1,167	165	1,136	1,842	29	519	2,287
Kathiawad															
All Religions	730	1,044	2,328	941	1,895	1,357	763	2,799	1,208	164	1,242	1,981	42	564	2,456
Hindu	728	1,036	2,274	937	1,878	1,231	753	2,666	1,130	158	1,222	1,888	49	564	2,419
Muslim	752	1,122	2,701	967	3,400	2,000	820	8,875	3,000	213	1,416	2,457	71	756	2,786
North Gujarat															
All Religions	678	1,037	2,294	876	2,311	988	611	2,000	672	136	1,166	2,250	39	563	2,396
Hindu	676	1,034	2,241	872	2,321	648	591	2,038	663	124	1,150	2,169	38	565	2,368
Jain	656	1,044	3,222	918	4,285	..	829	3,859	6,000	172	1,366	4,714	18	522	2,860
Muslim	718	1,099	2,605	910	1,800	29,837	804	2,632	857	228	1,367	2,442	79	547	2,550
South Gujarat															
All Religions	801	1,078	1,875	961	1,829	1,641	788	2,007	3,345	371	1,230	1,532	205	659	2,000
Hindu	784	1,076	1,869	949	1,814	1,667	756	1,957	3,775	303	1,212	1,571	145	659	1,972
Tribal	887	1,056	1,337	1,030	2,889	1,000	898	4,656	667	530	1,270	992	351	639	1,492
Muslim	796	1,128	2,406	975	2,093	2,000	875	2,511	1,400	395	1,374	1,774	315	631	2,688

SUBSIDIARY TABLE V—DISTRIBUTION BY CIVIL CONDITION

CASTES	DISTRIBUTION OF 1,000 MALES OF EACH AGE BY CIVIL CONDITION																	
	0-6			7-13			14-16			17-23			24-43			44 and over		
	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Advanced	996	3	1	930	67	3	740	255	5	433	552	15	143	780	77	76	634	290
Hindu and Jain	996	3	1	928	69	3	729	266	5	426	559	15	149	773	78	79	625	292
Bhavsar (Hindu and Jain)	993	7	..	874	126	..	597	398	5	284	601	25	102	802	96	44	658	295
Brahmabhat-Barot	998	..	2	946	48	6	762	227	11	503	482	15	194	735	71	117	606	277
Brahman	995	4	1	975	24	1	854	143	3	566	423	11	188	739	73	100	599	301
Anavala	999	1	..	983	16	1	907	91	2	543	451	6	206	728	66	145	555	300
Audich	998	1	1	972	27	1	837	160	3	518	468	14	160	768	72	88	617	295
Deshastha	998	2	..	1,000	..	..	996	4	..	897	101	2	216	695	89	75	569	356
Khedawal	997	3	..	966	34	..	809	191	..	466	526	8	190	733	77	196	541	323
Konkanstha	1,000	..	..	996	4	..	988	12	..	946	51	3	225	725	50	48	667	285
Mewada	1,000	..	..	967	33	..	779	221	..	522	469	9	219	709	72	111	576	313
Modh	997	..	3	980	20	..	812	180	8	495	490	15	196	725	79	98	596	306
Nagar	1,000	..	..	988	10	2	934	66	..	726	268	6	232	708	60	88	603	309
Tapodhan	993	7	..	916	77	7	652	339	9	318	670	12	64	880	56	32	751	217
Other Brahmans	984	15	1	982	17	1	862	134	4	566	420	14	216	701	83	120	574	306
Ghanchi	992	7	1	762	236	2	398	595	7	186	794	20	60	873	67	28	727	245
Kachhia-Khambar	992	7	1	820	177	3	461	532	7	202	758	40	53	848	99	25	671	304
Lewa Patidar (Hindu and Jain)	996	3	1	893	103	4	649	345	6	338	646	16	146	770	84	74	620	306
Luhana	996	3	1	963	36	1	808	188	4	409	582	9	62	871	67	21	757	222
Maratha Kshatriya	999	1	..	996	4	..	939	58	3	642	346	12	103	827	70	30	707	263
Prabhu	1,000	..	..	1,000	..	..	978	22	..	936	64	..	245	730	25	33	741	226
Soni	996	..	2	976	23	1	757	238	5	405	582	13	109	806	85	60	653	287
Sutar	994	5	1	872	123	5	567	426	7	248	735	17	51	893	56	53	719	228
Vania (Hindu and Jain)	999	1	..	992	8	..	860	136	4	514	470	16	168	754	78	94	606	300
Disawal	993	7	..	991	7	2	847	144	9	523	455	22	169	756	75	94	581	325
Kapol	1,000	..	..	1,000	..	..	981	19	..	758	242	..	266	652	82	108	587	305
Khadayata	1,000	..	..	971	20	..	735	258	7	369	608	23	128	790	82	85	595	320
Lad	1,000	..	..	992	8	..	865	131	4	480	510	10	159	746	95	94	591	315
Porwad	1,000	..	..	991	9	..	883	110	7	514	467	19	166	746	88	78	602	320
Shrimali	1,000	..	..	994	6	..	887	111	2	517	470	13	173	758	69	102	632	266
Other Vanias	1,000	..	..	991	9	..	822	176	2	525	454	21	163	756	81	87	591	322
Muslims	996	3	1	949	48	3	856	140	4	500	490	10	84	851	65	25	749	226
Khoja	992	4	4	987	13	..	904	96	..	576	415	9	101	869	30	16	762	222
Memon	999	1	..	998	2	..	959	41	..	510	475	15	69	882	49	12	777	211
Pinjara	1,000	..	..	865	130	5	623	371	6	282	708	10	43	902	55	17	728	255
Salyad	1,000	..	..	993	6	1	963	34	3	594	401	5	110	804	86	33	707	260
Vohra (agricultural)	992	6	2	928	66	6	822	175	3	495	491	14	94	850	56	38	769	193
Vohra (trading)	996	4	..	932	65	3	806	185	9	496	498	6	73	851	76	15	745	240
Intermediate	992	7	1	820	169	11	513	469	18	273	702	25	67	858	75	28	724	248
Hindu Jain and Tribal	992	7	1	808	180	12	418	561	21	248	727	25	61	863	76	28	724	248
Anjana Chaudhari	970	29	1	696	286	19	447	537	16	246	729	25	93	835	72	39	683	278
Baria	993	7	..	851	145	4	471	519	10	185	793	22	48	875	77	18	779	203
Bava and Gosain	998	1	1	923	73	4	740	252	8	447	529	24	325	598	77	336	456	208
Chamar (Khalpa)	991	8	1	883	110	7	585	405	10	216	772	12	14	938	48	8	805	187
Darji (Hindu and Jain)	995	4	1	835	155	10	584	410	6	242	745	13	55	877	68	5	735	260
Garoda	989	11	..	827	167	6	483	500	17	134	857	9	16	927	57	21	807	172
Gola (Rice-powder)	924	74	2	340	649	11	154	833	13	78	892	30	40	871	89	14	789	197
Kadwa Patidar (Hindu and Jain)	997	3	..	690	280	30	292	665	43	191	772	37	50	851	99	17	665	318
Karadia	1,000	..	..	984	16	..	831	169	..	355	642	3	31	927	42	9	794	197
Kumbhar (Hindu and Jain)	980	19	1	720	267	13	406	574	20	168	811	21	40	874	86	10	732	258
Luhar	996	3	1	837	157	6	567	425	8	241	734	25	55	885	60	9	768	223
Mochi	991	8	1	845	151	4	513	485	2	213	770	17	36	900	64	16	746	238
Patanwadia	995	4	1	880	114	6	549	435	16	193	776	31	39	895	66	11	758	231
Primitive and Forest Tribes (Hindu and Tribal)	999	1	..	997	3	..	958	41	1	551	429	20	132	771	97	19	770	211
Chodhra	999	1	..	999	1	..	971	27	2	607	370	23	105	830	65	21	759	220
Dhanka	997	3	..	988	12	..	756	244	..	462	514	24	36	911	53	9	806	185
Dhodia	999	1	..	993	6	1	958	41	1	486	498	16	41	912	47	17	782	201
Rajput	997	2	1	926	72	2	673	322	5	363	622	15	106	833	61	45	707	248
Sathwara	988	7	5	739	240	21	467	519	14	206	771	23	32	920	48	10	755	235
Talabada	988	11	1	774	222	4	433	557	10	206	769	25	48	871	81	15	733	259
Targala (Hindu and Jain)	987	13	..	883	107	10	629	346	25	409	549	42	132	789	79	66	732	202
Valand	990	8	2	838	152	10	525	461	14	254	719	27	42	882	76	14	702	284
Vankar—Dhed	991	8	1	811	181	8	466	519	15	178	792	30	23	916	61	4	792	204
Muslim	993	6	1	943	55	2	791	201	8	481	503</							

OF 1,000 OF EACH SEX AT CERTAIN AGES FOR SELECTED CASTES

DISTRIBUTION OF 1,000 FEMALES OF EACH AGE BY CIVIL CONDITION																		
0-6			7-13			14-16			17-23			24-43			44 and over			
Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	Unmarried	Married	Widowed	
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
983	16	1	790	205	5	251	736	13	24	935	41	2	784	214	1	344	655	
983	16	1	777	218	5	216	771	13	15	942	43	1	776	223	1	339	666	
974	24	2	665	333	12	164	811	25	47	914	39	5	772	223	8	324	666	
983	17	..	706	287	7	232	742	26	4	911	85	2	703	295	..	256	744	
994	5	1	845	153	2	244	738	18	17	913	70	1	696	303	1	265	734	
999	1	..	927	71	12	321	666	13	11	931	58	..	742	258	2	351	647	
996	3	1	828	169	3	154	828	18	6	914	80	1	673	326	1	261	738	
998	2	..	989	9	12	523	471	6	25	886	89	3	701	296	..	225	775	
972	28	..	721	276	3	107	843	50	4	904	92	..	707	293	..	275	725	
1,000	..	..	992	8	..	661	339	..	58	894	48	4	708	288	..	248	752
995	5	..	716	281	3	159	808	33	18	912	70	..	653	347	..	259	741	
993	7	..	813	184	3	207	786	7	7	926	67	..	673	327	1	236	763	
992	8	..	900	95	5	428	535	37	60	849	91	1	647	352	..	247	753	
983	17	..	615	383	2	81	901	18	7	959	34	2	789	209	4	278	718	
997	2	1	884	114	2	293	691	16	29	914	57	2	722	276	1	260	739	
981	17	2	603	393	4	113	887	..	..	983	17	1	839	160	1	396	603
974	26	..	594	399	7	31	957	12	4	971	25	1	866	133	..	380	620	
975	24	1	690	305	5	158	831	11	8	964	28	..	839	161	..	415	585	
996	4	..	920	80	..	239	753	8	5	960	35	1	806	193	2	392	606	
999	1	..	926	70	4	349	642	9	47	898	55	5	718	277	4	149	847	
1,000	..	..	1,000	..	..	872	122	6	298	675	27	7	759	234	9	404	587
994	5	1	837	159	4	165	812	23	5	947	48	3	775	222	..	274	726	
926	72	2	610	358	32	90	893	17	4	979	17	2	833	165	..	358	644	
999	1	..	955	44	1	357	632	11	26	926	48	3	713	284	2	290	708	
1,000	..	..	901	95	4	168	817	15	7	930	63	1	670	329	..	222	778
1,000	..	..	996	4	..	508	492	..	8	939	53	..	707	293	4	295	701
997	3	..	890	110	..	71	929	..	8	961	31	..	760	240	..	348	652	
1,000	..	..	930	70	..	203	784	13	10	935	55	1	711	288	3	410	587
998	2	..	959	41	..	399	588	13	20	942	38	1	708	291	2	284	714	
999	1	..	974	25	1	481	513	6	23	932	45	4	723	278	2	272	726	
999	1	..	953	44	3	294	687	19	49	899	52	3	709	288	..	298	702	
992	7	1	902	95	3	565	423	7	106	871	23	8	854	138	3	403	539	
996	4	..	985	15	..	603	382	15	39	946	15	4	874	122	6	429	565	
997	2	1	983	16	1	604	396	..	64	917	19	6	855	139	1	497	502	
977	23	..	768	226	6	289	675	36	39	952	9	2	844	154	2	374	624	
1,000	..	..	896	100	4	601	399	..	108	858	34	8	765	227	1	303	696
990	9	1	879	116	5	635	359	6	163	804	33	15	883	102	6	431	563	
990	10	..	905	94	1	522	474	4	94	894	12	3	884	113	3	409	588	
977	22	1	603	388	9	187	797	16	36	942	22	5	847	148	2	389	609	
976	23	1	579	412	9	166	817	17	29	950	21	3	850	147	2	364	634	
929	68	3	465	523	12	78	901	21	88	894	18	2	811	187	1	338	661	
975	24	1	594	401	5	81	908	11	4	984	12	1	882	117	1	429	570	
987	12	1	791	296	3	215	766	19	6	972	22	5	849	146	17	326	667	
973	26	1	710	285	5	213	772	15	20	962	18	1	865	134	..	344	656	
973	26	1	654	343	3	143	839	18	34	936	30	1	839	169	1	352	647	
970	26	4	544	446	10	91	896	13	12	963	25	2	866	132	2	348	650	
824	173	3	271	717	12	35	940	25	2	984	14	..	803	197	2	258	740	
991	8	1	398	584	18	135	844	21	18	954	28	1	825	174	1	371	628	
998	1	1	962	38	..	327	667	6	53	931	16	2	883	115	1	394	665	
953	45	2	520	475	5	125	865	10	7	978	15	1	876	123	1	385	614	
971	27	2	636	357	7	90	894	16	9	972	19	1	815	184	..	350	650	
974	25	1	626	372	2	118	871	11	8	971	21	1	877	122	1	426	573	
977	21	2	634	362	4	79	912	9	7	984	9	1	893	106	..	461	539	
998	1	1	981	15	4	766	227	7	188	800	12	26	905	69	10	547	443	
998	1	1	986	8	5	799	194	7	224	766	10	37	892	71	12	567	421	
1,000	..	..	863	137	..	287	690	23	17	974	9	6	944	50	..	513	487
999	..	1	987	11	2	769	225	6	161	823	16	14	918	68	8	520	472	
988	11	1	759	236	5	184	797	19	11	947	42	2	797	201	1	326	673	
953	45	2	471	519	10	51	915	34	8	975	17	..	791	209	..	285	715	
966	32	2	508	485	7	87	897	16	8	972	20	3	874	123	2	498	500	
965	35	..	618	373	9	101	882	17	8	962	30	..	832	168	2	365	633	
963	35	2	582	410	8	90	903	7	7	971	22	1	822	177	..	323	675	
966	33	1	564	427	9	127	855	18	13	972	15	1	877	122	1	395	604	
999	9	1	856	142	2	404	537	9	76	839	35	5	838	157	3	364	633	
994	6	..	852	140	8	413	587	..	59	898	43	5	867	128	4	342	654	
964	33	3	676	321	3	298	694	8	111	871	18	4	874	122	2	409	589	
995	5	..	906	92	2	440	544	16	34	944	22	3	805	192	1	333	666	
995	5	..	822	176	2	239	761	9	10	960	30	1	826	173	..	382	618	
977	21	2	755	243	2	350	650	..	140	803	57	1	933	66	3	480	517	
997	2	1	130	68	..	501	481	18	60	902	38	7	814	179	2	295	703	
996	3	1	920	80	..	461	527	12	63	908	29	7	822	171	8	339	653	
995	3	2	936	64	..	497	490	13	45	947	8	2	852	146	5	346	649	
994	6	..	813	178	9	368	626	6	103	874	23	15	826	159	3	393	604	
936	62	2	531	491	18	281	695	24	251	726								

CHAPTER VII

INFIRMITIES

§ 1. GENERAL CONSIDERATIONS

205. Introductory—The census schedule reserved to its last column its query about infirmities. The question asked was: "whether insane...., deaf-mute...., totally blind.... or a leper....?" The statistics discussed in this chapter will be concerned with these four kinds of infirmities. The instructions on the cover of the enumeration book sufficiently indicate the limitations of the return:

"If any person be blind of both eyes, or insane, or suffering from corrosive leprosy, or deaf and dumb, write yes (or y) on the card against the name of the infirmity from which he or she is suffering: otherwise, put a cross (X). Do not enter those who are blind of one eye only or who are suffering from white leprosy only. No other infirmity except the four above is to be mentioned. For those who suffer from more than one infirmity, write 'yes' (or y) after each of the infirmity with which the person is afflicted."

It is to be noted that insanity to be recorded must be one of the more active forms of mental derangement, blindness must be of both eyes, deaf-mutism may be either congenital or acquired after birth and leprosy does not include the initial stages of the nodular type of the disease. The "speaking deaf", the imbecile "cretin" or idiot, the short-sighted or blind of one eye and the sufferer from white leprosy were not to come into the return at all.

206. Reference to Statistics—The figures dealt with here were compiled in the three parts of Imperial Table IX—Part A, showing the distribution of each kind of infirmity by age, Part B showing similar distribution by administrative divisions and Part C showing the prevalence in absolute figures of the different infirmities in selected races or castes. The castes selected for this purpose are the same as those for Imperial Tables VIII (Civil Condition), XI (Occupation) and XIV (Literacy). Of these castes, however, such as returned less than 10 afflicted cases were omitted. It is necessary to add here in regard to the figures compiled under each infirmity that, added together they do not agree with the total of persons afflicted shown in columns 2, 3 and 4 of the Imperial Table. As a person afflicted with more than one such misfortune has been separately counted to each of them, the basis of figures under each refers to *cases* and not *persons*. This has been the practice since 1911. In 1901, the basis was presumably persons, and one with multiple infirmities was entered under the most important of his afflictions. In addition to the above statistics, further details regarding infirmities have been compiled by mahals in State Table XV—B. A special Table showing the age and civil condition of afflicted persons has been also prepared (State Table XV—A).

207. Utility of the Return—At the outset the point may be discussed whether a census of infirmities serves any useful purpose at all. The census organisation is a layman's organisation. As a result the statistics of infirmities are not very reliable. The English census depending as it did until the latest year on the householder's whims, was notoriously defective in this respect. The Royal Commission on the Care of the Feeble-minded reported on the unsuitability of the census agency for ascertaining facts concerning mental defects,—

"the nature of which in very many instances can only be learnt by the personal observation of men and women whose judgment has been trained and well-practised in a special branch of medical work. Both for administrative and scientific purposes it would be better, we think, to ascertain the facts by special investigation such as that which has been made by our medical investigators, or by means of the cumulative records which we hope may be compiled as confidential documents, as soon as the importance of the subject is recognised." (Column 4202, page 198).

Instancing the case of Insanity in particular, Major W. S. J. Shaw, I.M.S., the Superintendent of the Yerowda Lunatic Asylum, indeed advocated in 1920, the omission of insanity returns and the mere statement in their stead of the certified cases of insanity in the asylums. He wrote :

" I would suggest.....that no attempt be made to obtain figures of the incidence of insanity in general, as such can only be quite inaccurate. In the last census report, the return was for 'mania' alone, and 'mania' is almost the most recoverable type of insanity, but now-a-days it is considered a phase of 'manic-depressive' insanity and not a definite disease in itself. We must assume that the graver varieties of insanity exist in India outside Asylums, as they do in all other countries ; consequently it is difficult to understand why a return of cases of 'mania' alone is made in India, unless it is meant to include all serious cases of insanity, which from every point of view it should not."

The purport of the above observations is that as the census return is only concerned with obvious types of maniacal derangement, which are the most recoverable, it misses those more important cases of real insanity, the ascertainment of which is more to the purpose of social welfare. So is it the case with leprosy. It is true that most people recognise the difference between white leprosy and leprosy proper. The vernacular terms respectively for these—*kodh* and *raktapitta*—are well-understood. But it is more difficult to ascertain real cases of incipient or nodular leprosy, or to draw the line between this disease and that other scourge—syphilis ; so that a census return under this head fails to give an accurate idea of the real incidence of this affliction.

208. Accuracy of the Record—On the whole therefore a census return of infirmities does not serve any very useful purpose. But on the other hand, there is public demand for knowledge of the extent to which these infirmities are each in their own way re-acting on the efficiency of the population. Again, decade after decade, the census machinery is getting more improved and better stored with knowledge and as it is the only organisation by whose means such data can be at all effectively collected throughout the country, it is better that an imperfect record should be made rather than that no figures be compiled altogether. With the progressive improvement in the quality of the enumerating staff, the record becomes increasingly reliable, the margin of error is narrowed, and the variations from census to census do indicate in a continuous and satisfactory manner the extent to which the disease or affliction is spreading or is being controlled. In support of this statement, the testimony of the Indian Council of the British Empire Leprosy Association may be quoted from their latest report* as proving that in important sections of the country there is undoubtedly a changed outlook. "There is less tendency to conceal the disease and less reluctance to come forward for treatment," so that in one important particular, the leprosy record, which used to be most vitiated by the factor of wilful concealment, has become more reliable. Further if leprosy and insanity returns do not adequately show the real incidence of these infirmities, there is no reason why the return of the blind and the deaf-mute, if properly supervised should not be accepted as fairly satisfactory. These are afflictions which can be readily recognised. There is no particular shame attached to them : as the occurrence of deaf-mutism and blindness is most in evidence at the two extremes of life. Lastly the reader is assured that the figures of blindness and deaf-mutism were most carefully enquired into and revised. The slips regarding them were recopied and sent back to the mahals, very elaborate instructions were issued as to what each infirmity meant and how the return was to be compiled, and the charge superintendents were specially directed to enquire into each individual case and revise the record in the light of these instructions. The leprosy record was similarly revised in the majority of cases in those areas where the incidence is known to be severe. In many cases the slips were revised wholesale, and a new record was made. All cases of multiple infirmities were similarly carefully scrutinised and the slips revised wherever necessary. Many cases of one-eyed or night blindness were removed from the list of infirmities during census tours ; census inspectors and other touring officers specially took note that the record was being

* From the *Times of India* of 5th July, 1930.

accurately made, and in other ways particular attention was paid to see that accuracy was maintained. We shall presently assess the relative value of figures under each head.

209. General Results—The general results may now be given. The total number of infirm persons in the State was found in the present census to be 11,146

Types of Infirmary	Cases in 1931	Variation per cent since 1921
1	2	3
Insanity	1,373	+ 38.1
Deaf-mutism	1,266	+ 111.7
Blindness	8,033	+ 18.2
Leprosy	575	+ 4.2

(4,944 males and 6,202 females). In 1921, the number was 8,901. Thus the infirm have increased by 2,245 or over 25 per cent. The general increase of population being only 15 per cent, the increase in the number of the afflicted since 1921 is serious. As seen in the marginal table, the largest increases are amongst the insane and the deaf-mute. The blind have increased a little more than the general population, but leprosy, as shown in the proportionate figures set out below, has actually declined.

210. Co-existent Infirmities—The afflicted cases under each of the four heads as seen in the table above if added up, differ from the total of afflicted persons by 101, as 96 persons suffer from multiple infirmities. 91 persons suffer from double infirmities (insane and deaf-mute—48 persons, insane and blind—9, deaf-mute and blind—27, blind and leper—5, and deaf-mute and leper—2). 5 persons are afflicted with triple misfortunes—four are insane, deaf-mute and blind, and one is insane, deaf-mute and also a leper. In the 1921 Census, only 33 cases of such combined afflictions were disclosed. That the number of such multiple misfortunes has increased is a tribute to better record. Generally certain infirmities are associated together in one and the same person. To quote the same authority mentioned above, Major Shaw of the Poona Asylum,—“a large proportion of deaf-mutes (enumerated separately in the census) may be considered definitely insane.” A proper record therefore should show a much larger number of persons than the 53 recorded in this census who combine deaf-mutism with insanity. Even then this figure is an improvement on 1921 which had only 18, and 1911 which had only 2 such cases. Again leprosy and blindness are both diseases associated with squalid conditions of living and should occur in combination more frequently than the census record which shows only 5 such cases.

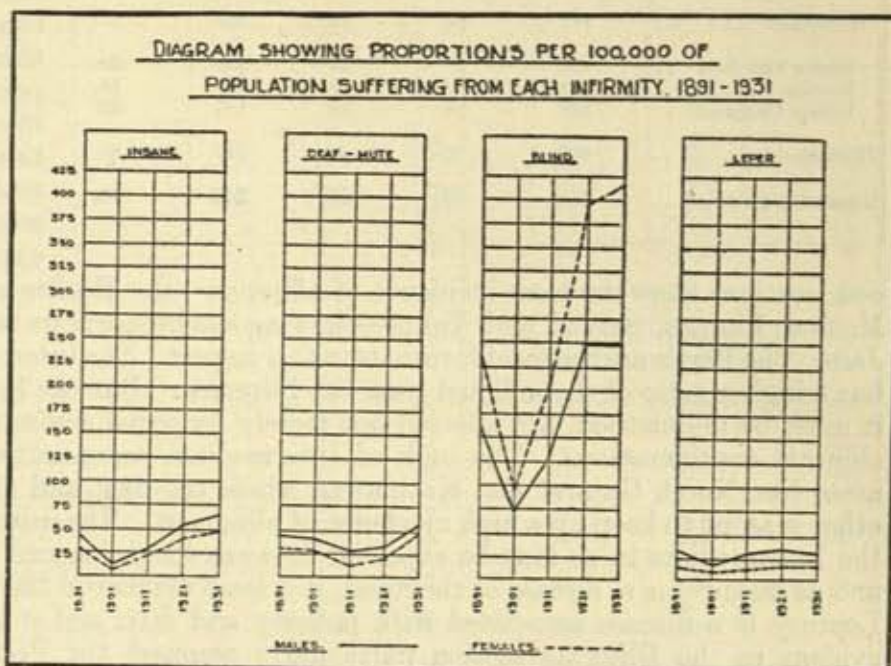
211. Variations in Infirmities since 1891—The best way to study variations is to mark the change in the proportionate figures. The following Table gives the proportionate figures (calculated per 100,000) of the population under each infirmity since 1891:—

SUBSIDIARY TABLE I
NUMBER AFFLICTED PER 100,000 OF THE POPULATION
AT EACH OF THE FIVE CENSUSES

INFIRMITY	PROPORTION PER 100,000									
	Male					Female				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
Insane	65	54	30	15	43	47	39	21	9	27
Deaf-mute	55	34	29	41	45	48	22	13	28	30
Blind	246	249	129	75	161	417	395	204	95	235
Leper	31	35	31	18	32	15	16	12	10	15

Insanity has steadily increased since 1911 among both sexes, and its proportion is now more than double. Blindness amongst males has slightly declined since 1921, but amongst females it has increased, so much so that it has now proportionately doubled itself since 1911. Deaf-mutism amongst males has similarly increased and amongst females its incidence is more than three times what it was 20 years ago. It is only in leprosy that we have apparently some grounds for satisfaction, as the proportions show actually a decline since 1921, while compared to 1911, the state of things is nearly the same. A diagram is given here also

to illustrate the proportional variations from census to census under each infirmity. Taking the earlier censuses, the 1901 figures show a general all round drop under each head since 1891, because the severe famine preceding that census had worked havoc more among these unfortunates



than in any other section of the population. The ratios for 1891, which was the final year of the "normal decade," compare very favourably with those of the present census. The variations will be subjected to further analysis, when we take up each infirmity in turn, but we may notice here in passing that the leprosy figures show a remarkably stationary trend, while under insanity and deaf-mutism, the variations are a continuous series. It is only under blindness, the most easily discoverable infirmity and therefore likely to be the most accurate, that the figures curiously enough show a jump in 1921, since which date, the proportionate increase seems more or less normal. The reason for this untoward happening in 1921 is perhaps that the earlier censuses were very imperfect in this respect and that the standard of improvement began to be definitely raised since 1921 and has maintained itself on the present occasion. In regard to deaf-mutism, the 1901 figures show a small decline since 1891, but in 1911 there was a big drop under this infirmity, which can be only explained by stricter limitation of the return to congenital deaf-mutes only. Since then there has been a sharp rise in figures under this head due to a change in definition.

212. Certain General Considerations: Infirmities by Caste—Before each infirmity is taken up, certain general considerations about figures of the infirm by caste, age-period, sex and civil condition will be made. Imperial Table IX-C gives the absolute figures of infirm persons in selected castes. Caste figures are of interest as they show in the first place directly the comparative incidence of each particular type of affliction in the different social strata, and secondly indirectly they give a clue to the extent to which certain kinds of occupations and social habits favour or inhibit the progress of these infirmities. The Government of India decided to drop the compilation of this Table of Infirmities in selected castes from motives of economy, but we in this State have retained it in view of the wide public interest for such data as we are able to compile in this regard and also because, on account of the smallness of figures, it is comparatively easy to compile this table. The marginal table has been prepared from that Imperial Table and the ratios are calculated per 100,000 of the strength of each section concerned. Of

INFIRMITIES BY SOCIAL STRATA					
CASTE	Number afflicted	Insane	Deaf-Mute	Blind	Leper
<i>Advanced</i>	457	81	46	314	16
Hindu and Jain ..	464	78	46	325	15
Muslim	410	107	56	230	17
Parsi	266	98	14	154	..
<i>Intermediate</i>	479	54	54	350	21
Hindu and Jain ..	483	51	54	356	22
Muslim	451	80	53	300	18
Indian Christian ..	268	28	28	184	28
<i>Illiterate</i>	475	39	59	340	69
General population ..	456	65	55	246	31

course as regards sections whose numbers are below 100,000, the proportions calculated are actually larger than the absolute figures and the marginal table suffers in utility in consequence. But there are certain points of general interest as the sections selected represent definite strata of society. As might be expected, the Advanced

sections show the least incidence of affliction—the Muslim advanced groups—Memon, Pinjara, Saiyad and Vohra—showing less proportions than the Hindu and Jain. The Parsis are the most fortunate in this respect. The Intermediate, it is true, has a higher ratio of the afflicted than the Illiterate. But the Intermediate ratios, it must be understood, are affected not merely by social environment but also by climatic considerations. The bulk of Intermediate communities are localised in areas like North Gujarat and Kathiawad where the dust and glare combine with other reasons to keep up a high incidence of blindness. The insanity ratio amongst the Intermediate is, as may be expected between the Advanced and the Illiterate, and as insanity is a disease of the mind, it is least evident in the Illiterate sections. Leprosy is a disease associated with poverty and dirt, and it is, therefore, most evident in the Illiterate section particularly amongst the Primitive and Forest Tribes. The low proportion of lepers amongst the Advanced is also due to some extent to deliberate concealment.

213. Infirmitities by Occupation—Infirmitities and occupational details are not directly correlated in the census, but it is possible from the usual occupations of groups of castes to find out how far these have an effect on the incidence of infirmitities. The following Table has been also prepared from Imperial Table IX-C :—

SUBSIDIARY TABLE II
INFIRMITIES IN SELECTED CASTES

CASTES		Number afflicted per 100,000 of the strength of each caste or section			
		Insane Persons	Deaf-Mute Persons	Blind Persons	Leper Persons
1		2	3	4	5
(1) <i>Learned Professions and Public Administration</i> ..		95	59	395	12
Barot		89	69	514	14
Brahman		96	59	402	12
Saiyad		83	73	292	10
Parsi		98	14	154	..
(2) <i>Trade</i>		103	57	263	15
Vania		98	57	290	13
Memon		100	45	223	..
Vohra		120	60	194	25
(3) <i>Artisan</i>		65	88	484	15
Bhavsar		119	85	256	17
Darji		83	133	629	19
Ghanchi		112	140	573	14
Kumbhar		51	82	512	10
Luhar		52	86	314	14
Valand		57	46	482	21

SUBSIDIARY TABLE II—*concl'd.*

INFIRMITIES IN SELECTED CASTES

CASTES							Number afflicted per 100,000 of the strength of each caste or section			
							Insane Persons	Deaf-Mute Persons	Blind Persons	Leper Persons
1							2	3	4	5
(4) <i>Agricultural</i>	..	..	..	..	..	..	47	42	283	13
Anjana	..	..	..	..	..	..	49	55	268	..
Kadwa	..	..	..	..	..	..	42	53	292	8
Lewa	..	..	..	..	..	..	50	27	273	20
Malek	..	..	..	..	..	..	27	18	286	18
Momna	..	..	..	..	..	..	36	72	318	22
Pathan	..	..	..	..	..	..	94	69	296	6
(5) <i>Military and Dominant</i>	..	..	..	..	..	..	68	65	364	23
Maratha	..	..	..	..	..	..	132	41	206	8
Rajput	..	..	..	..	..	..	60	68	384	25
(6) <i>Labour</i>	..	..	..	..	..	..	45	51	335	19
Baria	..	..	..	..	..	..	36	50	223	23
Patanwadia	..	..	..	..	..	..	39	53	221	58
Talabda	..	..	..	..	..	..	57	40	240	39
Thakarda	..	..	..	..	..	..	37	55	318	5
Vankar	..	..	..	..	..	..	64	52	549	20
(7) <i>Religious Mendicant (Hindu and Muslim)</i>	..	..	..	..	..	..	72	63	414	25
(8) <i>Unclean Occupations</i>	..	..	..	..	..	..	51	60	520	30
Bhangi	..	..	..	..	..	..	45	74	496	32
Chamar	..	..	..	..	..	..	56	49	537	28
(9) <i>Primitive and Forest Tribes</i>	..	..	..	..	..	..	35	47	231	69
Intermediate	..	..	..	..	..	..	31	20	135	35
Illiterate	..	..	..	..	..	..	36	55	260	79

The above table certainly points to certain broad conclusions. Insanity is a disease associated with intellectual occupations or else with such other employments in which the stress of economic factors has the fullest operation. The highest ratios therefore are found in the trading communities and amongst castes which bulk most largely in the learned professions. The Vohra and Memon amongst Muslims, just as Parsis, Vantias and Brahmans amongst others, show the largest proportions of the insane. Artisan groups, especially those which show a very high literacy ratio, are also affected like the Bhavsar and Ghanchi. Agriculture and pasturage are usually supposed to have a salutary effect on the mind, so that even though recent years have hit hard these principal industries, the castes mainly depending on them still show the lowest ratios of insanity, with the exception of the Pathan who shows rather a higher figure. Insanity seems to increase since 1911 amongst this group and the cause of its rise must be sought—rather in their social habits such as consanguineous marriage, which generally accounts for its comparatively high incidence amongst typical Muslims of all grades of society. These practices generally lead to cretinism, idiocy and even to certain true forms of insanity, but they are not generally believed to result in mania. As to other occupations and their reactions on this particular infirmity, it is to be noted that the dominant and military groups show a low ratio while religious mendicancy has a way of attracting the insane. The Marathas included under military and dominant however show a high insanity figure because of their high literacy and the share which they have increasingly taken in professions and the public administration. While on the subject of insanity, it is important to reiterate, what has

MUSLIM CASTES			Incidence of Insanity
Saiyad	..	..	83
Vohra	..	..	120
Memon	..	..	100
Pathan	..	..	94
Fakir	..	..	123

been often pointed out, the inverse correlation between it and such afflictions as

OCCUPATION	Order according to Insanity	Order according to Blindness	Order according to Leprosy
Trade	1	8	7
Learned Professions ..	2	4	9
Religious Mendicancy.	3	3	3
Military	4	5	4
Artisan	5	2	6
Unclean	6	1	2
Agriculture	7	7	8
Labour	8	6	5
Primitive	9	9	1

leprosy and blindness as the marginal table shows it. Where insanity is more prevalent, there the latter named are apt to be less in evidence on the general ground that blindness and leprosy are diseases of dirt and are usually found in the lower grades of employments and amongst tribes and classes with a very low standard of life. But blindness is also the result of intellectual toil, of social conditions such as the *purdah*, of congested conditions of living in towns where its high incidence amongst females is due to their work-

ing in smoke-infested kitchens and also of such physical causes as dust and glare. This explains the relatively high place in the order according to blindness of learned professions and also of artisans, who have the second place and living mostly in towns have to work in dingy homes without light; the primitive tribes in spite of their dirt manage to escape from blindness because they live in forest areas, where the sun's glare does not intrude. Religious mendicancy takes a uniformly high place in all the three infirmities while agriculture appears to be the most fortunately circumstanced.

214. The Infirm by Age: Certain Preliminary Considerations—We now come to the age figures of the infirm. Certain preliminary considerations are necessary for a proper understanding of the figures. Deaf-mutism and blindness may be acquired from or after birth, but the former can only be acquired in infancy before speech is fixed, while blindness is not merely congenital but it can also be acquired after birth any time during life. In fact there are more blind who are so after birth than those who are congenitally not able to see. It is a disease peculiarly associated with old age, and does not directly affect, except through social neglect and poverty, the longevity of persons it affects. Insanity and leprosy however are afflictions of adult ages and rarely found amongst children. Taken generally, all these afflictions however make their sufferers shortlived. Consequently any large increase in higher age-groups in subsequent censuses can only be due to (i) better record, and (ii) to other persons newly acquiring the infirmities. Errors in the infirmity returns are mostly due to errors of diagnosis resulting in the bulk of cases in omissions and wilful concealment on the part of the people. The instructions regarding deafness, blindness in one eye, and white leprosy are now so well-known that the error of an excess of returns due to these causes is now eliminated. Therefore any increase in numbers in spite of the known heavy rate of mortality amongst the infirm can only be put down to the above cause. A marginal table showing the absolute figures for the last three censuses for the higher age-groups (35 and over), is instructive. Thus there were, in the age period 35-45, 690, who grew to 1,468 in 1921 and 2,337 in 1931. Similarly the 45-55 group of 1911 increased from 776 to 1,658 in 1921. The infirm aged 35-45 in 1921 increased from 1,098 to 1,623. Now taking the persons aged 45-55 in 1921 (who numbered 1,468) let us calculate

AGE PERIOD	Persons afflicted		
	1911	1921	1931
35-45 ..	690	1,098	..
45-55 ..	776	1,468	1,623
55-65 ..	..	1,658	2,337

the exact number of the infirm who have been added to the list during the decade through the operation of the above two causes. The rate of mortality usual to that age period is 75 per mille per annum. If 80 per mille per annum is the rate assumed for the infirm, then at the end of the decade, only about a fifth of 1,468 will have survived. Thus there must have been at least 2,000 new cases added to the list—nearly 20 per

cent of the total afflicted recorded in this census—during the last ten years. After making allowances for inaccuracies in stating of age, one cannot resist

the broad conclusion (i) that the percentages of omissions have been very much reduced, and (ii) that new afflictions have alarmingly increased.

215. Subsidiary Table III: The Infirm by Age-Period and Sex—After preliminary considerations, let us analyse the age returns of the infirm. There are two ways in which these age returns can be reduced to proportionate figures. In the first place, the figures of the infirm per each age group may be proportioned to the total population of those ages, so that the incidence of each infirmity by age groups may be studied and contrasted. Subsidiary Table III has been prepared on this basis, giving the proportions of infirm persons in each sex and under each infirmity per 100,000 persons of those ages. In the last four columns of the table, the proportion of women under each infirmity is shown. There is a second way in which the age returns can be analysed, that is, by proportioning the number of infirm persons in each age-period to the total infirm; this will be done when each kind of infirmity is taken up for consideration.

SUBSIDIARY TABLE III

NUMBER AFFLICTED PER 100,000 PERSONS OF EACH AGE-PERIOD AND NUMBER OF FEMALES AFFLICTED PER 1,000 MALES

AGE	NUMBER AFFLICTED PER 100,000								NUMBER OF FEMALES AFFLICTED PER 1,000 MALES			
	Insane		Deaf-Mute		Blind		Leprosy		Insane	Deaf-Mute	Blind	Leprosy
	Males	Females	Males	Females	Males	Females	Males	Females				
1	2	3	4	5	6	7	8	9	10	11	12	13
0-5 ..	5	5	15	10	36	23	3	3	900	667	636	833
5-10 ..	37	22	52	43	74	54	7	3	542	747	661	333
10-15 ..	59	34	66	52	76	62	10	6	511	710	739	533
15-20 ..	85	47	70	46	90	60	20	9	533	640	645	458
20-25 ..	92	46	60	40	102	59	23	7	491	568	571	296
25-30 ..	103	53	62	41	103	103	31	12	500	638	969	379
30-35 ..	100	66	52	50	93	155	42	22	614	891	1,549	486
35-40 ..	87	76	45	43	129	296	55	33	838	914	2,188	581
40-45 ..	75	84	41	45	174	399	62	41	1,057	1,034	2,154	614
45-50 ..	78	86	48	64	290	767	63	41	979	1,172	2,351	579
50-55 ..	71	83	60	66	442	1,030	77	38	1,020	966	2,052	432
55-60 ..	80	70	92	94	1,055	2,155	86	30	808	933	1,878	321
60 and over ..	61	86	117	176	737	4,705	101	35	1,375	1,475	1,681	340
Total ..	65	47	55	48	246	417	31	15	683	824	1,600	463

216. Consideration of Subsidiary Table III—In the above table, it is interesting to observe how certain ages more than others are prone to particular infirmities. Taking insanity first, we find that the age-periods 25-35 are most severely affected by insanity. The danger zones are the years of first youth and middle age (20-40) for males and late maternity (35-55) for females. Obviously the economic strain in the one case in the first years of working life, as the psychological effect of the menopause in the other are governing factors. Deaf-Mutism shows a most extraordinary phenomenon in this census because the higher ages show the greatest incidence. In 1911 and 1921 the proportions show more or less a diminishing series from 35 and upwards. In this census, the ratios from age 45 upwards seem to increase in a way which raises a doubt about the accuracy of the age-return. Possibly a few of the speaking deaf of these ages may have been wrongly entered as deaf-mutes. But it is more probable that many of these had their ages wrongly entered and should have been put to earlier ages. The deaf-mutes aged 40 and over numbered 388 in this census while in 1921, they were only 81. I do not think, allowing for corrected record in 1931 that the number of deaf-mutes of these ages could be much more than 100. The rest must be credited with younger ages. Coming to blindness, we find that it is mainly an old age affliction, the danger zone for males being 50 and over and for females 40 and over. Leprosy shows the highest incidence amongst males 35 to 55 and amongst females between 40 and 55. But a caution must be entered here in the consideration of these figures. Age-returns are always defective and they are specially so in respect of the infirm; considering the age-returns of the infirm for the two censuses, one must

conclude that while there were less omissions of record on the present occasion, in 1921 the age-returns were more accurate. Turning to the sex ratio, it will suffice to note that while leprosy and insanity are predominantly masculine afflictions, blindness selected adversely against women and amongst the deaf-mutes, the sexes tend to approach equality. Amongst the blind aged 35-55, the women indeed are more than double the number of afflicted of the other sex. Finally it must be added that the sex ratio of the lepers is vitiated by deliberate concealment particularly in the ages 10-15, 15-20 and 20-25 when with girls about to marry or young married women, the incentive to conceal this dreadful affliction is natural and understandable.

217. The Infirm by Civil Condition—One other point of general interest must be briefly dealt with, before each infirmity is discussed. In this State, since 1921 a special table showing the Civil Condition of the Infirm has been compiled. Of the afflicted persons in 1921, 31 per cent were married and 44 per cent were widowed. In 1931, the corresponding ratios of the married and widowed were 31 and 48 respectively. In the general population, the proportions of the married and widowed are 50 and 11 respectively. As infirmities bulk largely amongst castes which allow child-marriage as well as remarriage of widows, it may be concluded that the occurrence of infirmities does inhibit marriage to a certain extent. Especially is this seen in the proportions of the married and widowed amongst infirm women (which are 27.5 and 63.6 per cent) compared to 52 and 15 per cent respectively amongst females generally in the State. The high proportion of the widowed amongst the female infirm is due to the fact that the bulk of them in the older ages are blind and have no chance in matrimony. A fair proportion of these afflicted women are believed to be either aged spinsters, who are ashamed to own that they are still unmarried, or abandoned wives who were deserted by their husbands as soon as their infirmities had overtaken them. Lastly, the very high percentage of the married amongst lepers arrests attention. This high ratio shows public indifference about the dreadfully contagious character of the disease. The following Table prepared from State Table XV-A may be studied with advantage :—

SUBSIDIARY TABLE IV

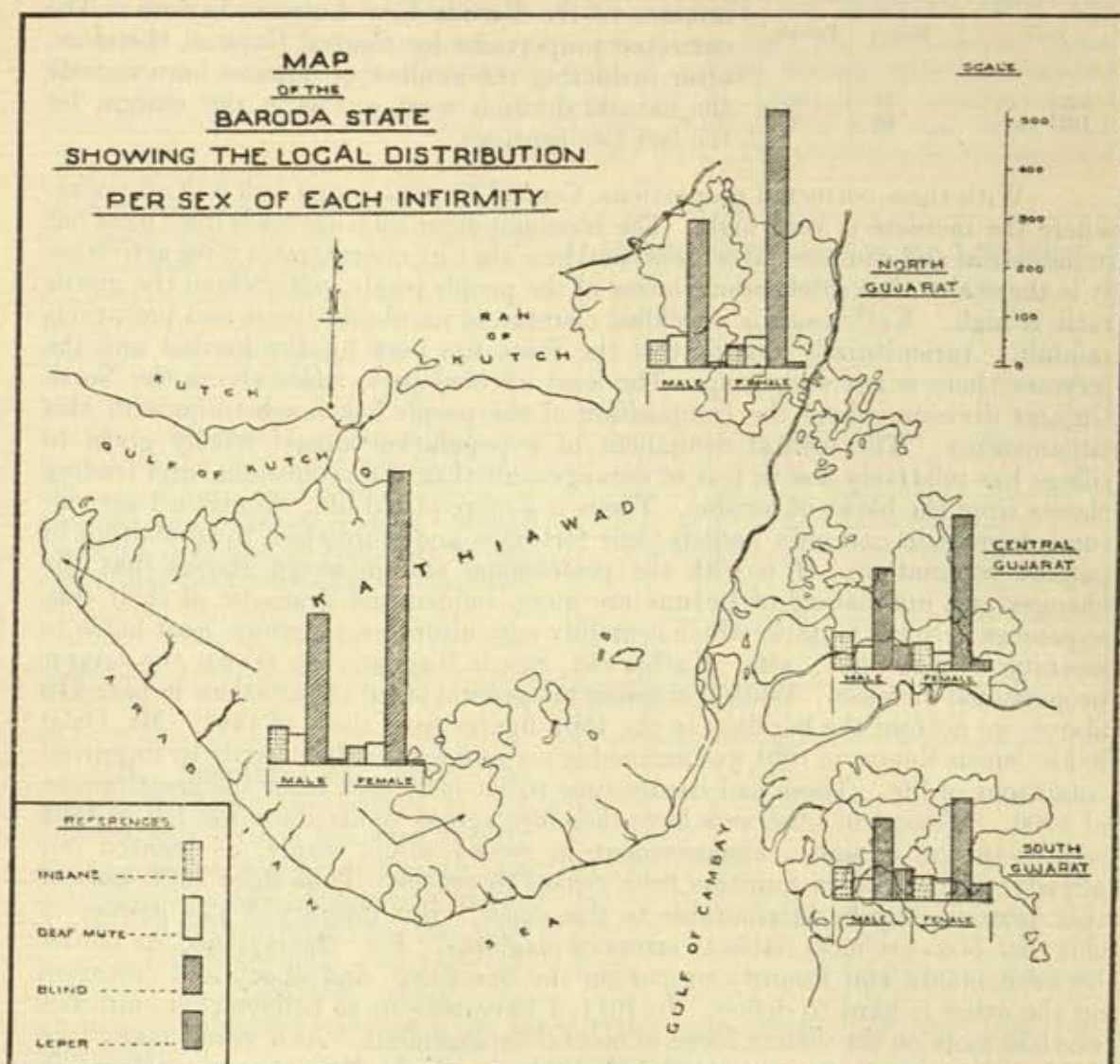
THE CIVIL CONDITION OF THE INFIRM

INFIRMITY	Male		Female	
	Proportion to 100 afflicted of		Proportion to 100 afflicted of	
	Married	Widowed	Married	Widowed
1	2	3	4	5
Persons Afflicted	35.8	28.1	27.5	63.6
Insanity	30.8	13.6	47.6	32.3
Deaf-Mutism	24.8	11.2	39.9	31.1
Blindness	37.7	36.2	23.0	71.7
Leprosy	50.4	22.4	49.4	33.5

Comparing these proportions with the state of things in 1921, we find that the conditions have hardly improved. Of the infirm males in 1921, 34 per cent were married and 26 per cent were widowed. Amongst leper women in 1921, 39 per cent were married and 34.5 were widowed. At first sight these figures would indicate that public opinion is even more callous than before, but the absolute figures are so small that the reader is cautioned against building any conclusions.

218. Local Distribution of the Infirm—Now we can subject the figures under each infirmity to a closer analysis; for that purpose a general conspectus of the local distribution is necessary. A map of the State is here given in which, in each division, the comparative incidence of each infirmity in each sex is plotted. As each infirmity is discussed, its particular local distribution will be described and

the reader is invited to refer to this map again for a more graphic understanding of the figures.



§ 2. INSANITY

219. Insanity: Local Distribution—Taking infirmities briefly one by one, we find that there has been a real increase of insanity. The following Table gives the comparative figures per sex and natural division (proportioned to 100,000) for the last five censuses :—

SUBSIDIARY TABLE V-A

NUMBER OF INSANE PER 100,000 OF EACH SEX IN EACH DIVISION
(FIVE CENSUSES)

NATURAL DIVISION	INSANE									
	Male					Female				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
Baroda State	65	54	30	15	43	47	39	21	9	27
Central Gujarat with City	75	67	33	19	37	53	48	20	9	26
Kathiawad	73	41	17	10	35	33	19	2	8	25
North Gujarat	54	47	26	9	45	44	33	20	5	28
South Gujarat	66	51	40	25	55	48	47	33	17	24

The highest incidence of insanity is in Central Gujarat where the City is situated, but the figures for the insane include the inmates of the Baroda City Lunatic Asylum. The corrected proportions for Central Gujarat, therefore, after deducting the number of inmates born outside the natural division work out as in the margin for the last two censuses.

Year	Male	Female
1931 ..	72	52
1921 ..	63	46

With these corrected proportions, Central Gujarat comes below Kathiawad, where the increase is very high. The economic depression has made itself most felt in industrial and commercial centres; and here the City concentrates these activities. It is there also that intellectual classes of the people reside, with whom the insane ratio is high. Kathiawad is a feckless country of moribund rivers and precarious rainfall. Agriculturally this part of the State has been hit the hardest and the increase there is not surprising. The least affected part, relatively, is the North Gujarat division, where the composition of the people has much to do with this circumstance. The mental equipment of a population almost wholly given to tillage has relatively less to fear of derangement than the professional and trading classes from the blows of fortune. Theirs is a more placid life. Continued agricultural depression can only harden their fortitude and inure them to an attitude of patient resignation. It is with the professional and moneyed classes that the changes and mischances of fortune are more sudden and dramatic in their consequences. North Gujarat which is mainly agricultural is, therefore, least liable to insanity. Since 1921, after Kathiawad, South Gujarat has shown the largest proportional increase. While discussing the general trend of variations in para 210 above, we noticed the big drop in the 1901 figures from those of 1891. Mr. Dalal in his Census Report of 1901 was inclined to account for this drop partly by improved conditions of life. These had hardly time to set in so soon after the great famine of 1900. Subsequent observers have therefore agreed to attribute the fall in 1901 wholly to the famine. Improvement in record would imply, as pointed out already, an increase in numbers from census to census. Thus since 1901, part of this increase may be attributable to this cause. But insanity is like leprosy in this that both are most liable to errors of diagnosis. For the layman, the border between mania and insanity proper on the one hand, and idiocy and cretinism on the other is hard to define. In 1911, I have reasons to believe that emphasis was laid more on the violent forms of mental derangement. As a result many true cases of insanity went unrecorded. In 1921 though the definition was widened in the instructions to include all forms of insanity, it is doubtful whether all true cases, such as Major Shaw refers to, were included, while certain cases of congenital cretins aged 0-10 appear to have been wrongly entered as insane in 1921. In 1931, the record has been made under exactly the same conditions as in 1921, with perhaps more frequent inspections and scrutiny. The result is that with the

NATURAL SUB-DIVISION	Incidence of Insanity per 100,000	Order according to insanity	Order according to literacy
<i>Central Gujarat</i>			
Vakal	88	1	1
Charotar	41	10	3
Chorashi	55	6	9
Kahnam	62	4	6
<i>Kathiawad</i>			
Mid-Block	56	5	4
Scattered Areas..	77	3	5
Sea Coast Areas..	42	9	7
<i>North Gujarat</i>			
East Kadi	52	7	8
West Kadi	49	8	11
Trans-Sabarmati Area	34	12	10
<i>South Gujarat</i>			
Rasti	82	2	2
Semi-Rasti	33	13	12
Rani	38	11	13

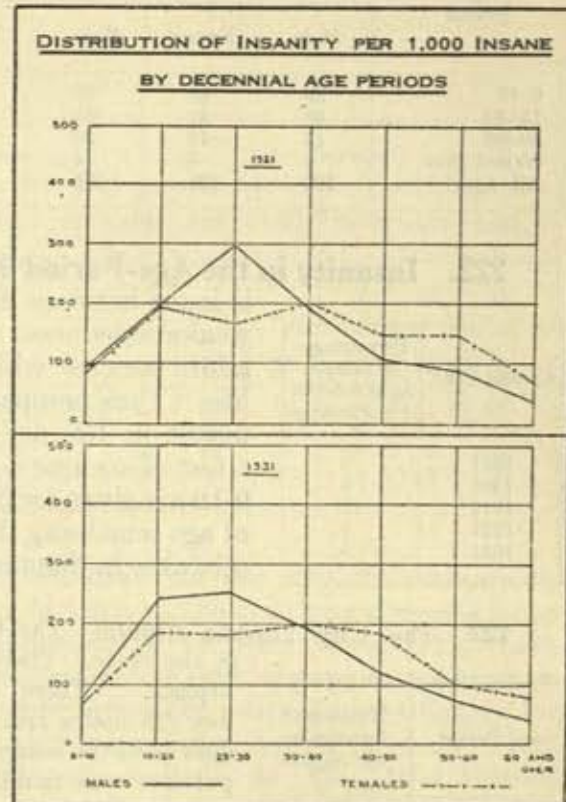
margin of error remaining about the same there has been a real increase, with a doubt as to the increase in Kathiawad. Reverting to the figures of 1901, it is interesting to observe that while the famine was generally very effective in killing off these unfortunates, it succeeded most where its effects were most calamitous, as for instance in Kathiawad and North Gujarat. On the other hand in South Gujarat, where general agricultural conditions are fairly satisfactory on the whole and even the blows of 1900 were not so severe as in the other parts, the variations are more uniform.

220. Insanity by Natural Sub-Divisions—

The figures of infirmities have been separately compiled for each mabal. In the margin a table is given showing the incidence of insanity in each natural area and comparing the order according

to the prevalence of this infirmity with that according to literacy, we find that there is a fairly close correspondence between the two. The co-efficient of correlation has been mathematically worked out according to Galton's method and comes to .70 a high correlation, it would have been even higher, had it not been for the Charotar figure, which is an exception. In Charotar, in spite of a high literacy ratio, the insanity figure seems low. In 1921, the Charotar figure was 54. Agricultural depression and economic strain on the other hand in Kahnām, Mid-Block and East and West Kadi have helped to force up the insanity ratios in those parts. The proportion for the scattered areas seems unduly high for the composition of their people. The Rasti incidence is second highest in the Raj and would have mounted much higher if to the number of insane recorded there we added the lunatics in the City Asylum, whose birthplaces belong to the Rasti area. The incidence for the whole State is 56, so that Rasti, Vakal, Scattered areas and Kahnām show a higher average of prevalence than the general population. It has now been generally agreed that locality has little to do with the occurrence of insanity. Widely dissimilar areas like the Rasti with its high rainfall and green vegetation and the Vakal with its red soil mixed with salt and the Scattered areas of Kathiawad, dry and windswept, show a like incidence of this affliction.

221. Insanity by Age—The general incidence of insanity in the different age-periods has been already shown (*vide* para 215 above). In this paragraph the age-constitution of the insane will be dealt with; for this purpose the following table and also the diagram in illustration should be studied; the diagram compares the age curve of the insane for the last two censuses.



SUBSIDIARY TABLE VI-A

DISTRIBUTION OF THE INSANE BY AGE PER 10,000 OF EACH SEX (FIVE CENSUSES)

AGE	INSANE									
	MALE					FEMALE				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
0-5 ..	123	50	94	198	187	162	25	294	248	32
5-10 ..	723	857	1,097	397	599	575	802	1,030	124	734
10-15 ..	1,103	1,025	877	530	1,140	826	902	932	1,111	766
15-20 ..	1,287	958	972	794	1,364	1,006	1,078	1,274	1,481	1,809
20-25 ..	1,324	1,294	1,191	1,655	1,308	952	752	1,422	1,481	1,002
25-30 ..	1,175	1,697	1,348	1,060	990	862	902	1,078	1,111	1,002
30-35 ..	1,078	1,261	1,097	1,457	1,121	966	1,153	1,470	740	970
35-40 ..	833	605	939	994	785	1,023	852	735	493	809
40-45 ..	650	639	846	1,126	879	1,006	827	490	986	766
45-50 ..	576	403	533	530	411	826	627	148	493	420
50-55 ..	417	555	376	729	599	628	1,203	490	618	679
55-60 ..	319	269	158	199	75	377	250	98	248	364
60 and over	392	387	472	331	542	791	627	539	866	647

The table has been prepared after smoothing the age-returns of the insane in the same way as the general ages were done (*vide* Chapter IV). The numbers at each age are proportioned to 10,000 insane of each sex. It is interesting to compare the age-constitution of the insane with the general age-constitution of

the people. As seen from the margin, the proportion of the insane below 15 is about half of what obtains in the general population. The bulk of the infirm under this head—more than three-fourths—are aged 15-60, although the female insane aged 40 and over are more numerous relatively than the menfolk afflicted in those ages.

AGE-CONSTITUTION				
Age-Period	General Population		Insane	
	Male	Female	Male	Female
0-15 ..	39	39	19	16
15-40 ..	40	41	57	48
40-60 ..	17	16	20	28
60 and over ..	4	4	4	8
All Ages ..	100	100	100	100

222. Insanity in the Age-Period 0-10—In the Indian Census, a distinction is made between insanity proper and idiocy, cretinism and weakmindedness. Insanity belongs to the adolescent or adult periods while these latter occur at the beginning of life. Thus comparative figures of persons recorded as insane in the age-period 0-10 from census to census are a test of accuracy. In the margin the insanity proportions of 0-10 are given for five censuses. Perhaps, the error in return of age remaining the same, it is permissible to infer that the mistakes in diagnosis show a slight diminution since 1911.

Census Year	Percentage of insane aged 0-10 to total insane
1891	8
1901	6
1911	12
1921	9
1931	8

223. The City Lunatic Asylum—The City Asylum is the only asylum for the insane in the State. There is besides an Infirmary for the aged and the orphan. There were 51 patients in the Asylum on the census day (33 males and 18 females). They were divided according to ages as in the margin. As may be expected, the largest number of patients were middle aged. Mania claimed the largest number of patients. Melancholia and dementia were other forms in evidence. The bulk of the patients were Hindus. Less than a fifth were Musalmans. The Asylum has now been enlarged, the female ward now affording accommodation for a larger number of inmates. The majority of patients hail from Central Gujarat (21 males and 15 females). South Gujarat sends 4 males and 2 females and North

Age-Period	Number of lunatics in the Asylum
0-15	..
15-40	38
40-60	13
60 and over	..

Gujarat, 4 males and 1 female. There were 2 males from Kathiawad. Only 2 were from outside the State. The distance of Kathiawad accounts for smallness of the number of inmates.

§ 3. DEAF-MUTISM

224. Deaf-Mutism—By this infirmity is meant the “congenital want of the sense of hearing which in the absence of special schools...for removing the defect, necessarily prevents the sufferer from learning to talk.”* The point to note is that the defect is congenital and that it must be combined with dumbness. Uptill 1921, deaf-mutism was only to be recorded in respect of persons who had acquired it *from birth*. In 1921, these last words were omitted from the instructions on the recommendation presumably of a committee in the Bombay Presidency who were investigating the problem of defectives and their education. The disturbing effects on the return, which resulted from this change in the instructions, were described in the Census Report of 1921. The change was meant for such real cases of deaf-mutism as were acquired after birth. It must be remembered however that the defect can only be acquired after birth in a very limited sense. As Dr. James Kerr Love, M.D. (Glasgow), stated: about half the number of deaf-mutes acquire their affliction after birth, *but before speech* is fixed. Thus there cannot be any additions to deaf-mutism after the age-period 0-5. We can therefore expect in the higher age-periods that the number of deaf-mutes should show a

* The India Census Report, 1921, page 349.

diminishing series. But the general results may be now stated. For better understanding of the local distribution, the map given below para 218 should be consulted.

SUBSIDIARY TABLE V-B

NUMBER OF DEAF-MUTES PER 100,000 OF EACH SEX IN EACH DIVISION
(FIVE CENSUSES)

NATURAL DIVISION	DEAF-MUTE									
	MALE					FEMALE				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
Baroda State	55	34	29	41	45	48	22	13	28	30
Central Gujarat	48	31	25	36	43	34	18	14	21	27
Kathiawad	57	27	14	57	44	40	27	5	38	45
North Gujarat	64	35	20	28	37	62	21	10	22	25
South Gujarat	45	39	63	77	81	45	32	19	53	45

The above table shows that North Gujarat has the largest incidence in 1931. South Gujarat claimed that honour in each of the previous censuses since 1891. Kathiawad shows the largest proportionate increase since 1911, there being four times as many deaf-mutes (proportioned to a lakh of population) as there were twenty years ago. Unlike the other infirmities, the proportionate figures for 1901 do not show that jump since 1891, which has been noted already. But the 1901 figures of defectives generally were suspect: as Mr. Dalal himself pointed out: "on looking at the figures generally there was a strong suspicion that the enumerators had put in those who merely suffered from dumbness or deafness or both after birth." One would imagine therefore that the census of 1911 would show a sensible decline in figures (both proportionate and absolute). There was an all round fall in figures, the most notable being in Kathiawad, where the incidence was only about a fourth of what was recorded in 1901. There was a stricter limitation in 1911—so strict indeed that, as stated in Mr. Govindbhai's Report of that year, in the course of tabulation "persons shown as dumb were assumed to be congenital deaf-mutes" as a set-off against the number of genuine deaf-mutes omitted. In 1921, there was an increase in figures which was ascribed to (i) better record, (ii) change in definition and (iii) real increase in the prevalence of the infirmity. For the latest census, the number of deaf-mutes has increased from 598 to 1,266. The deaf-mutes are now more than double. Their strength in this census has been carefully estimated. The slips as originally recorded were sent back and revised after very close scrutiny. Numerous cases of the merely deaf were omitted from the record, and where cases were found to have been omitted, new slips were prepared. At first sort, the deaf-mutes numbered 2,655, but after revision, the figure was brought down to what is shown above. It can therefore be accepted as an accurate estimate of the total incidence. The defect lies however in the age-returns of these persons, to which reference will be presently made.

225. Deaf-Mutes by Locality—In the meantime, the occurrence of deaf-mutism in the different parts of the State may now be more closely examined. Generally it is said that locality has some connection with deaf-mutism. The general incidence of deaf-mutism (for both sexes) is 52 per lakh. This figure might be compared with the respective ratios of the 13 natural sub-divisions of the State. As it is also said that there is some connection between insanity and deaf-mutism, the marginal table also gives in the last two columns the relative orders

of these natural divisions according to the prevalence of these two infirmities. East Kadi (which includes Mehsana town) owes its high ratio to the existence of the Boarding School for the Deaf-Mutes and the Blind. From the Vakal figures also the number of those belonging to the City School for the Blind and Deaf-Mute

NATURAL SUB-DIVISION	Proportion of deaf-mutes per 100,000	Order according to deaf-mutism	Order according to insanity
<i>High Figures</i>			
East Kadi ..	72	1	7
Vakal ..	65	2	1
Rasti Area ..	60	3	2
Mid Block Area ..	60	4	5
West Kadi ..	53	5	8
<i>Low Figures</i>			
Rani Area ..	45	6	11
Chorashi ..	42	7	6
Sea Coast Area ..	39	8	9
Trans-Sabarmati Area ..	39	9	12
Kahnani ..	37	10	4
Scattered Area ..	33	11	3
Semi-Rasti Area ..	16	12	13
Charotar ..	13	13	10

whose birthplaces are outside this area should be omitted to get at the correct figures. Having done this, East Kadi and Vakal ratios are reduced to 69 and 60 respectively. Even with these corrected ratios, the order of these areas according to deaf-mutism is not disturbed. Taking both these infirmities, we find correspondence in seven out of the thirteen natural areas between insanity and deaf-mutism in Vakal, Rasti, Middle Block, Chorashi, Sea Coast, Semi-Rasti and Charotar. Perhaps the correspondence in other areas is disturbed by the fact that the insanity record does not include many true cases of mental derangement which are not obvious to the enumerator. On the whole, in so far as locality reacts on this particular type of affliction, what I wrote in 1921 still holds good:—"It appears the hilly and forested regions suffer more from deaf-mutism than the open low-lands and that tracts in the neighbourhood of the sea where the soil is of recent formation from alluvial deposits have higher ratios than areas remoter from the coast. Again unhealthy areas with wet and humid climates show more evidence of this infirmity than elsewhere."

226. Deaf-Mutism on banks of Certain Rivers—In 1921, from a collation of taluka figures, certain rivers were found to have a marked influence on the incidence of deaf-mutism. It was conjectured that the upper reaches of the Dedumehr and Malan rivers in Khambha (Kathiawad Middle Block), the Tapti river in Kamrej taluka (Rasti) and the proximity of the Rann of Cutch were likely causes of the high prevalence of deaf-mutism in these areas. In this census, the highest incidence occurs in these particular areas also. Perhaps the smallness of absolute figures does not warrant us to press this view any further; in future censuses, the medical authorities may be asked to find out whether

Taluka	Incidence of deaf-mutism (per 100,000)	
	1931	1921
Kamrej	91	52
Harij	89	57
Khambha	61	59

the analysis of the waters of these rivers can give any clue in this respect.

227. Sex Ratio and Age Distribution of the Deaf-Mutes—(i) Sex Ratio—First the sex ratio of the deaf-mutes may be briefly dwelt upon. As deaf-mutism is a congenital defect, males are more adversely affected than females, because congenital defects are known to select against males. In deaf-mutism however the sexes tend to approach equality more than in any of the other three afflictions.

(ii) *Age Distribution*—Coming to the age-returns, we must first of all test through absolute figures from census to census, whether the deaf-mute record is progressively accurate or otherwise. As a congenital defect, deaf-mutism makes its sufferers very shortlived. Therefore if the age-returns are accurately recorded the numbers in the higher age-groups should show a diminishing series, as the death rate is high and no fresh attack in the higher ages is possible. The marginal table gives the absolute figures of three censuses for decennial age-periods from 30 upwards. All the three censuses show a diminishing series, but the figures of 1921 and 1911 show much smaller incidence for these ages than the facts would seem to warrant. The figures were so closely scrutinised in the present census, that the total number of deaf-

Age-Period	1911	1921	1931
30—40	54	75	154
40—50	35	40	122
50—60	12	29	115
60—70	8	9	91

mutes may be taken as accurately representing the actual prevalence in the State. Care was taken, as far as possible, to exclude cases of senile deafness. It is just probable however that a few may have been wrongly included. But on the whole, as pointed out already in para 216 above, the age-returns were perhaps more correctly shown in 1921, while the total strength is more correctly recorded in 1931.

228. Subsidiary Table VI-B—The following Table gives the distribution of the deaf-mutes by age per 10,000 of each sex for five censuses. An *illustrative* diagram is also attached here to show how the age-distribution curve varied in the last two censuses.

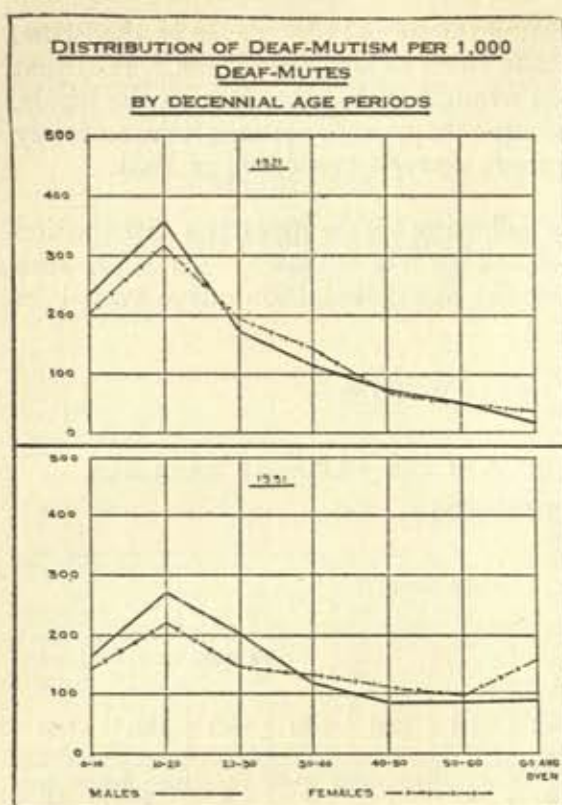
SUBSIDIARY TABLE VI-B

DISTRIBUTION OF THE DEAF-MUTE BY AGE PER 10,000 OF EACH SEX
(FIVE CENSUSES)

AGE	DEAF-MUTE									
	Male					Female				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
0—5	389	352	530	289	335	315	742	407	572	514
5—10	1,196	1,924	1,887	994	845	1,084	1,310	2,114	1,031	1,229
10—15	1,441	2,276	1,357	1,211	1,426	1,241	2,140	1,707	1,146	1,429
15—20	1,239	1,247	1,324	1,236	1,109	962	1,004	1,138	954	971
20—25	1,167	921	1,126	967	1,021	804	830	1,382	1,107	771
25—30	836	840	1,093	1,012	951	647	1,092	732	726	600
30—35	663	623	662	791	951	717	961	976	687	829
35—40	504	515	497	606	528	559	480	569	954	457
40—45	418	407	464	1,211	792	524	480	325	687	686
45—50	418	271	397	241	458	594	175	407	152	343
50—55	418	325	166	670	475	490	393	81	648	857
55—60	432	163	166	241	264	490	87	81	305	171
60 and over	879	136	331	531	845	1,573	306	81	1,031	1,143

The detailed age distribution is by quinary age groups. The age-constitution of the deaf-mutes may be compared with that of the general population. The marginal table does this and compares the results of the last two censuses. The 1921 figures bring out the diminishing trend from childhood to old age more prominently than those 10 years later: which would at first imply that in 1931 more congenital deaf-mutes aged 0-10 were omitted than in 1921. But this is not the case. In 1921 there were only 131 deaf-mutes aged 0-10. In 1931, there were 190. There is no reason therefore to suppose that fresh cases of congenital deaf-mutism (before or after birth) during the decade

Age-Period	General Population (1931)		Deaf-Mute 1931		Deaf-Mute 1921	
	Male	Female	Male	Female	Male	Female
0—15	39	39	30	26	46	41
15—40	40	41	44	37	41	44
40—60	17	16	17	21	12	12
60 and over	4	4	9	16	1	3
All Ages	100	100	100	100	100	100



were not properly recorded. In the later ages as the curve shows in the marginal diagram there is a steep rise in the female line after 50-60, implying that mistakes in the return of ages usually occurred amongst the old women.

229. Schools for Defectives—Finally this section may be concluded with a brief reference to the two Government Schools for the deaf-mutes and the blind at Baroda City and Mehsana. The City School has 19 deaf-mutes (including 4 girls)—while the Mehsana School is larger and more suitably housed with 52 children—(32 of whom are deaf-mutes). The 32 deaf-mutes consist of 27 boys and only 5 girls. The deaf-mutes of school-going age number 316, so that only 16 per cent are given the advantage of a schooling in their special line.

§ 4. BLINDNESS

230. Blindness—The incidence of blindness shows little variation since 1921, when the census record was pronounced to be very accurate compared to previous returns. For 1921, the question of blindness was elaborately scrutinised (just as deaf-mutism has been taken in hand in this census). Generally the greater part of the increase shown in 1921 was put down to better record. In this census, male blindness has decreased and female blindness has increased slightly. It is the least prevalent in South Gujarat which is relatively cooler and greener than other parts. It is most prevalent in Mehsana and Kathiawad portions on account of the glare and the dust there (as also the comparative poverty of the inhabitants) which are contributory causes. The map given below para 218 can be again consulted for a graphic representation of the local distribution of the blind. The following Table shows the number afflicted with blindness (of both eyes) per 100,000 of the population since 1891.

SUBSIDIARY TABLE V-C

NUMBER OF BLIND PER 100,000 OF EACH SEX IN EACH DIVISION
(FIVE CENSUSES)

NATURAL DIVISION	BLIND									
	Male					Female				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
Baroda State	246	249	129	75	161	417	395	204	95	235
Central Gujarat	205	195	91	57	122	317	311	134	57	147
Kathiawad	305	351	169	139	187	599	647	309	205	291
North Gujarat	301	285	158	62	193	526	438	249	85	304
South Gujarat	164	215	114	113	137	206	318	177	136	186

Throughout the last 40 years, Kathiawad and North Gujarat have vied with each other for the melancholy honour of being first in the proportion of their blind.

231. Correlation between Blindness and Rainfall—As pointed out in the last Census Report the prevalence of blindness varies inversely with the rainfall. A marginal table is given which compares the order of the natural sub-divisions according to the blind ratio and normal rainfall. There is a very obvious inverse correlation.* The distributing factors are those obscurely connected with social habits, race and occupation. The spread of social diseases amongst relatively higher classes, which is a predisposing cause for this affliction, is also a point not to be forgotten. The Kolis, whose occupation of salt manufacture is said to affect their eyes injuriously, and Anavalas who have a high incidence of blindness bring up the blind ratio in Rasti; although its high average of rainfall would have led one to expect a lower proportion. But from the marginal table it is apparent that blindness is specially in evidence in dry tree-less dust-ridden tracts like Kathiawad and West Kadi where the sun's glare is a potent cause of this disease.

NATURAL SUB-DIVISION	Population of Blind to 100,000	Order according to	
		Incidence of Blind- ness	Normal Rainfall
Scattered area	526	1	12
Mid-Block	459	2	13
West Kadi	426	3	10
East Kadi	426	4	9
Sea Coast area	394	5	11
Rasti area	324	6	2
Kahnam	300	7	5
Charotar	269	8	8
Trans-Sabarmati area ..	261	9	6
Chorashi	240	10	4
Vakal	233	11	7
Rani area	121	12	1
Semi-Rasti area	96	13	3

232. Variation since 1921—The number of blind persons in the State has increased from 6,794 to 8,033 or by 18.2 per cent. The males have increased by 13 per cent and the females by 22 per cent. A marginal table is given in which the proportionate figures calculated per lakh of population in each area for the last two censuses are compared. On the whole, the figures point to a real increase, particularly amongst the females. The only serious decline in figures is in Semi-Rasti, where instead of 224, the proportion is now only 96. The Semi-Rasti consists of Mangrol and Mahuva talukas. In Mahuva the incidence is 180 but the Mangrol figures (2 males and 16 females) appear to be far short of the truth, as they work out to only 36 per 100,000. At the same rate as in Mahuva, there ought to be 91 blind persons in Mangrol, instead of only 18; and the true incidence for the whole Semi-Rasti area should be nearer 180 than 96.

NATURAL SUB-DIVISION	Incidence of blindness	
	1931	1921
Charotar	269	308
Vakal	233	271
Chorashi	240	169
Kahnam	300	269
West Kadi	426	401
East Kadi	426	350
Trans-Sabarmati	261	309
Mid Block	459	513
Scattered area	526	519
Sea Coast area	394	455
Rasti area	324	367
Semi-Rasti area	96	224
Rani area	121	135

233. Accuracy of the Record—In 1921, the claim was made for the blind census of that year that it was the most accurate so far. This claim was supported by the medical authorities and local workers for the blind who were consulted. On the present occasion the same standard of accuracy has been kept up, except in Mangrol taluka as mentioned in the previous paragraph. A census was taken in selected areas in Nasik and Bijapur in 1919 under the auspices of the Blind Relief Association of Bombay and the incidence of this infirmity (calculated on the population of 1921) was ascertained to be 251 and 170 respectively for these two districts. Nasik is near our State, and its ratio may be compared with the figures for Central and North Gujarat (205 and 305) and also with Rasti and Trans-Sabarmati areas. In point of accuracy therefore it cannot be held that the blind return of this census is defective. Blindness of both eyes is an easily discoverable affliction and there is little public inclination to conceal it from the enumerator.

234. Distribution of the Blind by Sex and Age—In Subsidiary Table III above, it can be seen that unlike other infirmities, blindness attacks women more than men: particularly old women are the greatest sufferers from it. In the marginal table age-periods have been chosen from childhood, youth, middle age and old age to show

* The correlation has been mathematically worked and it is found to be— $-8262154 \div 06745$, which is a very high inverse rate of correlation.

Selected Age-Period	Male	Female
0-5	36	23
5-10	74	54
15-20	90	60
25-30	103	103
30-35	93	155
35-40	129	296
50-55	442	1,630
60 and over ..	2,737	4,705

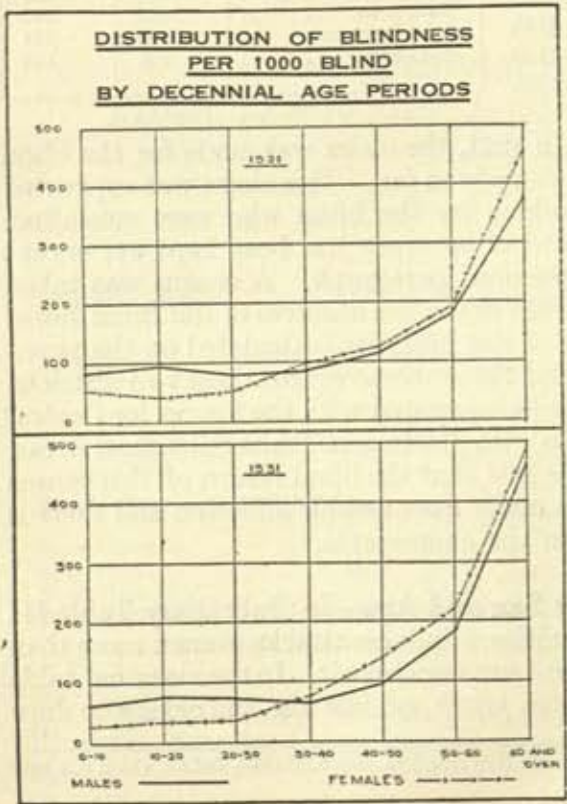
how as the age advances, women owing to greater neglect, more sedentary and harder conditions of living succumb more easily to blindness than men. Amongst persons aged 50 and over, there are twice as many blind women as men. The following Table gives the distribution of the blind in quinary age-groups totalling up to 10,000 afflicted of each sex for each of the last five censuses. A diagram is given below it, similar to the ones for the other infirmities to illustrate the age-distribution curve of the blind for the last two censuses.

SUBSIDIARY TABLE VI-C

DISTRIBUTION OF THE BLIND BY AGE PER 10,000 OF EACH SEX (FIVE CENSUSES)

AGE-PERIOD	BLIND									
	Male					Female				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
0-5	214	288	491	291	382	85	217	305	236	326
5-10	382	532	688	742	639	158	304	275	526	398
10-15	372	525	756	728	610	172	207	405	604	351
15-20	356	398	606	517	530	144	188	345	515	446
20-25	385	405	556	755	674	138	195	461	537	476
25-30	311	376	547	636	595	188	328	461	760	512
30-35	265	441	526	755	694	256	481	581	705	593
35-40	327	408	500	702	600	447	489	666	805	497
40-45	398	627	565	795	744	536	686	771	1,140	856
45-50	563	489	634	503	496	827	543	836	459	457
50-55	686	1,138	1,078	953	1,002	880	1,268	1,231	1,174	1,207
55-60	1,110	635	491	517	282	1,303	595	365	302	421
60 and over ..	4,631	3,738	2,562	2,105	2,752	4,866	4,499	3,298	2,237	3,460

235. Consideration of Subsidiary Table VI-C—As to the above table and



marginal diagram, it is fortunate that we are dealing with fairly accurate data at least since 1921, and the curve shows a real variation in figures. In the earlier age-periods 0-10 and 10-20, the curve for 1931 (for both sexes) keeps well below the level of 1921, showing that the extension of medical facilities for cataract and diseases of the eye (particularly ophthalmia neonatorum) and of maternity relief has led to a decrease in the incidence of this disease amongst infants and adolescent children. The curve rises thenceforward rather more sharply for females than for males aged between 20 to 50 and it is on a higher level than in 1921. The age-constitution of the general population may be now compared with that obtaining with this infirmity in the last two censuses. It will also appear therefrom that in the latest year the ameliorative measures taken both by the State and the public have

succeeded to a certain extent in controlling the virulence of this affliction amongst the child and the able-bodied elements in the population. Amongst persons aged 40 and over the figures, however, both in proportionate and absolute figures, show a decided increase. The margin gives the variations in absolute figures

since 1921. Those who are aged 40 and over are now 32 per cent more than the corresponding age-group in 1921, while the younger blind (*i.e.* below 40 years) are now 16 per cent less than before. These figures are confirmatory of the conclusions arrived at from relative figures. We will now refer to certain figures testifying to the manner in which the State and the public have co-operated to bring light to the blind and in other ways to relieve their suffering.

236. Other Statistics re : the Blind—(a) *Schools for the Blind*—The two schools for the deaf-mutes at Mehsana and Baroda also catered for the education of the blind. There were 20 blind children (one girl) in Mehsana and 8 (all boys) in Baroda. The blind of school-age (5-15) numbered 396 (233 boys and 163 girls) so that less than 7 per cent get any advantage of schooling. Much remains to be done in this respect, particularly for the blind girls. The Mehsana school which is an efficiently conducted institution, ought to have a much wider scope of work within its own territory *i.e.* East Kadi, which has a very high ratio of the blind. Of the total afflicted there, there are at least 46 boys and 80 girls who ought to receive relief (instead of the 20 accommodated there). The City School requires a great deal of more attention from the department in the matter of housing, apparatus and staff : instead of the 8 blind children on its rolls, it ought to be able to accommodate at least 45 boys and 60 girls, even if its operation is restricted to the needs of Central Gujarat only.

(b) *Deaths from Small-pox.*—Small-pox plays havoc with the children and is a potent cause of blindness amongst them. Successful primary vaccinations increased from an annual average of 58,791 (in the decade 1910-20) to an average of 62,950 (in the last decade). In both these decades, these vaccinations formed 28 per mille of the mean population of each decade concerned. Deaths from small-pox in the last three decades since 1901 are shown in the margin with the respective proportions for each decade calculated per 10,000 of its mean population. The ratio for the last decade is about double of that of the first, but the last decade was abnormal. In 1929-30, there was a small-pox epidemic (which claimed 8,616 victims) : if that year had been a normal one, the small-pox incidence would have been reduced to 29 for the latest decade.

(c) *Cataract and other Eye Operations.*—The margin shows interestingly how the State Medical department has coped with the problem of blindness with increasing success through its cataract operations. Altogether 2,044 successful cataract operations were performed in the hospitals of the State during the last ten years. Other eye operations conducted by this agency numbered 9,703. But the State effort in this regard was ably supplemented by public effort in two places in the Raj, which deserves mention in this chronicle. In Sidhpur, a public committee headed by the Vahivatdar and consisting of all local doctors was formed with the strong support of wealthy men of all classes in October 1928. An eye-specialist was invited from Kathiawad and

AGE CONSTITUTION						
AGE-PERIODS	General Popula- tion 1931		Blind			
			1931		1921	
	Male	Female	Male	Female	Male	Female
0-15 ..	39	39	10	5	13	7
15-40 ..	40	41	16	11	22	17
40-60 ..	17	16	28	35	28	31
60 and over ..	4	4	46	49	37	45
All Ages ..	100	100	100	100	100	100

YEAR	VARIATION IN NUMBERS OF BLIND	
	Below 40 years	Above 40 years
1921 ..	1,901	4,893
1931 ..	1,592	6,441
	-16.3 Per cent	+31.6 Per cent

DECADE	DEATHS FROM SMALL-POX	
	Absolute figures	Per ten mille of mean population of decade
1901-1910 ..	6,287	32
1911-1920 ..	10,313	49
1921-1930 ..	14,377	63

DECADE	No. of cataract operations
1891-1900 ..	23
1901-1910 ..	101
1911-1920 ..	564
1921-1930 ..	2,044

something like an organised campaign against blindness was carried on for over a fortnight from October 20th of that year. Large sums were collected from all sides—all local bodies co-operated with enthusiasm, and officialdom vied with public workers to work for its success. 7,000 patients were treated during the period the campaign lasted and 789 eye operations, the bulk being of cataract, were successfully performed, the percentage of success being as high as 96. Later on the example of Sidhpur was followed by Petlad, where in March 1929, a local philanthropist took up the burden of expense, and set free for this purpose a spacious building in which he was conducting a Sanskrit Pathshala. The services of the same Kathiawad specialist who was utilised at Sidhpur, were requisitioned for Petlad. From 1st March 1929, the campaign lasted for 20 days and in spite of the restricted area of its work, 10,345 eye patients were given relief : and 1,601 operations (including 447 of cataract) were performed. 30 of these became septic, but the percentage of success was no less than 98. The Sidhpur drive was most economically managed and cost only about Rs. 3,500. The Petlad organisation was a one-man show, and cost, so it is stated, Rs. 15,000.

(d) *Veneral Diseases and Diseases of the Eye—Ophthalmia Neo-natorum* is the congenital disease of sore-eyes of children after birth. It is largely due to defective midwifery but a good proportion is the result of gonorrhœa. In this connection it is interesting to observe that in spite of the wide extension of medical relief through rural areas, the average annual number of venereal diseases treated in hospitals and dispensaries decreased from 6,680 in 1910-20 to 5,666 in 1920-30. On the other hand people showed appreciation of State effort by coming in much larger numbers to State institutions for general relief of eye diseases, the number treated in 1911-12 being 38,651, in 1920-21 being 50,457 and in 1929-30, 72,141.

§ 5. LEPROSY

237. Leprosy: Local Distribution—The total number of lepers in the State recorded in the last census was 575 persons (393 males and 182 females) or 24 per 100,000. The following Table gives the number of lepers in each division proportioned per lakh of its population of each sex for the last five censuses.

SUBSIDIARY TABLE V-D

NUMBER AFFLICTED WITH LEPROSY PER 100,000 OF EACH SEX IN EACH DIVISION
(FIVE CENSUSES)

NATURAL DIVISION	LEPER									
	Male					Female				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
Baroda State	31	35	31	18	32	15	16	12	10	15
Central Gujarat	49	50	38	21	39	20	23	16	16	22
Kathiawad	8	10	15	13	16	6	6	..	5	15
North Gujarat	9	6	4	2	12	7	2	1	1	4
South Gujarat	63	94	91	59	89	31	45	36	27	34

The above figures, it must be noted, include the inmates of the Anasuya Leper Asylum in Central Gujarat (Sinor taluka of Baroda *prant*). The corrected proportions for this division in the case of this infirmity for the last two censuses, after deducting the number of inmates born outside the natural division are shown as under :—

Year	Leper per 100,000	
	Male	Female
1931	43	19
1921	41	22

Taking the figures generally we find that the area of greatest prevalence of leprosy is South Gujarat. Here 63 males and 31 females (per 100,000 of their respective sex) suffer from this dreadful infirmity. This is so, for two reasons. In the first place, the Raniparaj (forest tribes) on account of their dirty habits of living are peculiarly liable to this affliction. Secondly, it is presumed that damp humid

climates, such as we get in Navsari and Coastal areas composed of recent alluvium are rather more liable to this contagion than other tracts. Kathiawad shows the least evidence. Since 1921, the incidence of leprosy as shown in the marginal table has happily declined. In 1901, there was an all round drop but in 1911 and 1921, the number of lepers everywhere increased except in Kathiawad, where it has steadily declined.

DIVISION	LEPER					
	Male			Female		
	1931	1921	1911	1931	1921	1911
Baroda State ..	31	35	31	16	16	12
Central Gujarat ..	40	50	38	20	23	16
Kathiawad ..	1	10	15	6	6	..
North Gujarat ..	9	6	4	7	2	1
South Gujarat ..	63	94	91	31	45	36

238. Incidence of Leprosy by Natural Sub-Division—The point made above about humid climates may be investigated further by studying the proportionate figures of lepers in each natural sub-division and comparing the order according to their strength to the order of these areas according to rainfall. We should remember that the State average is only 24 and the areas of highest incidence are the West and East of Navsari *prant*, the Kahnām tract across the Narmada and the Chorashi part of Central Gujarat, and it is in these areas that the rainfall is the most copious. In the margin the necessary figures are given.

NATURAL SUB-DIVISION	Incidence of leprosy per 100,000	Order according to prevalence of leprosy	Order according to rainfall
Rasti area	55	1	2
Rani area	54	2	1
Kahnām	53	3	5
Chorashi	37	4	4
Vakal	23	5	7
Semi-Rasti area ..	22	6	3
Charotar	21	7	8
Scattered area ..	16	8	12
Trans-Sabarmati area.	12	9	6
Sea Coast area ..	8	10	11
East Kadi	8	11	9
West Kadi	7	12	10
Middle Block ..	4	13	13

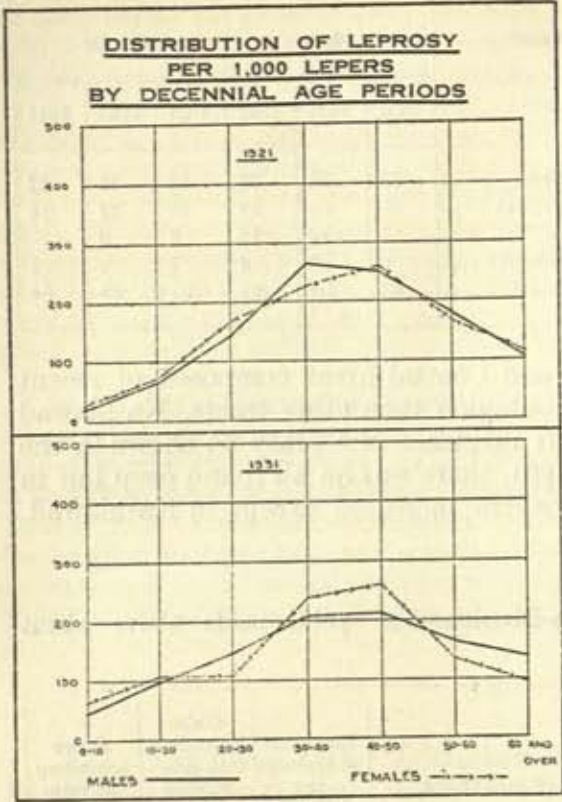
239. Correctness of Return—

Unlike blindness, the leprosy return is peculiarly liable to errors of record. The factor of wilful concealment particularly amongst women of higher and even intermediate castes bulks largely to defeat the ends of truth. But more than this, the errors of diagnosis are very important, and really vitiate the usefulness of the data collected. The limitations of the return have been already pointed. The large number of incipient cases which are not obvious to the enumerators get left out. The less evident nodular type of affection also is likely to find no place in the record. Again certain forms of syphilitic lesions are apt to be mistaken for leprosy, and this is the case with many old persons returned as lepers who are really syphilitics of the advanced stage. The distinction between white leprosy however and leprosy proper is now well-known, and the census staff are little likely to confuse between the two. One test in gauging the correctness of the return is the well-known fact that lepers are notoriously shortlived. It has been estimated that the average duration of a leper's life after attack is rarely more than 20 years. As we found from the age-return (Subsidiary Table III) the period of greatest liability to this disease is between 35 and 55, so that a person contracting this disease at 45 can hardly live beyond 60. All figures of lepers therefore beyond 60 and above are clearly open to the suspicion that (i) either their ages are

Year of Census	Number of lepers returned			
	Below 20 years	20-45	45-60	60 and over
1931	85	269	150	71
1921	47	291	155	59
1911	48	291	80	26

wrongly returned, or (ii) they are senile syphilitics whose sores have been mistaken for the leprous variety. The margin above

gives the comparative figures for the last three censuses in the different age-periods. Studied in this light, the figures of 1931 are open to doubt in two directions. The children are less open to attack than the middle aged, and yet lepers below 20 have nearly doubled themselves since 1921. There were only 10 lepers aged 0-10 in 1911, 13 in 1921 and 27 in 1931. These cases are clearly of the class of wrong diagnosis, for errors of age are less likely with these ages than with the last periods of life.



240. Distribution of the Lepers by Age—Some further clue about the correctness of the return is seen in the distribution of the lepers by age. The following Table gives the comparative figures proportioned per 10,000 lepers of each sex (for each of the last five censuses). A diagram is also attached marginally to show how the age-constitution curve has varied since 1921.

SUBSIDIARY TABLE VI-D
DISTRIBUTION OF THE LEPEE BY AGE PER 10,000 OF EACH SEX
(FIVE CENSUSES)

AGE	LEPER									
	Male					Female				
	1931	1921	1911	1901	1891	1931	1921	1911	1901	1891
1	2	3	4	5	6	7	8	9	10	11
0- 5	153	26	92	165	..	275	119	..	421	233
5-10	305	182	123	385	126	220	179	254	631	698
10-15	382	313	123	549	479	441	179	254	421	581
15-20	611	286	671	440	302	604	476	762	316	872
20-25	687	599	854	1,154	1,184	441	773	1,272	210	988
25-30	738	807	915	1,484	1,134	604	833	1,357	1,790	1,220
30-35	941	1,198	1,502	1,209	1,007	989	1,310	1,357	2,527	1,047
35-40	1,094	1,380	1,441	1,704	1,033	1,374	893	1,610	1,474	872
40-45	1,120	1,354	1,748	604	1,713	1,484	1,310	1,187	210	1,454
45-50	967	1,094	854	879	982	1,204	1,190	593	526	465
50-55	941	1,198	671	934	982	879	893	846	843	698
55-60	712	521	305	219	252	496	714	254	105	58
60 and over ..	1,349	1,042	701	274	806	989	1,131	254	526	814

241. Consideration of Subsidiary Table VI-D—As absolute figures are so small, it is somewhat artificial to have elaborate ratios calculated per 100,000. The age constitution of the lepers is therefore reduced to broad groups for better understanding and compared with that of the general population as has been done already with regard to other infirmities. The curve for 1921 differs from that for 1931 in marked particu-

Age-Period	Age constitution					
	General Population 1931		Leper (1931)		Leper (1921)	
	Male	Female	Male	Female	Male	Female
0-15	39	39	8	9	5	5
15-40	40	41	42	40	48	43
40-60	17	16	37	41	37	41
60 and over ..	4	4	13	10	10	11
All Ages..	100	100	100	100	100	100

lars. First the child leper looms more conspicuously in 1931 than in the previous census. Secondly there is a curious depression in the curves for females for 1931 at 20-30 which is not noticeable in 1921. This is probably, at least to a certain extent, due to the fact that more female-lepers of those ages must have concealed their infirmity when the enumerator came along than in 1921. Again, in the ages 50 and over, there are far more male lepers relatively to the total than in 1921. On the whole therefore, judged by every test, the leprosy record of 1931 was more imperfect than in 1921, in spite of every effort on the part of the census organisation to secure a revised return. Adjustment of figures are necessary. I would reject four-fifths of the children returned as lepers aged 0-10 in this census as wrong entries. Of persons returned as lepers aged 60 and over I would reject half as due to wrong diagnosis, and of the other half I would distribute half to lower ages and retain the remainder for the age-period 10 and over. For the age-period 15-40, I would also add a third as a set off against wilful concealment. To the resulting total, 528, as shown in the above marginal table I would add about a third more to include such cases of nodular and other types of leprosy which the enumerator omitted to return owing to error of diagnosis. This I would distribute by age according to the same ratio, as I have done with regard to the lepers already returned. Thus we arrive at the final marginal table, which at once gives a correcter idea of the total incidence of leprosy in the State and of its distribution in the different age-periods. The recorded incidence of 24 is thus raised to 28 per lakh of population. A recent census under a controlled agency of revenue officers in the central division in Bombay gave out that the spread of leprosy there amounted to 120 per 100,000. This is five times as much as the census return, and a little more than four times the estimate we have given above, for this State. But there is no reason to suppose that the incidence is much higher than as estimated above.

Age-Period	Adjusted Leprosy Figures	
	Absolute	Relative
0-15	31	6
15-40	320	61
40-60	160	30
60 and over ..	17	3
Total .	528	100

Age-Period	Adjusted Leprosy Return	
	Absolute	Relative
0-15	41	6
15-40	427	61
40-60	208	30
60 and over ..	28	3
All ages ..	704	100

242. Statistics re: Leprosy Relief—We will now conclude our treatment of the subject of leprosy by reference to the State effort towards relieving the afflicted. The Anasuya Leper Asylum, situated on the Narmada, was founded by the State in 1890. It is adjacent to a temple dedicated to the Anasuya Mata, after whom the Asylum is named and has accommodation for 100 patients. As will appear from the figures given below it seems never to be full and patients seldom stay for the full period of treatment. The annual average of patients treated in the last ten years was only 123; and judging from the birthplaces of inmates, 28 of 45 found on the census date in the Asylum gave their birthplaces from outside the

State, some as far afield as Allahabad, Malabar and Orissa. A large number came not unnaturally from Rajpipla State across the river. The age returns of the inmates as arranged in the margin appear to be a correcter index of the age-constitutions of the lepers in the whole State than the census figures. The total number of cases treated during the last ten years was 1,228; to these no less than 18,138 intravenous injections were given. Owing to the prolonged character of the treatment and the painful nature of the injections, few have waited for a complete cure. The last five years record only two cures and the large number of injections can only be looked upon as a tragic mountain of labour! And it has always been so, for leprosy has been hitherto an enigma to science. Attention has however been hopefully directed to the researches of Sir Leonard Rogers.

Age-period	Number
0-15	3
15-40	20
40-60	20
60 and over ..	2

243. Comparison with other States and Provinces—

PROVINCE OR STATE	Year of Census	Incidence of Infirmities (per 100,000)			
		Insane	Deaf-Mute	Blind	Lepor
India	1921	28	60	152	32
<i>Bombay Presidency</i> ..	<i>1931</i>	<i>50</i>	<i>80</i>	<i>188</i>	<i>42</i>
<i>British Gujarat</i> ..	<i>1931</i>	<i>58</i>	<i>102</i>	<i>218</i>	<i>23</i>
<i>Travancore</i>	<i>1931</i>	<i>46</i>	<i>57</i>	<i>63</i>	<i>55</i>
Baroda	1931	56	52	329	24
<i>Madras</i>	<i>1931</i>	<i>33</i>	<i>71</i>	<i>110</i>	<i>71</i>

The final figures for all India are not available, but taking the figures of 1921 as a guide and with the latest figures from a few of the provinces and States, a comparative table is prepared and shown in the margin.

CHAPTER VIII

OCCUPATION

§ 1. BASIS OF THE FIGURES

244. Reference to Statistics—It is a relief to turn from the statistics of misfortune with which the last chapter was occupied to the gainful employments of the people. The return of occupations in the State census has such a variety and complication of data that some systematic classification of them is necessary as a preliminary to their tabulation. Four columns of the questionnaire were concerned with this return. Column 9 merely enquired whether a person was an earner, working dependent or non-working dependent. Column 10 was reserved for the earner, about whom the kind of his occupation was to be entered in detail. Column 11 had a two-fold purpose: in the case of an earner, the slip was to show his subsidiary occupation and in respect of a working dependent, it returned the form of his assistance to the earner in the family occupation. Column 12 was specially reserved for the industrial worker, but as later it was decided to dispense with the all-India Industrial Tables, the responses to this item were not separately compiled. Imperial Table X sets out the standard scheme of classification prescribed for all-India according to which the figures are tabulated. It gives the figures of earners and working dependents for each occupational group in each division and the City, showing on the top the distribution of non-working dependents in each administrative unit. Imperial Table XI gives the occupations of selected tribes and castes, for which purpose the same principle of selection and classification as that for Imperial Tables VIII (Age, Sex and Civil Condition) and XIII (Literacy) was adopted. Table XI has two parts—Part A showing the variety of occupations followed by each of the castes with particular reference to their traditional occupation and Part B indicating the strength of each caste amongst earners in selected grades of occupation. As the all-India general census dispensed with the necessity of compiling figures as to industrial workers from the responses to item 12 of the questionnaire, this State compiled special industrial statistics on more or less the same basis as in 1921 regarding factories employing power of some kind. The returns were got filled through the managers of factories by the Director of Commerce and Industries in co-operation with the Census department, and the results are compiled in two parts of State Table XIII. A special return of the educated unemployed was also taken along with the general census, and Imperial Table XII in two parts sets out the main results. As it was thought the results obtained were not indicative at all of the true volume of unemployment, additional statistics have been compiled, which, it is hoped, will be of assistance to the expert enquiry now ordered by the Government of His Highness to be made into this problem. These are contained in the two parts of State Table XIV—Part A giving the number of non-working dependents in certain selected castes in three age-groups and Part B correlating the literacy statistics of males with the broad occupational divisions into earner, working dependent and non-working dependent, and also showing their distribution in the different divisions in the adult age-groups. To digest this enormous mass of statistical material, the following subsidiary tables are attached to the end of this chapter :—

SUBSIDIARY TABLE	I—A and B—	General distribution of Occupation for Earners (principal occupation) and Working Dependents, and Earners showing subsidiary occupation only.
..	..	II—A
—	Distribution of Earners (principal occupation) and Working Dependents by Sub-classes and Natural divisions.	

SUBSIDIARY TABLE II—B	—	Distribution of Earners (Subsidiary occupation) by Sub-classes and Natural divisions.
”	”	III — Occupations of Females by Sub-classes and Selected Orders and Groups.
”	”	IV — Selected Occupations.
”	”	V — Occupation of Selected Castes.

In addition, Subsidiary Table VI gives the results of the special sort for occupations of persons literate in English. Other tables are given—too numerous to mention—which help to throw light on the census figures.

245. Basis of the Figures : Changes in the Occupation Return—To understand these figures, it is necessary at the outset to have a clear idea of their basis. The occupation census of 1931 has certain distinctive features. In the first place, it introduced innovations in the schedule, as a result of which it is not now possible to institute useful comparisons with previous censuses. In the second place, a few changes were made in the classifications as laid down at the last census. The first kind of innovations was mainly in two directions. Formerly, the population supported by each occupation was required to be shown. On the present occasion, only workers (earners and working dependents) are now so distributed, and the distribution of dependents by each group of occupation is dispensed with. Secondly, the old two-fold division of the population into worker and dependent is now replaced by a new three-fold division—of earner, working dependent and non-working dependent. The old time “worker” does not now exactly correspond to the “earner,” as the member of the family, who regularly (but not for all the time) assisted the earner in his business, would have been shown under the old classification as a “worker,” and as a “working dependent” in 1931. The test of pay was accepted in the present census as the dividing principle between the two classes, where only part-time work was concerned. But where the work was full-time, the test of wage did not apply. The following extracts, from the Imperial Census Code (Chapter VII) which was adopted as a basis for our work, are of interest :—

“Only those women and children will be shown as earners who help to augment the family income by permanent and regular work for which a return is obtained in cash or kind. A woman who looks after her house and cooks the food is not an earner but a dependent. But a woman who habitually collects and sells firewood or cow-dung is thereby adding to the family income, and should be shown as an earner. A woman who regularly assists her husband in his work (*e.g.*, the wife of a potter who fetches the clay from which he makes his pots) is an all-time assistant, but not one who merely renders a little occasional help. A boy who sometimes looks after his father's cattle, is a dependent, but one who is a regular cowherd and earns pay as such in cash or in kind should be recorded as such in column 10. It may be assumed, as a rough and ready rule that boys and girls over the age of 10 who actually do field labour or tend cattle are adding to the income of their family and should, therefore, be entered in column 10 or 11 according to whether they earn pay or not. Boys at school or college should be entered as dependents. Dependents who assist in the work of the family and contribute to its support without actually earning wages should be shown as dependents in column 9 and under subsidiary occupation in column 11.”

246. Changes in Occupational Classification—Lastly, the changes in the occupational classification were mostly in the nature of amplification of the old groups and of compression of a few others. A few examples may be cited. Thus group 3 of 1921 is now sub-divided into groups 2, 3 and 4 :—(i) Estate agents and managers of owners (group 2), (ii) Estate agents and managers of Government (group 3)—including officers of Agriculture, Land Records, Court of Wards and Settlement departments, and (iii) Rent collectors and clerks, etc. (group 4). Similarly, group 7 of 1921 (growers of special products and market gardening, etc.) is now expanded into groups 9-16 specifying cinchona, cocoanut, coffee, *ganja*, rubber, tea from others. On the other hand, old groups 26 and 27 have been combined into the new group 43 (cotton spinning, sizing and weaving); old groups 31-35 into new groups 46 and 47; old groups 52-54 into new 65; old 60-64 into new

70; old 66-70 into new 81; old 85-89 into new 90 and so on. A few re-groupings have also happened.

"Thus persons employed in public entertainment appeared in group 101—Order 18 at last census but are classified now in group 183 in Order 49; saddle cloth makers have been transferred from leather work to embroidery and saddle cloth sellers in means of transport (1) to trade in textiles; witches and wizards have been moved up from Sub-class XII, *Unproductive* to Sub-class VIII, *Profession and Liberal Arts* (group 181), where they are at least as suitably kennelled as astrologers and mediums; 'Grasshopper sellers,' classified last time under 'trade of other sorts', will now appear under 'trade in foodstuffs.'"

As a result of these changes, groups of occupations have increased from 191 in 1921 to 195 in 1931. There are four main classes in the occupational scheme, and these four are further divided into 12 sub-classes, 55 orders and 195 groups. The classes and sub-classes are as follows:—

CLASS A: PRODUCTION OF RAW MATERIALS

- Sub-class I. Exploitation of Animals and Vegetation.
 " II. Exploitation of Minerals.

CLASS B: PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES

- Sub-class III. Industry.
 " IV. Transport.
 " V. Trade.

CLASS C: PUBLIC ADMINISTRATION AND LIBERAL ARTS

- Sub-class VI. Public Force.
 " VII. Public Administration.
 " VIII. Professions and Liberal Arts.

CLASS D: MISCELLANEOUS

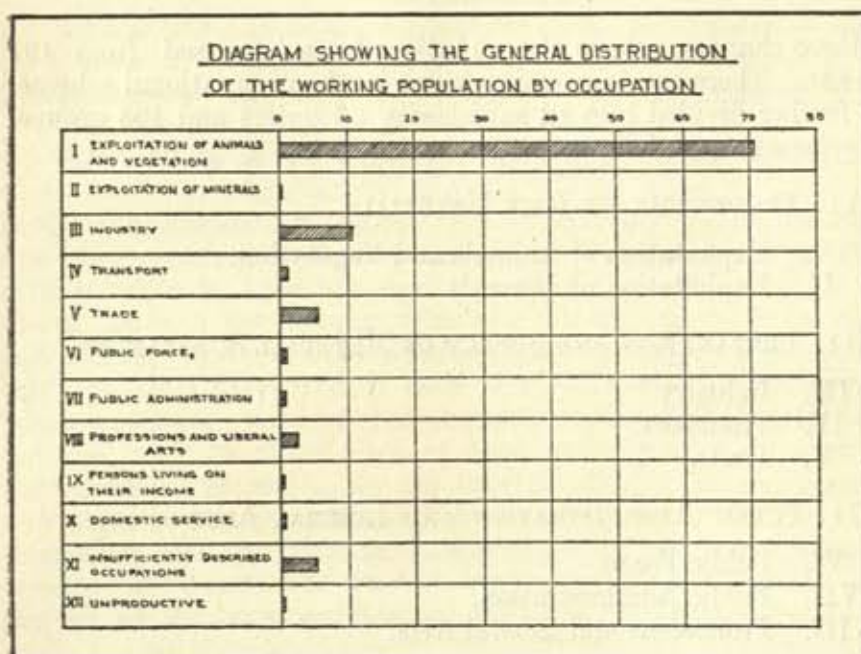
- Sub-class IX. Persons living on their income.
 " X. Domestic service.
 " XI. Insufficiently described occupations.
 " XII. Unproductive.

§ 2. GENERAL RESULTS

247. General Results—Subsidiary Table I-A gives the general occupational distribution. The general population consists of 958,961 earners (39.3 per cent), 251,514 working dependents (10.3 per cent), and the remainder (50.4) 1,232,532 non-working dependents. In 1921, the number of dependents of all kinds was 1,260,501 and the number of workers was 866,021. In 1931, the earners consisted of 711,565 males and 247,396 females—giving a proportion of 348 female per 1,000 male earners as against 396 (which in 1921 was the proportion of female workers). In the marginal table, as well as the inset diagram given below it, the total strength of

SUB-CLASS OF OCCUPATION	Strength of earners and working dependents	Proportion of earners and working dependents in each occupation per 1,000 in 1931	Proportion of persons supported in each occupation per 1,000 of population in 1921
I. Exploitation of Animals and Vegetation ..	855,913	707	664
II. Minerals	1,980	2	0.3
III. Industry	129,660	107	119
IV. Transport	15,863	13	13
V. Trade	67,065	55	66
VI. Public Force	14,021	12	11
VII. Public Administration ..	12,414	10	20
VIII. Professions	29,439	24	33
IX. Independent Means	5,905	5	5.4
X. Domestic Service	7,916	7	4.3
XI. Insufficiently described ..	65,122	54	59
XII. Unproductive	5,177	4	5

workers (earners as well as working dependents) in each of the 12 sub-classes of occupation in 1931 is shown, and comparative proportions per mille for the two censuses are given so far as comparison is possible. The 1931 proportions are worked out on the total of earners and working dependents taken together but the 1921 figures are the proportions in each grade of occupation of the total number of persons supported (workers and dependents taken together). In the present census, the distribution of dependents by occupation, as pointed out already, was not undertaken. That is why a strictly correct comparison is out of the question.



On the whole, however, it may be said that the proportions do not disclose any marked change in the occupational distribution. Sub-class I indeed shows a higher proportion, but it does not thereby betoken any increased interest in agriculture—the proportion becomes larger, merely

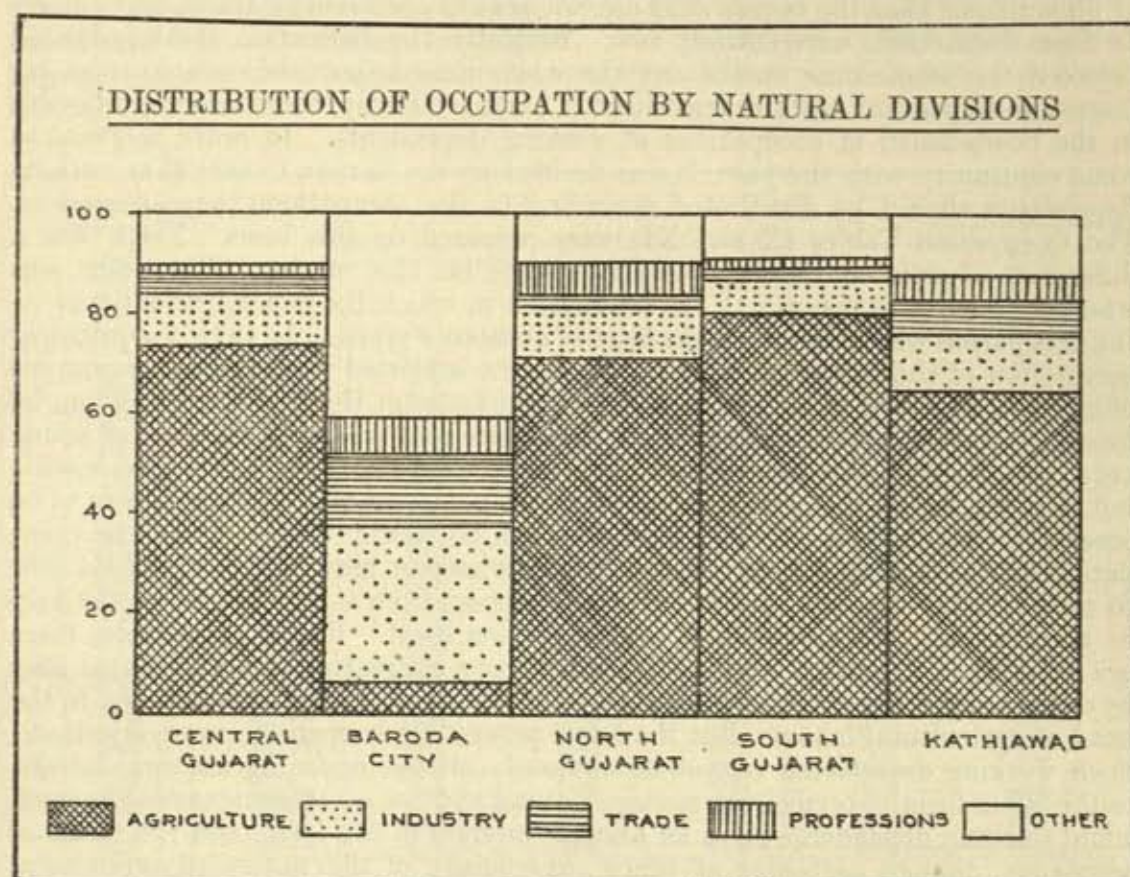
because the calculation for 1931 reckons in the working dependents, who form a much larger factor in agriculture than in any other occupation. The proportions of persons supported under trade, public administration, and the professions were larger in 1921 than similar proportions of workers in 1931, for the well-known reason that the number of dependents in these grades form a much larger proportion of persons supported than in other occupations.

248. Distribution per Division—The occupational distribution for the City and administrative divisions of all workers (earners and working dependents combined) is summarised in the following Table prepared from Subsidiary Table II-A:—

SUB-CLASS	PROPORTION OF WORKERS IN EACH OCCUPATION PER 100 TOTAL WORKERS					
	State	City	Central Gujarat	North Gujarat	South Gujarat	Kathia- wad
I. Exploitation of Animals and Vegetation.	71	6	74	71	80	65
II. Exploitation of Minerals.	0.2	..	..	..	..	1
III. Industry.	11	31	10	11	7	11
IV. Transport.	1	7	1	1	1	2
V. Trade.	6	15	4	6	3	7
VI. Public Force.	1	11	1	1	1	1
VII. Public Administration.	1	8	1	1	1	1
VIII. Professions and Liberal Arts.	2	7	2	2	1	4
IX. Persons living on their income.	0.4	3	..	1	..	..
X. Domestic Service.	1	2	1	1	1	1
XI. Insufficiently described occupations.	5	7	6	5	5	6
XII. Unproductive.	0.4	3	..	..	..	1
TOTAL.	100	100	100	100	100	100

South Gujarat with its large Raniparaj population is always the most predominantly agricultural. The City, as may be expected, is the least. Kathiawad, with

its Salt Works, shows the largest proportion of workers on minerals. The City again is the most commercial and industrial portion, followed *cum longo intervallo* by Kathiawad. The diagram below illustrating these contrasts may be of interest:—



249. Distribution of Non-working Dependents by Locality—The proportion of non-working dependents is a little more than half of the total population, but the small inset table shows how this proportion varied in different parts of the State. The highest proportion of dependence in both sexes as well as amongst females occurs in the City; for the dominant occupations there are trade, professions, public force and administration, in which females do not figure at all as earners or even working dependents. The next highest proportion of female dependence is in Kathiawad, where the composition of the people is largely of *purdah* observing castes, which do not usually allow their females either to work outside, or even to help their menfolk in their occupations. The female index shows that it is least in North and South Gujarat where agriculture predominates, in which occupation the sexes co-operate in the common toil far more than in other occupations, as we shall see presently. It is common knowledge that women are less of a burden to the family in an agricultural community than in a commercial one.

DIVISION	Proportion of non-working dependents per 1,000 of each sex			Female Index of non-working dependency
	Persons	Male	Female	
Baroda State	504	399	617	1,717
Baroda City	597	398	849	1,701
Central Gujarat	512	382	656	1,541
North Gujarat	498	410	588	1,391
South Gujarat	462	394	530	1,332
Kathiawad	546	413	686	1,584

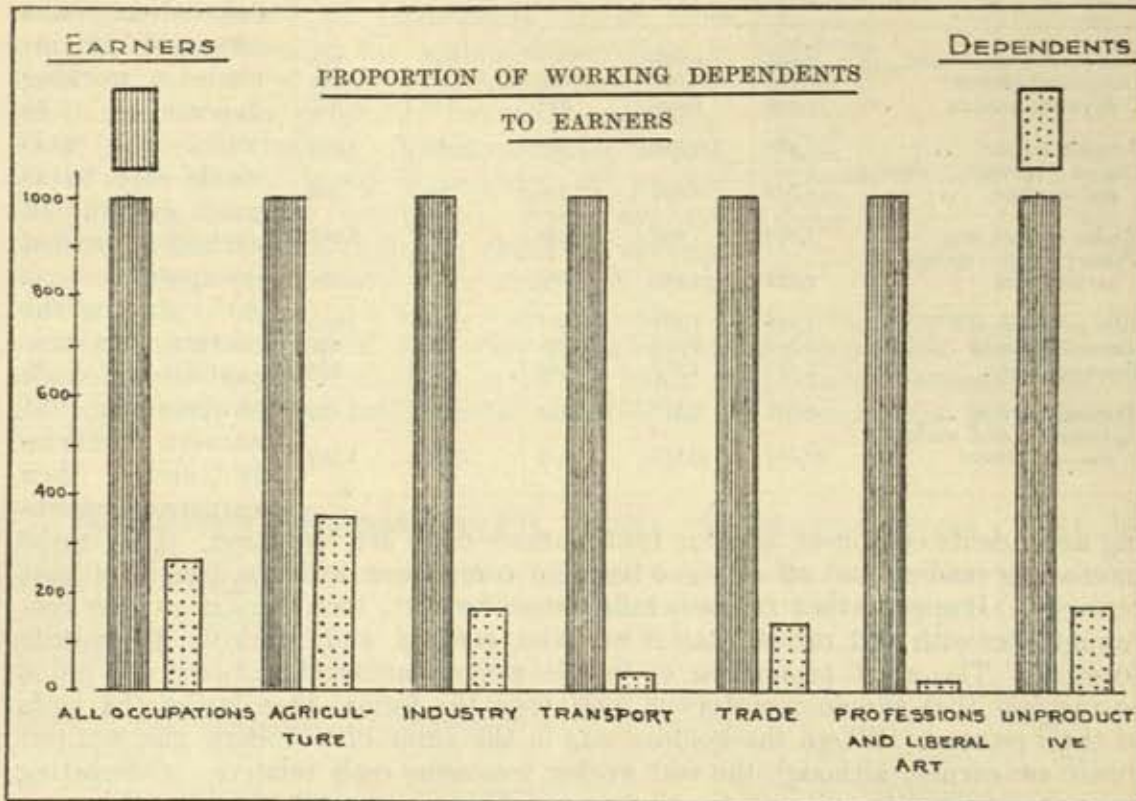
250. Occupation of Working Dependents—The definition of working dependents has been already indicated. A whole-time worker in the family occupation would ordinarily be returned as earner. A part-time worker on receipt of wages, would similarly go to that class: but a whole-time worker *who helps the principal member of his family in his family occupation*, will be classed as a working

dependent; so also a part-time assistant (member of the family) working in the family occupation, *but without any wages*, would be classed as a working dependent. The instructions were fairly clear, but they were accompanied by such a wealth of illustrations that the census staff did not always comprehend them, particularly as these distinctions were entirely new. Secondly, the distinction above indicated between the whole-time *worker* and the whole-time *helper* left enough room for discretion to prevent uniform treatment of cases. Thirdly, there was the difficulty in the compilation of occupations of working dependents. In order to preserve some continuity with the past, it was decided by the Baroda Census that working dependents should be distributed according to the occupations they assisted in. The Occupation Tables (X and XI) were prepared on this basis. There was a difference of opinion amongst census officers on this matter. The point was whether to enter in column 11 the occupation in which the dependent assisted, or the occupation which described the form of assistance given. In 1921, the principal occupation of the earner on whom a dependent subsisted was entered against his name, but where he gave any substantial assistance in the family occupation, he became a worker, and it was laid down in his case that wherever the kind of assistance was specified, the occupation to be entered was to conform to the specification but that otherwise, the occupation of the principal member of the family was to be entered. Ordinarily a working dependent can be readily classed under the occupation of the earning member of the family, whatever may be the view held how to classify him—because, besides deriving support from it, the nature of the help he gives is part of the process of the occupation itself. But in agriculture, there is a difference. Thus the working dependents of a cultivating owner or tenant may be classed under the respective occupation of the earner himself, or be taken to the head of agricultural labour. But the latter proceeding is open to grave objections. Such working dependents cannot be obviously classed under agricultural labour, as the latter form of occupation is wage-earning and has no other nexus to the land, while working dependents have an abiding interest in the farm, and the forms of assistance, though partaking at times superficially of the nature of agricultural labour, are too indefinite to be classified as such, or again they may be combined with other forms of help or varied from time to time. Therefore it was decided by the Baroda Census, after long consideration, that working dependents, in all cases, should be classed under the principal occupation of their earners. Besides, an agricultural labourer can have presumably no working dependent; as such help, however given by his family, will ordinarily receive wages from their common employer and therefore entitle the helper to be classed as an earner.

251. Proportion of Working Dependents to Earners—After explaining the basis on which the figures are compiled, we will now consider the following Table, which works out the proportion of working dependents to 100 earners in each of the twelve sub-classes of occupation. A diagram is given below showing how far in some of the principal occupations, assistance from working dependents is expected.

SUB-CLASS OF OCCUPATION						Total earners showing occu- pation as principal	Total working dependents	Proportion of working dependents to 1,000 earners
All Occupations						958,961	251,514	262
I.	Exploitation of Animals and Vegetation	..	..	..	..	632,785	223,128	352
II.	Exploitation of Minerals	..	..	..	..	1,955	25	12
III.	Industry	..	..	..	..	111,331	18,329	164
IV.	Transport	..	..	..	..	15,418	445	28
V.	Trade	..	..	..	..	59,009	8,056	136
VI.	Public Force	..	..	..	..	13,998	23	1
VII.	Public Administration	..	..	..	..	12,381	33	3
VIII.	Professions and Liberal Arts	..	..	..	..	28,771	668	23
IX.	Persons living on their income (order 50)	..	..	..	..	5,905	..	..
X.	Domestic Service	..	..	..	..	7,914	2	..
XI.	Insufficiently described occupations	..	..	..	..	65,044	78	1
XII.	Unproductive	..	..	..	..	4,450	727	163

The greatest proportion of assistance is seen in Agriculture, the prime industry in the State, in which there is one working dependent to every three earners. Industry comes next in which the working dependents form 16 per cent of the earners. Independent means, public force and public administration hardly admit any form of working dependence. The professions indeed show a small proportion. On the whole, out of four earners, three plod alone, and the fourth has an assistant.



252. Working Dependence by Sex—Turning to the sex ratio amongst working dependents, it is interesting to find that the vast majority of them are women. There are nearly 5 women to one man assisting the earner of the family. The female index is the highest in agriculture. In industrial occupations, particularly of the cottage type, the earner receives far more assistance from the female members of the family than from the male. One reason why working dependence is predominantly female in character is that the male members as soon as they are able to work are turned on to active earning, they work whole-time, share actively in the wages of the family and thus are excluded from the class of working dependents. The female index in the total number of dependents (working and non-working) is 1,717. Of the female dependents, no less than 22 per cent are workers rendering some form of assistance to their earners.

ITEMS	Female Index of working dependents (per 1,000 males)
All Occupations ..	4,631
Cultivation	5,987
Pasturage	1,700
Industry	2,743
Transport	780
Trade	1,104

§ 3. POINTS OF SPECIAL INTEREST

253. Occupation of Females—Subsidiary Table III gives the main proportionate figures regarding the employments of women-workers. The question of women's occupations in this State is somewhat on a different footing from most other Provinces and States of India, for few castes in the State insist on their seclusion; in consequence, the proportion of female workers is high. In 1911,

there were 431 female workers to a thousand male. In 1921 the ratio was 396.

GROUP	Strength of female earners and working dependents in 1931	Strength of female earners only in 1931	Proportion of female earners and working dependents per 1,000 males in 1931	Proportion of female earners in 1931 per 1,000 males	Proportion of female workers per 1,000 males in 1921
Non-cultivating owners ..	8,823	8,823	741	741	625
Cultivating owners ..	191,760	27,674	604	95	181
Cultivating tenants ..	24,406	6,408	398	115	303
Agrestic labour	111,888	111,888	1,265	1,265	1,182
Cotton spinners, sizers, and weavers	8,519	8,309	510	500	510
Basket makers, etc. ..	1,506	967	856	601	1,062
Potters and makers of earthenware	4,816	1,069	860	218	494
Rice pounders, etc. ..	1,610	1,373	2,371	2,155	2,685
Tailors, Milliners	4,161	2,076	778	418	748
Scavengers, etc.	2,425	1,973	664	559	598
Domestic service	2,517	2,517	466	466	1,457
Labourers and workmen non-agricultural ..	40,567	40,567	1,818	1,818	1,182

ing dependents combined, and for 1921 workers only) are compared. They make interesting reading and afford some basis for comparison with the figures of past censuses. It appears that if we only take earners for 1931, then there is a closer correspondence with 1921 ratios, than if we take earners and working dependents together. The great proportion of female workers amongst rent-receivers is due to the fact that the enumerators in 1931 took the formal *khatedar* as the basis of their returns. Where the holding was in the name of a woman, she was put down as earner, although the real worker was some male relative. Cultivating owners and tenants amongst female earners show, on the other hand, a big proportionate drop since 1921, because many women who would have been returned as workers under the 1921 classification were now returned as working dependents. But if the working dependents are added, the ratios become very high, showing how in the agriculturist castes, women generally help the men in their fields. Agrestic labourers are a purely wage-earning class according to the view taken in the Baroda Census; and here the females of the lower classes generally preponderate. The decreasing ratios of women workers in such occupations as basket making, pottery, rice pounding and husking, and flour grinding and the increase under general as well as agricultural labour shows how the change, in social tastes, as well as the application of machinery to such home industries hitherto monopolised by females, has released them from such employ and made them drift to general labour of a casual kind or else to swell the ranks of agricultural workers. The growth of industrial establishments in the State has taken away women from domestic service, hitherto their preserve.

254. Proportion of Female Workers by Castes—The proportion of female workers naturally varies according to social strata. In fact the tendency is that as a caste progresses in wealth and education, it acquires a new conception of its women's dignity and compels them to lead a life of dependence and enforced idleness. The Parsis are an exception, as their education on modern lines has developed a modern mentality. In Navsari besides, Parsi women from very old times have supplemented their family earnings by working on their *kastis* (sacred thread). Patidars, in spite of their advance in education, are still an agriculturist class and the claims of agriculture still require that their women should share a part of its soil. Below the Rajputs, who are typical of the Intermediate group, there is a large gap after which come the typically labouring classes who freely allow their women to share in the common struggle for existence. The progress of education, therefore, makes the problem

In 1931, if earners were reckoned only, the proportion of female earners to 1,000 males would be 344; but if the calculation was extended to include working dependents as well, the ratio would rise to as much as 600. In certain specified occupations as set out in the margin the proportions of female workers (for 1931 earners separately and then earners and work-

of female dependence in the higher castes acuter than before. Through competition and other causes, such as the kind of education they are receiving, the men-folk in these classes are becoming more and more unable to keep up their old standard of living or to maintain their old level of earning power.

In western countries where women have a varied education and numerous opportunities for specialised training in a variety of home-crafts, it is more possible for a woman of the higher classes than in India to take to a number of home occupations which are not only profitable but also interesting. Thus (a) pewter making, (b) embossing on leather, (c) the more artistic forms of bindery, (d) poultry farming, etc., may be mentioned. Some are not open to Indian women of similar classes on account of caste scruples, but many other ways such as the higher kinds of decorative wood work, painting on metals, lacquer work, the making and decoration of fans, clay modelling, wicker work and the like are still open. Widespread changes in social habit are however necessary, before any real variety in the occupational distribution of women can be expected in India.

NAME OF CASTE	Proportion of female workers per 1,000 males
Prabhu	60
Vania	119
Saiyad	185
Luhana	206
Brahman	219
Lewa Patidar ..	335
Parsi	396
Maratha	410
Rajput	416
Vaghri	739
Thakarda	750
Chodhra	903
Vankar	944

255. Urban Occupations—The variety of the occupational range in

urban areas may be now contrasted with the general distribution of occupations in the State. For the sake of comparison with the 1921 figures, only proportions calculated on earners for 1931 have been given. On that basis the marginal table has been prepared. It is inter-

OCCUPATIONAL DISTRIBUTION OF ACTUAL WORKERS PER MILLE				
OCCUPATION	State		City of Baroda	
	1931	1921	1931	1921
Exploitation of Animals and Vegetation	660	658	63	62
Industries including Mines ..	118	121	307	234
Commerce and Transport ..	78	71	215	173
Professions and Arts	30	34	78	93
Remaining occupations ..	114	116	337	438
Total	1,000	1,000	1,000	1,000

esting to see how the City is becoming increasingly industrial in character. The opening of new mills and the extension of industrial areas have given scope for a large increase amongst industrial workers who are, however, mostly immigrants, and have been mainly responsible for the increase in the City's population. Professions show a decline both in the State generally and in the City in particular, because priests and religious mendicants are now reduced in number; so also under letters, arts and sciences there is a slight decrease, although lawyers, doctors, and teachers have increased. The remaining occupations include public force and administration which together show an increase but in other respects there is a decline under insufficiently described and disreputable occupations.

256. Regional Distribution of Working Population—The general body of the working population is distributed in very unequal proportions between the City, towns and rural areas. The City population is only 4.6 per cent, while other towns absorb 16.7 per cent. The remainder 78.7 per cent reside in the rural areas. The distribution of the working population generally conforms to these ratios, but in the different occupations, there are great contrasts. The City has only one-fifth of what it should have according to its strength, engaged in agriculture. Transport (Sub-Class IV) absorbs four times its required quota, public force over seven times, administration over six times

OCCUPATION	PERCENTAGE RECORDED OF WORKING POPULATION IN		
	The City	Other towns	Rural areas
All Occupations	4	14	82
I. Exploitation of Animals and Vegetation	1	6	93
II. Exploitation of Minerals .. ..	..	21	79
III. Industry	11	32	57
IV. Transport	20	29	51
V. Trade	10	40	50
VI. Public Force	36	20	44
VII. Public Administration	29	40	31
VIII. Professions	12	32	56
IX. Independent means	24	49	27
X. Domestic Service	12	50	38
XI. Insufficiently described	5	21	74
XII. Unproductive	24	30	46

and disreputable and unproductive occupations over five times. Persons of independent means are least in evidence in rural areas. Nearly two-thirds of the number of workers in domestic service are found in urban areas, showing how the rural population is poorer and more self-reliant than town-dwellers. Professions include a multiplicity of employments, but lawyers and doctors are concentrated in the City and other towns.

257. Variation in Proportions of Workers by Class of Towns—An even more striking contrast is seen from State Table VIII in which the occupations

OCCUPATION	NO. PER 1,000 WORKERS (EARNERS AND WORKING DEPENDENTS) IN			
	The City	Industrial and urban towns	Agricultural and Distri- butive towns	Rural areas
Exploitation of Animals and Vegetation	63	200	531	776
Industry	307	295	201	77
Commerce and Transport	215	209	121	45
Professions and Arts	78	62	44	22
Remaining occupations	337	234	103	80
Total	1,000	1,000	1,000	1,000

of towns are detailed. The marginal table is prepared by combining the State Table above mentioned and Imperial Table X. The main division of towns, as we have seen in Chapter II, is into (i) industrial and urbanised

and (ii) agricultural and distributive. The distribution of workers in the main occupations is contrasted in these areas, and finally compared with the City at one end and the rural areas at the other. We see how the proportion of agriculturists rises from the City where it is the least through gradual stages in towns of different kinds to its maximum in rural areas. Conversely, industry and commerce claim the least attention of workers in villages: so also do professions and arts: and the proportions in these rise in a continuous grade to their height in the City. The contrast between urban and rural cannot be better exemplified

OCCUPATION	No. per 1,000 earners and working dependents in	
	City	State
Public Force	109	12
Public Administration	79	10
Living on own income	32	5
Professions and Liberal Arts	75	24
Textile Industry	108	9
Industries of Dress and Toilet	38	18
Food Industries	29	5
Rent from Land	6	17
Ordinary Cultivation	28	491
Field Labour	6	165
Pasturage	7	27
Transport	72	13
Trade in Textiles	15	5
Trade in General	132	51
Domestic Service	21	7
General Labour	60	52
Unproductive	26	4

than in the above inset, which also shows how closely alike the agricultural and distributive towns are to the villages from which they have been promoted.

258. Occupations in the City—The occupational distribution in the City deserves a little more detailed notice. The marginal list is not entirely exhaustive but it comprises the bulk of major employments and the contrast with the

mean proportions for the State is striking. As being the capital and seat of the administration, there is little wonder that the strength of public force and administration as well as of learned professions is concentrated in the City. The luxury trades and industries as well as transport and domestic service find their chief scope in the capital also; in the disreputable professions also—the prostitute, the vagrant and the beggar—find in the City a more hospitable refuge than the countryside; on the other hand, agriculture, the main stay of the general population, is little in evidence. But there is more of it here than in the cities of the Bombay Presidency as it will appear from the second marginal table now given. The larger portion engaged in agriculture in Baroda City as compared to cities in Bombay is due to the growing tendency in this

OCCUPATION	Proportion per 1,000 working population	
	Baroda City (earners) 1931	Bombay Presidency Cities 1921
Agriculture and Pasturage	60	27
Industry (including mining)	307	343
Trade	140	148
Professions	78	21
Remaining Occupations	415	461

State of the non-agricultural classes to enhance their social status by taking to the land. The rapid decay of the old cottage industries and of local handicrafts has also contributed to this process.

259. Occupations of Literates in English—An attempt was made in 1921 for the first time to find out the occupations of persons literate in English. It was of importance to know how far English education was acting as a disintegrating influence and taking away persons from agriculture and artisan groups to clerical and other similar employments. The enquiry was extended now to both sexes and Subsidiary Table VI gives the absolute figures of earners and dependents in each sex for the whole State and the administrative divisions separately. But as the number of female literates in English is still very small, the consideration of the figures here will be mainly confined to males only. In the margin the occupational distribution of male literates in English is compared with the general population. From the figures of workers in 1921, an attempt is also made—although the basis is different—to compare the distribution in two censuses. We noticed in 1921 that amongst the English literates there was not the same consuming passion for agriculture as in the general population. This is more or less true in this census also. There are two reasons for this circumstance. In the first place, the English literates are largely recruited from town-dwelling classes that are not addicted to cultivation. Secondly, higher education does induce a distaste for agricultural toil. Public administration was found in 1921 to be the chief concern of the educated. From the 1931 figures, it would appear that trade has displaced

SUB-CLASS	Workers distributed per 1,000 in		Occupational distribution in general
	1931	1921	
All Occupations	1,000	1,000	1,000
Exploitation of Animals and Vegetation	132	121	707
Minerals .. .. .	..	..	2
Industry	25	49	107
Transport	91	97	13
Trade	169	145	55
Public Force	28	28	12
Public Administration	168	206	10
Professions	135	196	24
Living on own income	82	58	5
Domestic Service	7	3	7
Insufficiently described	163	92	54
Unproductive .. .. .	..	5	4

it from its first place and that professions are not far behind. In regard to public administration, figures of two censuses are alone comparable as there can hardly be any working dependency for this kind of work. There is a large proportionate decline amongst the educated workers in the ranks of public service, although

there are now 3,216 English knowing male workers in the public service as against only 1,891 in 1921.

260. The Working Population amongst the English Educated compared with other Sections—It will be interesting now to compare the occupational

Males aged 20-39	Proportion per mille who are		
	Earners	Working dependents	Non-working dependents
All Males	922	60	18
All male literates	906	64	30
Male literates in English only..	786	48	166
Male literates in vernacular only.	919	66	15
All illiterate males	934	56	10

distribution of the educated with other sections of the population in order to see the reactions of higher education on the working capacity or disposition of the people. For this purpose, State Table XIV-B is valuable. In that table, by a special sort, the figures of the occupational distribution in the three main classes

DIVISION	Male literates in English aged 20-40 per 1,000		
	Earners	Working dependent	Total dependent
State	786	48	166
City	689	15	196
Amreli Division	890	70	40
Baroda Division	779	82	139
Mehsana Division	842	44	114
Navsari Division	837	50	113
Okhamandal	940	3	57

of earner, working dependent and non-working dependent of the male population aged 20-40 were compiled according to literacy for the different administrative divisions. As the ages were compiled according as they were returned, without any kind of smoothing, the totals will not correspond to the figures in Imperial Tables VII and XIII. Altogether 364,345 persons had returned ages between 20 and 40.* Of these, 15,093 were literate in English, 134,047 were otherwise literate and 215,215 were illiterate. The marginal table shows that the more 'educated' a man is, the greater is his dependency in this State. The proportion of workers amongst the English-educated is far less than in the general male adult population and the number of working dependents amongst them is relatively the least. This characteristic of the returns is even more strikingly shown in the marginal table now inserted. It seems that wherever English education is most widely prevalent, as in the City and Baroda division, there the proportion of dependency is the highest and that of working dependency the least. To be a working dependent implies a preparatory training in the processes of the trade or industry concerned. English education would seem hitherto to have served to divorce the English educated member from the family occupation itself.

261. Dependency of the English Literates in the Adult Ages—This brings us to the question of dependency in the adult age-periods. State Table XIV-B only takes the two groups of 20-30 and 30-40 which cover the bulk of the normal working population. It was not deemed necessary to compile for other age-periods, specially as the Table was meant as a corrective for the defects in the Unemployment return. The number of non-working dependents amongst the English educated males of the adult ages was 2,516, of whom 2,307 were between 20 and 30. In 1921, the number of English educated dependents aged 20-30 was 1,185. Thus the figures have nearly doubled themselves in ten years. Proportionately the variation however would show a decline from 27 per cent to 24 of total literates in the age group 20-30. This does not warrant our assuming however that the conditions have improved since 1921, as the proportion for 1931 does not include the working

* This figure differs from the total of ages 20-39 in the Annual Age Return (State Table XVI) by 2,553, the adult population of the Camp, which was not included in State Table XIV.

dependents aged 20-30. If the working dependents are so included, the ratio rises to nearly 30 per cent for 1931. Therefore really the comparison would indicate that adult dependency amongst the English educated has increased both relatively and absolutely. This is due mainly to three causes. The nature of present day English education with its predominantly literary courses is such that it does not adequately fit the adolescent groups to take up the callings in which their more unlettered fathers had worked. Secondly the English educated have not the same aptitude and interest as their less fortunate fellows for the callings of their fathers. Thirdly there is not enough scope for them in the professions or public service, for which their education mainly trains them, and to which they mostly aspire.

262. The Volume of Unemployment in the State: Imperial Table XII—

The above three causes are the prime factors that are behind the unemployment problem in the State. The attempt to record details of the unemployed who are educated in the English language was made therefore with the object of remedying the defects in the present system of education and in other ways of mitigating the distress that has been caused. Imperial Table XII shows that the attempt here has largely failed. We have the consolation however that in this respect, our fate has been shared by other Provinces and States in India. The Census Commissioner for India in his circular No. 25-Comp., dated 4th February 1932, has actually advised Provincial Superintendents and Commissioners in States to drop this Table from the Tables Volume in view of the paucity of returns and relegate the results compiled to the indignity of an appendix to the Report. But as in this State we have by a special sort attempted to supply a corrective to the returns actually compiled by the unemployment census, we have decided to include a brief reference here. The analysis need only be brief in this Report, as all the data collected have been handed over to Professor Kamdar of the Baroda College, who is given the special charge of studying the subject, supplementing the census details with independent enquiries and writing a special report on his researches. State Table XIV-A and B—read with Subsidiary Table VI—will enable the reader to form some idea of the volume of unemployment in this State. The figures compiled however are confined to the male sex—the problem of unemployment amongst women being considered not so urgent as to need immediate attention. Imperial Table XII shows that there were only 348 unemployed males educated in English in the State on the census date, of whom 282 were aged 20 and over. Only 270 aged 20-39 or 2.6 per cent of the English literates of these ages were willing to confess that they were unemployed. Of these 115 were Brahmans, 144 other Hindus, 6 Muslims and 5 belonged to other communities. Amongst them, there was only one with a British degree, 11 had Indian degrees of various kinds (3 being B.Sc.'s, 2 engineers and 1 a doctor). Matriculates amongst the unemployed numbered 76 and the non-matrices were 182. It is curious that not one, whose qualifications were above matriculation but below a degree, came forward to return himself as an unemployed. Most of the unemployed belonged to the age group 20-25. Only 27 were aged 30 years and over. Of the 270 unemployed in the adult ages, 233 or over four-fifths stated that they were unemployed for more than a year. Apart from figures of actual unemployment, the unemployment schedule included a query as to whether a person though not totally unemployed failed to obtain a post with which he was not satisfied. 31 persons came forward to state that they failed to obtain employments which were suited to them. Most of these preferred an academic career to their present work, which was either agricultural or connected with industry. Some, who were teachers would rather prefer a post of an administrative or otherwise more lucrative kind, a feeling which is readily understandable. But the most surprising part was that the answers were so few. The returns betoken a degree of contentment, which is of course far from true. The unemployment slips were broadcast and the census staff was instructed to supply every house which had a literate in English with a form. Professor Kamdar who has already started the work of the special enquiry above stated assured me that he was meeting with a good deal of unwillingness on the part of unemployed persons to come forward to declare their state. But ordinarily there should not have been any objection about stating that they were dissatisfied with their present lot, as divine discontent is an essential part of education!

263. Limitations of the Return : State Table XIV-B—It is necessary therefore to get at the real volume of unemployment. In the ordinary course of things dependency in the adult ages ought to be identical with unemployment. The adolescent groups are largely engaged in schooling. But in the absence of a continuation school movement which could profitably employ an adolescent after he has finished school during the years preceding his employment in active labour, the problem of unemployed boyhood—so fruitful as the nursery of future criminals, is attaining some magnitude with castes which do not favour higher education. Confining ourselves however for the moment to the adult population in two groups of 20-30 and 30-40 we must consider some factors before we decide whether adult dependency is coterminous with adult unemployment. In the first place working dependents will have to be added to non-working to get at the gross extent of unemployment. Secondly young men aged 20 and above who are studying in the colleges and high schools here and outside the State will have to be omitted from the total of dependents to find out the true extent of unemployment. Thirdly it must be remembered that the ranks of earners include many persons who are temporarily out of employ. The general census instructions lay down that persons who are only temporarily out of work are to be shown as earners under their normal or previous occupation and that persons who are so permanently (or from the beginning) without employment should be returned as dependent. These instructions of course are primarily meant for workers in seasonal factories, cultivators and agricultural labourers in their slack months and such like. But the earners' total undoubtedly includes many cases of genuine unemployed who are temporarily out of work and suffering real distress on that account, about whom the census cannot afford any clue. Not only that but the general instructions are not precise. "Temporarily" was not defined—no limit of time was purposely set, because even if it was set, the census staff would not have been able to make effective use of it and get really reliable data. The time element comes into the special unemployment census, but as most of the real unemployed escaped our net, it was futile in its operation.

264. Corrected Estimate of the Unemployed—With these preliminary considerations we proceed to analyse the results. The marginal figures are the

AGE PERIODS	Working and non-working dependents (males)			
	English Literates	Literates in Vernacular	Illiterate	Population
20 — 30	2,923	10,838	14,251	28,322
30 — 40	310			
Proportion per Mille for Age Period 20—40	214	81	66	77

summary of State Table XIV-B for the whole state. We find that more than one-fifth of the literates in English are dependent. From this number, the students in colleges and high schools will have to be omitted. 570

males are students of the college here who are aged between 20-30. 605 others of these ages are enrolled in high schools and other institutions of the secondary stage. This number does not include persons studying in colleges and schools outside the State but were residing here at the time of the census and counted as part of our population. Further the dependent total of 3,233 does not include the temporarily unemployed, who are compiled as earners under the instructions issued for the census, to which reference has been made already. These two factors may be said to cancel each other. This leaves us with 2,058 males educated in English and aged between 20 and 40, who are really unemployed, instead of the meagre 270 who returned themselves as such. As the number deducted falls within the first of the two adult age-groups, those aged 30-40 form only a little over 10 per cent of our estimate of the total adult unemployed amongst the English educated. Our corrected figure for the unemployed reduces the proportion of true dependency amongst the English literates from 214 to 136 per mille. Amongst the literates in the vernacular, there are only about 186 males aged 20 and over studying in the primary schools. As a set off to this figure, we have to include say 500 males entered as earners under the "temporarily

out of work clause" referred to in para 263 above. Thus there remain 11,202 adult unemployed males who, though not educated in English are still literate in some language (presumably their own vernacular). To the illiterate group of unemployed we add 802 (being the *pro rata* figure of the temporarily out of work entered as earners) and thus get 15,053 as the true extent of unemployment in the State amongst the illiterate. Adding the figures for the three sections, together the true volume of unemployment in the State is 28,313 amongst the adult male population, that is to say, one out of thirteen male adults is unemployed: in other words 78 per mille of adult males are really out of work. These 78 are made up of 41 illiterates, 31 literates in the vernacular and 6 educated in English. Our estimate for the unemployed amongst the English literates can be distributed in the different divisions as in the margin. The problem is the acutest in Central Gujarat, probably in Charotar, where English education of the secondary type is widespread.

NATURAL DIVISION	Estimated No. of adult unemployed amongst the English literates	Proportion per mille of unemployment
State	2,058	136
City	622	141
Central Gujarat	703	176
North Gujarat	379	118
South Gujarat	273	115
Kathiawad	81	73

265. Non-working Dependency by Caste—A more intimate view of

the unemployment problem is provided by the results revealed in State Table XIV-A, in which in selected castes, non-working dependents are distributed by sex and age-groups. The marginal table summarises the main facts from State Table XIV-A. The Advanced groups show the acutest stage of dependence, particularly amongst Parsis, Brahmans, Vantias and Maratha - Kshatriyas. The Indian Christians are being rapidly educated in English and among them unemployment is also acute. In fact the higher is the literacy, the greater is

NON-WORKING DEPENDENCY			
CASTE	Male non-working dependents 17 and over	Total male strength 17 and over	Proportion per mille aged 17 and over of non-working dependents
<i>Advanced</i>			
Brahman	4,480	40,612	110
Vania	2,817	27,011	104
Maratha-Kshatriya	422	4,319	97
Parsi	266	1,836	145
Lewa Patidar	4,254	73,498	58
<i>Intermediate</i>			
Anjana Chaudhari	492	11,697	42
Kadwa Patidar	2,973	61,271	49
Rajput	1,201	29,822	40
Indian Christian	210	2,152	98
Muslim	2,159	34,077	63
Baria	544	31,741	17
<i>Illiterate</i>			
Talabda	610	16,774	36
Thakarda	2,217	53,793	41
Depressed Classes	2,542	52,006	49
Primitive and Forest Tribes ..	2,643	83,171	32

the extent of dependence in the social groups. The Intermediate and lower classes which do not look down on manual labour show a far less extent of adult dependency. The cultivating classes (Kadwa and Lewa Patidar and Anjana) show a comparatively high incidence in this respect, partly because agriculture has begun to show the operation of the law of diminishing returns, and partly also because vast new masses of workers from other classes are being turned on to the land, throwing the able-bodied amongst the true farming class out of employment.

266. Traditional Occupation in Different Castes—One other direction in which the figures throw light on the social changes is the extent to which the different castes are keeping to their traditional occupations. The marginal table has been prepared from the Subsidiary Table V for this purpose: selected castes have been arranged into (i) high figures, where the proportion of workers

(earners) in the traditional occupation is 500 per mille and over and (ii) low figures, where the ratios are below this limit. The castes taken are representative

CASTE	Traditional Occupation	Number per 1,000 earners in 1931	Number per 1,000 workers in 1921
High Figures			
Darji	Tailor	940	964
Soni	Goldsmith	839	863
Sutar	Carpenter	796	761
Thakarda	Cultivator and Agrestic Labourer	795	..
Lewa Patidar	Landlord and Cultivator	790	817
Shrimali	Trader	770	748
Mochi	Shoe-maker	734	791
Anavala	Landlord and Cultivator	710	785
Luhana	Trader	725	651
Kadwa Patidar	Cultivator	679	836
Lad Vania	Trader	554	538
Memon	Trader	626	700
Dishawal Vania	Trader	613	614
Kumbhar	Potter	364	600
Bhangi	Scavenger	366	532
Low Figures			
Vankar	Weaver	234	251
Maratha-Kshatriya	Public Force	230	259
Audich Brahman	Priest	209	207
Mewada Brahman	Priest	197	100
Pinjara	Carder	164	235
Deshastha Brahman	Priest	98	96
Saiyad	Priest	69	86
Ravalia	Tape weaver and drummer	60	150
Shenva	Rope-maker and Village watchman	46	32
Rajput	Public Force	30	31

samples. Amongst high ratio castes, Vantias are traditionally traders, but Shrimali shows a high incidence and Lad a relatively low one, of the traditional occupation. The low figures regarding traditional occupation are instructive. Not all Brahmans are priests even by tradition; for Anavalas are landlords and cultivators, Nagars (at least a section of them) despise the calling of priesthood, and Tapodhans are only in the humble business of temple service. Audich amongst Brahmans shows the highest proportion of workers as priests; even then hardly one out of five earners among them follows the hereditary calling. Rajputs are supposed to be the hereditary soldiers of India and yet in this State, only 3 per cent follow the profession of arms. Audich Brahmans have drifted to a variety of other occupations (land with 251 earners per mille, professions with 160, trade with 110 and public administration with

65). Rajputs have largely gone in for cultivation (643 per mille). Maratha-Kshatriyas have still some interest in arms, but hardly one in four workers among them follows that calling; of the rest of them 20 per cent have crowded the public offices and 14 have found scope in Industry. Amongst Vankars, only 23 per cent are weavers, but 38 per cent are field labourers and 18 have taken to farming as owners or tenants. Turning to Saiyads only 7 per cent of their earners have stuck to their old calling of religion: 21 have drifted to cultivation and 21 have found employment in the services or the professions.

The marginal table given above also attempts a comparison with the proportion of workers in the traditional occupation in 1921. Strictly no comparison is possible as the basis of the figures is different. Broadly one or two conclusions follow. The unclean occupations are being gradually deserted. Bhangis and Shenvas have taken more and more to other callings. This is a serious matter, as the sanitary services already understaffed in the rural areas are in peril of being seriously in want of workers in the near future. Secondly the artisan groups show little tendency of leaving their old professions. Where power has displaced the hand, and public taste has altered, there some of the traditional occupations are rapidly giving way before modern forces. Thus enamelled iron wares have invaded where the potter's humble stock in trade held sway. The patent lanterns are rapidly transplanting the earthenware lamps. It is no wonder therefore that the Kumbhars are fast giving up their traditional calling. The Vania and other trading castes are still tenaciously clinging to their ancestral profession. But as to the other advanced groups, the more educated they become, the more they tend to move away from their old moorings. Lastly the groups that had hitherto held steadfastly to the land are showing signs of a wavering faith in its capacity for unvarying return.

267. Subsidiary Occupations—One other point of general interest may be briefly discussed before the figures of individual occupation are taken in hand. The question of subsidiary occupations is always of great economic interest but the census by the very limitation of its functions is of little use in this regard. The Census Act expressly prevents the enumerating staff from enquiring into the size of an individual's income and yet the distinction between the principal and subsidiary occupations is based on the extent of earnings received from either. The earner himself does not much appreciate this distinction. He would rather put forward the occupation from which he derived the greater prestige as his principal one, relegating to the background the other calling from which he may be deriving more income. I was myself an interested listener to a wordy argument between one of my enumerators and a government servant, unacquainted with census intricacies. The latter held that although as owner of a little plot of tobacco land in Charotar he was actually earning more money than his pay as a government servant, he would prefer to return public service as his principal occupation to which he devoted more time, and from which he derived his status and social position. There was a good deal to be said for his point of view but the census instructions were precise and inexorable, and his personal predilections had to be set aside. But really on the whole we get so little out of the record of subsidiary occupations that it is a question whether on future occasions of economic survey this important item should not be entrusted to other agencies less amateurish, more qualified, and with more time at their disposal than the census staff of enumerators. That the census record of subsidiary occupations is woefully incomplete is apparent from the fact that out of 10,000 of the population, 4,955 are workers. These workers are divided into 4,684 who have returned only one occupation and only 271 (or about one-eighteenth of the working population) who have sported one or more subsidiary. Only if we divided the earners into two broad groups of agricultural and non-agricultural, we can see how each class reacts on the other in the occupational field. The marginal table takes the number of earners in each class, and proportions of those who have shown the other class as subsidiary are calculated and shown side by side. It is natural that where agriculture is the most dominant system there all other occupational groups will be more influenced by it than *vice versa*. That is what the marginal figures emphasise. Women of course are far less affected than men. As to the agricultural population, if the figures are to be believed, it would appear that in spite of the ample leisure on their hands, few workers have betaken themselves to other sources of subsidiary income. That the agriculturist in the State, as in India elsewhere has leisure cannot be doubted. Mr. Calvert in his study on *The Wealth and Welfare of the Punjab* estimates that the work done by the average cultivator covers not more than 150 days in the year, and that even when he is occupied, his idea of a full day's work is more leisurely than a farmer's in the more progressive countries of Western Europe and America. Perhaps the remark is not exactly true for this State. The days of leisure are fewer in Gujarat and the ideas of work more efficient and sustained. But for at least half the year a cultivator is idle; and yet it is tragic to think that so few of them are engaged in other occupations. The problem is complicated however by many factors into which it is not possible to enter here in any detail. In the first place the farmer's leisure is not so continuous as one would imagine. His work is often intermittent. Particularly if he is the owner of an irrigated farm as in Charotar, he has far less leisure than others. This circumstance results in lack of training in other occupations, which weights a farmer from the very outset even if he has the desire to work on a subsidiary trade or industry. He cannot obviously join any new industry without previous training. Further there is not much scope or opportunity for such work. A farmer would most like an opening somewhere near his holding for subsidiary activity. This is very seldom the case under present conditions. Again religious

SEX	NUMBER PER MILLE OF EARNERS ONLY AMONG	
	Agriculturists who show some non-agricultural occupation as subsidiary	Non-agriculturists who show agriculture as subsidiary
Male	65	121
Female	20	36
Both sexes	54	99

prejudice is a great hindrance often to the Gujarat peasantry, who is predominantly Hindu. Sericulture or poultry farming will therefore not have any appeal for them. Lastly the lack of marketing facilities at present hamper progress in any activities undertaken in this behalf.

§ 4. ANALYSIS OF CERTAIN PRINCIPAL OCCUPATIONS

268. Agriculture—We shall now take up some of the chief occupations and discuss some of the features of interest that the figures reveal. We shall commence with Agriculture, the principal occupation of the people. Altogether 630,814 persons returned themselves as earners under ordinary cultivation. In 1921, the number of workers was 547,634. The two figures are not exactly comparable, as we know that many now returned as working dependents must have been shown as workers in 1921. This is most likely to have happened with female workers. If we confine ourselves only to males, the number of earners now is 449,001 while that of workers in 1921 was 382,452, the increase being 17 per cent. Cultivating owners (males) have increased by 15,470, or only 6 per cent to 292,478. The factor of working dependency however vitiates the comparison, but in land-

CLASS	WORKERS IN		
	1931	1921	1911
Landlords and other non-cultivators.	20,731	6,787	9,919
Farm servants and agricultural labourers.	200,304	179,271	201,224

lords and other rent receivers at one end and agricultural labourers at the other end, we have the only two classes in agriculture in which working dependency is normally not expected to exist. Here we have some basis of comparison with past figures. The number of workers in these two grades is compared

for the last three censuses. The figures do not show any features worth noting. The increase under landlords and other non-cultivators is more apparent than real; as soon as a cultivating owner can afford to do so, he would wish to pass off as a landlord and zamindar. Possibly some proportion of the increase is due to inflation on this account, but there is a real increase in this class as evidenced by the fact that large sized holdings (100 bighas and over) now number 8,180 as against only 6,835 in 1921. The strength of agricultural labour has really shrunk since 1911. The falling off in 1921 was probably due to better record in the previous census, of labourers and workmen otherwise unspecified numbering 42,828 in 1921 as against 27,931 in 1911.

269. Distribution of Agriculturist Groups—The Hali System—The marginal table proportions the agricultural workers to a 1,000 of the working population in each division and distributes this ratio amongst the different grades of workers on the land. The two most marked features are the very high proportion of agricultural labourers (farm servants) in South Gujarat, and the even higher proportion of cultivating owners in North Gujarat. South Gujarat is the home of the peculiar system of indentured labour not far

AGRICULTURIST GROUPS	DIVISIONAL DISTRIBUTION—PROPORTION PER MILLE OF WORKERS IN				
	State	Central Gujarat	North Gujarat	South Gujarat	Kathiawad
All Agriculturists ..	676	647	670	768	618
Non-Cultivators ..	17	20	20	6	14
Cultivating owners ..	420	316	538	345	395
Cultivating tenants ..	71	118	24	115	22
Agricultural Labourers and Farm-servants.	166	189	85	301	115
Estate Agents, etc. ..	2	4	3	1	2

removed from serfdom which is known as the *Hali*. The *Halis* or permanent farm servants are mostly recruited from the Raniparaj tribes. They receive money in advance from their employers and bind themselves

by a written or oral agreement for a number of years to work out the debt for their masters. The master or *dhaniamo* on the other hand generally takes care to see that the debt is not cleared by plying his servant with more advances, and if he happens to be a Parsi, and a liquor seller to boot, he has a ready supply of a more effective inducement to keep his serf by his side. There are two chief types—the *bandhela* and the *chhuta hali*. The former is bound as a serf and often runs away. The latter receives some wages nominal in amount but within the meaning of the Act to bring him to the class of free labourer. In July 1923, the Government of the State by proclamation declared this whole system of forced indenture as illegal and allowed the Raniparaj serf to repudiate it if he chose to. But the intentions of the Government were not properly interpreted by subordinate revenue officials and the operation of the Government's order is therefore not effective. The *chhuta hali* receiving nominal wages has indeed come to exist in large numbers, but in reality the new guise is not effective in concealing the old status. The figures for farm servants were not separately compiled in this census, but all observers agree in holding that the system is dying out, as it is no longer economical to work with *hali* labour. In the long run it is more expensive than ordinary labour.

"Forty years ago," writes Dr. Jyotindra M. Mehta, M.A. (Oxon.), PH.D. (Lond.), in his *Study of Rural Economy of Gujarat*, "it was possible to get a *hali* by advancing Rs. 50. The advance to-day amounts to Rs. 200 to 300. The maintenance of a *hali* did not cost more than Rs. 40 to 50 a year forty years ago. To-day the expenses of maintaining a *hali* come to Rs. 122 a year.

	Rs.	a.	p.	
A loaf of <i>juwar</i> of $\frac{3}{4}$ seers a day	17	8	0	a year.
Rice one seer a day	27	0	0	"
<i>Dal</i> (pulse)	11	8	0	"
<i>Juwar</i> —two seers a day	45	0	0	"
Clothes and shoes	13	0	0	"
Tobacco	8	0	0	"
	Rs.	122	0	0

270. Comparison with Revenue Statistics—All landlords and other non-cultivators and also all cultivating-owners are likely to be *khatedars* or registered holders in the State. The figures obtained of such holders from the Revenue department show very close correspondence. The burden of agricultural toil

KIND	Earners	Working dependents	No. of earners showing occupation as subsidiary	Total earners	No. of Khatedars
Landlords and other non-cultivators	20,731	..	5,958	26,689	} 357,429
Cultivating owners ..	320,152	188,940	9,453	329,605	
Cultivating tenants ..	62,123	23,555	4,970	67,093	

falls on the cultivating owners, tenants and agrestic labourers and it is found that together with their working dependents, 100 cultivators are required for tilling 0.65 square mile of 416 acres of the gross sown area. The average size of individual holdings in Baroda is only 18.7 bighas or 11 acres. The marginal table (with 1921 figures* for other provinces) compares the state of things with the rest of India. The peasant proprietary system in the State has encouraged the growth of small holdings thereby inducing a horde of non-farming classes to try their luck on the land. The result is a shrinkage in agricultural labour, but as the wage level has not risen and the prices have continued high, the economic distress and resulting

STATE OR PROVINCE	No. of acres cultivated per 100 cultivators
Bombay	1,215
N. W. F. Province	1,122
The Punjab	918
C. P. and Berar	848
Burma	565
Madras	491
Baroda	416
Bengal	309
Assam	296

* From the India Census Report of 1921, page 244.

discontent are acute among the lower grades of labour which live on the margin of subsistence. The reactions of the influx of a non-farming class into agriculture are seen in various ways. Standards of agricultural produce have in a manner deteriorated where these classes have squatted on the land. In

Food	Yield in Maunds of 40 pounds (000 omitted)		
	1910	1920	1930
<i>Food Crops</i>	24,079	11,197	18,194
Rice	4,852	1,957	2,900
Juwar	7,361	4,430	5,561
Bajri	7,177	3,113	6,638
Kodra	1,505	706	1,341
Pulse	1,709	289	538
Wheat	1,475	702	1,143
Gram .. ..	..	..	73
<i>Non-Food</i>	4,978	6,959	5,139
Cotton	3,906	5,131	4,565
Sugar cane	39	190	81
Tobacco	480	263	275
Linseed	114	774	..
Rapeseed	439	601	218

other ways, they have cheapened labour and done nothing to improve its efficiency. Lastly they have strengthened the tendency to grow food crops of the coarser variety in preference to non-food. Although as we have seen in Chapter I that the proportion of cultivated area sown with food crops has not declined, the yield of non-food crops shows an increase since 1910. Compared to 1920 however, the non-food crop yield is less. But the reader must be cautioned here that the crop yield figures are not accurate being largely the guess work of *talatis*. The 1920 figures of yield of food crops were perhaps exceptional coming as they did after the great drought of 1919, but compared to 1910, there is a real decline in the production of food grains, in

comparison with which the fluctuations in the yield of cotton are not serious. The contraction in the yield of luxury foods is even more serious than the commoner staples, proving that the newer classes who have taken to the

YEAR	Average Area (in bighas) of land transferred annually from agriculturists to	
	Agriculturists	Non-Agriculturists
1909-12	46,712	16,260
1912-17	79,156	18,969
1919-20	88,828	34,019
1920-25	83,411	20,472
1925-26	83,887	28,979
1926-30	55,168	13,820

land are not yet trained to grow such crops. In the meantime the figures of transfer of land through sale from agriculturists to non-agriculturists show that the movement grew in strength from 1909 until the end of 1926 when a decline has set in. The exceptional year of 1919-20 forced the pace of this movement for a while. Perhaps any further increase in this direction will mean widespread changes in the rural economy. In various ways it is seen—to quote from what I wrote in 1921—“that the true agriculturists are feeling the necessity of change. The contraction of credit due to many forces, . . . the rapidly diminishing surplus of available land, the influence of modern education and thought weakening the ties that have hitherto

bound the cultivator to his soil, the insistent call of the towns with their industries and their higher wages to the aspiring youths of the countryside—all these are causes that operate in this respect.” That these forces have so far been retarded is due mainly to the unpreparedness of the Indian worker to move out of his old moorings and venture into untried fields of industrial enterprises. The lack of capital due to the contraction of money in the maelstorm of world forces has also operated to prevent the accomplishment of large schemes. Lastly one would mention that the wage-level has been prevented from rising, because of the helplessness of the underdog in the agricultural industry, the unorganised labourer, who seeking perforce a refuge from other fields has so far been unable to drive a hard bargain. Thus the cost of production has not increased appreciably, although the prices of food grains have fallen.

271. Industry : General Distribution—After agriculture, the next in importance, *cum longo intervallo* is Industry (Sub-class III) which has 13 orders and 59 classes. Some of these do not occur in the State at all such as industries connected with jute of such importance in Bengal, manufacture and refining of mineral oils and manufacture of *ganja*. The main industries in the State are connected with textiles, the common rural occupations like

Order	Name of Selected Industries	Proportion of earners and working dependents per 1000	Proportion of actual workers per 1000 in 1921	Actual number of workers and working dependents	Number of skilled and unskilled factory workers	Estimated number of cottage workers
	All Industries ..	170.1	121	129,660	20,127	105,141
5	Textiles	31.8	31	38,673	16,789	18,358
6	Hides and Skin, etc ..	6.6	7	8,036	..	8,036
7	Wood	10.9	13	13,293	..	13,293
8	Metals	4.5	6	5,476	398	5,026
9	Ceramics	11.4	15	13,887	334	13,489
10	Chemical Products ..	3.5	5	4,281	1,305	2,702
11	Food Industries ..	4.6	5	5,647	133	5,406
12	Dress and Toilet ..	18.3	22	22,205	..	22,205
14	Building Industry ..	5.1	7	6,172	586	5,476
13, 15, 16 and 17	All other Industries ..	10.6	10	11,990	582	11,150

carpentry, food industries such as rice pounding and husking of corn, industries connected with iron and other metals, tailoring, building, pottery and shoe-making. The question of decaying industries will be considered briefly in an appendix. The distribution of the main orders is shown in the margin. The most important groups are the textile industries that are ancillary to the cotton crop, the chief non-food product of the State. Subsidiary Table IV gives the absolute figures of earners and working dependents in the main orders and groups with the corresponding total of workers in 1921. The figures are not exactly comparable as so often pointed out, because of the intrusion in the present census of the factor of working dependency; any discussions therefore of variation in absolute figures will be out of place. The proportionate variations also do not call for much notice as the proportionate distribution of earners and working dependents in 1931 is practically the same as that of workers ten years ago, except that the relative strength of workers in ceramics and dress industries has visibly declined.

272. The Textile Group—31 per mille of total workers in the State are engaged in this important branch of activity as their principal occupation. 2 per mille have shown other occupations as principal and some branch or other of textiles as their subsidiary. Possibly as hand weaving and spinning is receiving wide encouragement, the figures of only 787 earners who have returned cotton spinning, sizing and weaving as a subsidiary occupation cannot be accepted as a complete record. The number of workers on the ginning, cleaning and pressing of cotton can be compared profitably with the corresponding figure of workers in 1931, as no working dependents in these processes were recorded. The variation shows an increase of over 36 per cent which occurs entirely amongst factory workers, proving that these preliminary processes of the manufacture of cotton have almost entirely passed from the hand workers to factories using mechanical power. Dyers and calenderers have increased slightly, but factory workers amongst them have jumped from 691 to 1,028.

273. Other Industries—Next to the textiles, which absorb 298 per mille of industrial workers, the most important individual groups are noted in the margin. Tailors and milliners have increased largely, while potters have declined. The Kumbhars have indeed increased in strength but their attachment to their hereditary calling is rapidly falling off, because of lack of demand in public taste

INDIVIDUAL OCCUPATIONS	Number of earners and working dependents in 1931	Proportion per 1,000 engaged in industry
Potters	10,416	80
Tailors, etc. .. .	9,505	73
Barbers, etc. .. .	7,141	55
Shoe-makers .. .	3,668	28
Manufacturers of Vegetable Oils, etc. ..	3,330	26
Rice Pounders .. .	2,289	18

industry, and not a few have taken to the land. The growth of rice mills in South Gujarat, and the City, coupled with the fact that rice no longer figures as largely in the dietary of the people as before, accounts for the large and continuous decrease amongst workers in rice pounding and husking and grinding of corn since 1911.

274. Cottage and Factory Workers—Next to the general distribution of industrial workers, the most significant point of interest in the statistics regarding them is their division into cottage and factory. The number of factory workers has been separately compiled from homeworkers since industrial returns were specially collected in 1921. The strength of organised workers was not compiled from the census returns in 1931, but from a special industrial schedule, devised as in 1921, and differing only in a few particulars. This schedule was supplied to all industrial establishments of the factory type, whether employing mechanical power or not. The particulars in which the schedule differed from the 1921 return are as below :—

(i) In 1921, a separate schedule was issued to the manager of each industrial establishment in the State for which purpose a preliminary register was first prepared per mahal of industrial establishments which either employed some form of mechanical power or were worked by hand. On this occasion it was decided that the census should merely settle and issue the forms of the schedule and that the actual details should be got filled in by the Director of Commerce and Industries.

(ii) In 1921, only such establishments as employed 10 operatives and more were included in the register. In 1931, we decided to do away with this minimum limit.

(iii) While we dispensed on the present occasion with details of the kind of power employed, the differentiation of skilled and unskilled, and the caste of operatives, we decided to enter details re : the welfare staff employed.

(iv) Lastly we did not in this census have a special enquiry relating to cottage industries, as on the last occasion we were not able to collect reliable data and the Commerce department and the local revenue staff produced rival lists of cottage industries between which the statistician had to flounder as best as he could.

The marginal table in the preceding paragraph gives the distribution of cottage as against

NAME OF INDUSTRY	Cottage workers		Factory workers	
	1931	1921	1931	1921
All Industries ..	107,337	93,380	22,323	11,225
Cotton manufacture ..	18,552	16,623	17,524	8,130
Dyeing	1,569	1,333	1,028	691
Chemical Products ..	2,839	3,832	1,442	207
Building Industries ..	5,531	6,116	641	143
Other Industries ..	78,846	65,476	1,688	2,048

factory workers in each order of Industry. We can compare the main variations since 1921, always remembering in regard to cottage workers that the figures of the two censuses do not exactly correspond. The factory workers will be dealt with presently, but the increase in cottage workers is largely discounted by the fact that their number now includes working dependents, who were not shown as workers in 1921. Generally the conclusion is indubitable that cottage workers have not progressed at all. The male earners (amongst the home working) now number 70,624, while the male cottage workers in 1921 totalled 68,869; thus there is an increase of only 2.2 per cent. This rate of variation may be accepted as real for the whole range of cottage industries.

for the higher and more artistic varieties of the potter's art. The most inefficient of the Kumbhars are stuck to the cruder products which are all that the poor will need, but the better and more ambitious sections are seeking more lucrative outlets for their talent. Some have invaded the carpenter's preserve, others are in the building

275. The Industrial Return—The number of factory workers in 1931 is 22,323; these were working in 233 factories which furnished returns out of the total of 275 industrial establishments. The following Table sets out the main facts regarding the industrial concerns in the State. A diagram is also attached illustrating the strength of factory operatives in each kind of industry :—

Serial Number	INDUSTRY	Number of establishments registered	Number of establishments furnishing returns	Total persons engaged			Directional Supervising and Clerical staff		Welfare staff		Operatives	
				Persons	Males	Females	Indian	Other	Males	Females	Males	Females
1	2	3	4	5	6	7	8	9	10	11	12	13
	All Industries ..	275	233	22,323	18,025	4,298	2,074	43	75	4	15,833	4,294
1	Cotton Ginning and Pressing Factories ..	146	117	8,088	5,783	2,305	932	34	..	..	4,817	2,305
2	Cotton Weaving and Spinning Mills ..	8	8	5,883	5,222	661	317	..	39	1	4,866	660
3	Cotton Spinning Mills ..	6	6	3,158	2,532	626	296	..	31	3	2,205	623
4	Woollen Mill	1	1	359	326	33	23	..	..	..	303	33
5	Cotton and Silk Weaving Factories	3	3	36	35	1	11	..	..	..	24	1
6	Dyeing Factories ..	3	3	1,028	1,027	1	74	..	2	..	951	1
7	Iron Factory	1	1	29	29	..	1	..	..	..	28	..
8	Brick and Tiles Factories	6	6	366	249	117	28	4	..	..	217	117
9	Kalabhavan Workshop	1	1	38	37	1	5	..	..	..	32	1
10	Railway Workshop ..	1	1	357	356	1	19	1	..	..	336	1
11	Stone Quarry Works ..	1	1	370	265	105	27	..	1	..	237	105
12	Match Factory	1	1	466	351	115	17	1	..	..	333	115
13	Chemical Drugs Works	3	2	170	159	11	44	..	..	..	115	11
14	Oil Mills	14	7	102	93	9	17	..	..	..	76	9
15	Soap Candle Works ..	2	2	30	29	1	9	..	..	..	20	1
16	Chocolate Factory ..	1	1	8	6	2	1	..	..	..	5	2
17	Flour Mills	19	19	71	68	3	17	..	..	..	51	3
18	Distilleries	2	2	85	58	27	20	..	..	..	38	27
19	Water Works	3	2	14	11	3	..	..	..	..	11	3
20	Sugar Factory	1	1	101	91	10	32	1	..	..	58	10
21	Candied Sugar Manufacturing Factory ..	1	1	7	7	..	3	..	..	..	4	..
22	Salt Works	1	1	568	313	255	25	..	..	..	288	255
23	Cement Works	1	1	271	267	4	23	2	2	..	240	4
24	Electric Works	5	3	295	209	5	56	..	..	..	133	6
25	Ice Factories	3	1	19	19	..	4	..	..	..	15	..
26	Printing Presses ..	41	41	403	402	1	62	..	..	..	430	1

NOTE :—Of the above total of registered establishments, so many as 42 establishments did not furnish returns, presumably because most of these were not working on the Census day.

276. Distribution of Factories by Division—The following Table shows how the industrial establishments are distributed in the different divisions :—

NUMBER AND DISTRIBUTION OF FACTORIES IN BARODA STATE										
KIND OF FACTORY	Total State		Central Gujarat Including City		North Gujarat		South Gujarat		Kathiawad	
	Total	Included in the special return	Total	Included in the special return	Total	Included in the special return	Total	Included in the special return	Total	Included in the special return
Cotton Weaving and Spinning Mills	8	8	4	4	2	2	2	2	..	..
Gins and Presses (including Cotton Presses)	146	117	71	55	32	28	23	15	20	19
Dyeing Factories	3	3	3	3	..	..	..	..	..	..
Flour Mills	19	19	13	13	..	..	5	5	1	1
Oil Mills	14	7	5	2	2	2	5	2	2	1
Chemical Works	3	2	3	2	..	..	..	..	..	..
Ice Factories	3	1	2	1	..	..	1	..	..	..
Printing Presses	41	41	28	28	8	8	5	5	..	..
Miscellaneous	38	35	16	14	7	6	11	11	4	4
TOTAL	275	233	145	122	51	46	52	40	27	25

**PYRAMID SHOWING THE STRENGTH OF FACTORY WORKERS
IN DIFFERENT INDUSTRIES IN BARODA STATE**

SUGAR FACTORY	101
OIL MILLS	104
CHEMICAL DRUGS WORKS	170
ELECTRIC WORKS	204
CEMENT WORKS	271
RAILWAY WORKSHOP	357
WOOLLEN MILL	359
BRICKS & TILES FACTORIES	366
STONE QUARRY WORKS	370
MATCH FACTORY	466
PRINTING PRESSES	493
SALT WORKS	568
DYEING FACTORIES	1,028
COTTON SPINNING MILLS	3,158
Cotton Weaving and Spinning Mills 5,883	
COTTON GINNING, PRESSING Etc. FACTORIES 8,088	

More than half of the factories included in the special return are concentrated in Central Gujarat, the City alone having 43. The largest number of concerns are connected with the cotton industry. Printing Presses form rather less than a sixth of the total on the register, about half of these being in the City. Flour and Oil mills are the next two important items in the list. Dyeing factories are confined to Central Gujarat (in Petlad town and Baroda City). Under "miscellaneous" are included public and state concerns like the water works, the Kalabhavan (Technical Institute) workshops, the Electric works and the Railway works.

277. Analysis of the Industrial

Return*—In 1921, only 161 industrial concerns were recorded in the census. In 1931, the number has increased to 275. The number of persons employed in the 233 factories furnishing returns was 22,323 (including 4,298 females). The directional, supervising and clerical staff totalled 2,117 or nearly one-tenth of the factory population. Non-Indians numbered 43 amongst these as against only 4 in 1921. The welfare staff of 79 persons (including

*I am indebted for this paragraph to a note kindly supplied by the Director of Commerce and Industries of the State.

4 females) were mostly confined to the cotton weaving and spinning mills. The industrial expansion foreshadowed rather optimistically in the last Census Report (para 55) has indeed continued, but not to the same extent to which the boom period would have led one to expect. In the aftermath that followed, projects that were conceived on a large scale had to be abandoned, or else curtailed,—some failed owing to want of proper management and some did not go beyond the initial stages. This was evidenced by the shrinking of the nominal capital of joint stock concerns from about 8 crores in 1921 to 7 crores at the end of the decade, thereby showing that some old projects had to go into liquidation and were afterwards reconstructed. The amount of paid-up capital, however, increased from Rs. 151 lacs to Rs. 311 lacs in ten years. The increase in the number and strength of industrial concerns has been mainly in the direction of the textile trade, but on the whole, the Industrial return of 1931 has a wider variety than that of 1921. Various small industries, however, which could not be listed in 1921 by reason of their size, did not, for the same reason, find a place in the latest return, although on the present occasion we did not specifically exclude industries employing less than 10 workers. Apart from textiles, the extension of power is most strikingly illustrated by the increase in the population served by electricity which is now 180,571 having grown from 94,712 in 1921. The number of kilowatts registered in 1931 was 2,581 against only 700 ten years ago. A third index of industrial expansion is seen in the increase of factory workers from 12,000 to over 22,000. Okha Salt Works is the most individual achievement of the industrial history of the decade, and its possibilities have been recognised by the Government of India. The mainstay however has been in the cotton industry in which the spindles have increased from 53,428 to 230,416, and the number of looms from 722 to 3,382. Petlad and Navsari have now become important mill centres, Kalol and Kadi enterprises are now under reconstruction, and Bilimora retains its position as a centre for oil milling. Generally the cottage industries and handicrafts have suffered a further set-back owing to competition from organised industries. This has been so in spite of the fact that the pendulum of popular favour has swung towards hand-made and home-spun enterprises. Recently surveys in two different areas showed that this industry was languishing. Hand-spinning was kept alive through the urge of political stimuli, but the results achieved so far do not point to any lasting progress in this direction.

278. Trade—Coming to Trade, we see that out of 67,065 workers nearly one tenth are found in the City although its population is even less than 5 per cent of the State. The workers in this class are mainly concerned with industries of exchange. As pointed out in 1921, the differentiation between preparation of material substances and their exchange does not largely obtain in India. Further in rural areas and even in towns also of the average size, we find that shopkeepers do not specialise in any one commodity. "Oil sellers will also deal in grain. Money lenders sometimes vary their pleasant transactions with dealing in piece-goods." The miscellaneous store of the *manjara* persists as a feature of the countryside. It is therefore difficult to attempt any detailed analysis. The

margin collects the principal groups of trade and commerce, distributes them proportionately to all workers in trade, and considers the variation of the strength of earners in each as compared to the corresponding figures of workers in 1921. The number of working dependents has been omitted in the comparison, as it is presumed that very probably they were not included amongst workers ten years ago, so that the basis of the figures is made to approximate as far as possible. The general increase of workers in this branch would seem to be

CLASS OF TRADE	Number of earners and working dependents	Proportion per 1,000 engaged in trade	Variation of earners from number of workers in 1921 (per cent)
All Trades	67,065	1,000	+ 17.5
Bankers, Money-lenders, etc.	6,417	96	+ 19.0
Traders in Textiles ..	5,877	88	+ 22.0
Grain and Pulse dealers ..	13,180	197	+ 12.5
Sweetmeat, etc. dealers ..	13,595	203	+ 32.8
Dealers in tobacco, opium and ganja	3,339	50	+ 160.0
Other traders	24,657	366	+ 17.0

more than the increase in the population, and that would appear to be a real variation. As we have seen while discussing variations in the occupations of English literates, trade has begun to oust public services from the first place as their favourite occupation. The increase amongst bankers is a contrast to their decline registered in 1921. That decline was explained by the spread of the co-operative movement in the State. This movement has gone on expanding since, but what

has happened appears to be this: the indigenous money-lending class with its local organisation of credit has begun to capture to some extent the co-operative movement in many places by allying themselves with co-operative societies, apex banks and agricultural banks. On the other hand the tendency for the large scale farmer to try his fortunes as a money lender has also increased of recent years. Grain dealers increased by 27 per cent in 1921 and only 12 per cent in this census. Possibly the fluctuations are in a large measure due to the whim of individuals about returning their subsidiary occupations. Moneylending and dealing in grain often coalesce themselves in one and the same person in most villages; and a money lender may call himself such in one census and a grain dealer in the next. The two combined give 14.6 per cent as the rate of increase, which may be regarded as the true variation for either. The large increase under trade in textiles is partly due to a rise in indigenous cloth shops but also because of the fact that the census return often confuses between the maker and the seller of cloth. The variations amongst cottage workers in textiles are in part governed by this latter cause.

279. Public Force and Administration—The Public Force includes Imperial and State forces, the police and the village watchmen. Public Administration includes persons in the general service of this State, British India and other states, including municipal and village servants, but excluding persons employed in technical and professional services, such as surveyors, engineers, doctors and teachers. A special group under this sub-class (Group 152/1) was opened for this census, for the Ruler of the State, as it had the honour of counting His Highness the Maharaja. As these sub-classes do not usually admit of working dependency, it is possible to make useful comparisons from census to census. The figures in

GROUP	Earners	Variation per cent since	
		1921	1911
Total	26,379	+ 3.9	— 0.1
Imperial Army ..	541	+ 621.3	— 29.7
State Forces ..	3,615	— 10.0	— 27.0
Police	4,544	+ 13.6	+ 14.0
Service of the State ..	8,845	— 18.6	— 25.3
Other service ..	8,834	+ 37.2	+ 81.9

the margin show the variation under main heads of workers since 1911. The British Indian regiment at the Camp accounts for the item of Imperial Army in the returns. In 1921, the old regiments were under orders of transfer and most of them had left Baroda when the census was taken. In 1931, they were not in their full strength. The State Army shows a decline of 27 per cent since 1911, on account of the policy of reducing effectives which has been

pursued since that date. The police has increased since 1921, both in efficiency and personnel. The figure under general administration of the State shows a large decrease which is continuous since 1911. The policy of His Highness's Government has been to retrench in the number entertained in the service, while increasing their pay and prospects.

280. Caste and Qualifications of the Servants of the State—The distribution of earners by caste in the public force and administration discloses an interesting state of affairs. Imperial Table XI-B gives the details. The gazetted

CASTE	No. of gazetted officers in the civil administration in		
	1931	1921	1911
Brahman	95	231	416
Lewa Patidar ..	50	89	53
Maratha	42	72	53
Rajput	9	27	11
Vania	37	74	42
Muslim	25	94	27
Indian Christian ..	1	8	..
Parsi	4	12	17
European and Anglo-Indian.	8	12	12

officers of the State Army are almost entirely limited to Marathas (30) and Muslims (6). The sepoys are recruited mostly from Marathas (1,060), Muslims (500), Brahmans from Upper India (428), and Rajputs (314). In the police, the officers are not differentiated from the men in the table. The force relies largely on Muslims (1,229), Brahmans (488), Rajputs (481), and Marathas (302). In the general service of the State, the different castes represented in the gazetted

ranks are shown in the margin for the last three censuses. The term "Gazetted officer" is apt to be interpreted differently. In 1911 any "amaldar" dispensing authority was deemed a gazetted officer. In 1921 and still more in 1931, the term was restricted to officers of the status of a *mahalkari* or thereabouts. Brahmans and Patidars still retain their pre-eminence in this line while Marathas and Vantias are advancing in usefulness in the service. Amongst Brahmans, the Deccani speaking section however has largely decreased. Out of the employés of the State in all branches, including the technical and professional departments, 719 are graduates, 1,521 have qualifications between the matriculation and the degree, and 1,555 are non-matriculates, but

DEPARTMENT	Strength of establishment	Graduates	Other English knowing hands	Only Vernacular knowing hands
Education	6,861	271	470	6,120
Army	3,718	6	47	3,665
Police	4,528	9	284	4,235
Railways	2,281	18	401	1,862
Revenue	1,938	97	321	1,520
Judicial	437	68	356	13
Accounts	318	28	225	65
Central Administration	154	49	88	17
Public Works ..	231	47	184	..
Khangi (Household department) ..	190	16	95	79
Medical	339	32	307	..
Development departments	457	54	177	226

knowing English. The others are only vernacular knowing hands: particularly is this the case with the subordinate staff in the Police and the Army, and the vernacular school teachers in the Education department. The chief departments are shown in the margin. The largest proportion of graduates is in the Central administration and Judicial department. Within recent years graduates have multiplied in the service with resulting improvement in the tone and efficiency of the administration.

281. Professions and Liberal Arts—In dealing with Sub-class VIII, we are confronted with a bewildering range of occupations. From artists to buffoons this sub-class covers an amazing company of people. Here architects and authors jostle with mountebanks and circumcisers, while bishops and High Court judges have to look askance at grave diggers and worm extractors: altogether 5 orders and 22 groups are comprised under this head. The principal groups are summarised in the margin. The total is practically unchanged since 1921, but the individual groups show marked fluctuations. Religious mendicants have increased by almost as much as other religious workers have declined. Priests and ministers are no longer the favourites that they were formerly but their number cannot be so few as the census record shows it: it is even less than one sixth of the figure shown in 1921. Many persons having shown *yajmanvriti* (practice of keeping disciples) are apt to be wrongly compiled as religious mendicants. The total under religion shows continuous decrease

KIND	Number of earners and working dependents	Proportion per 1,000 engaged in Sub-class VIII	Variation since 1921
Total	29,439	1,000	+ 0.8
Religious Mendicants, etc.	10,317	350	+ 46.4
Other Religious workers..	5,062	172	— 56.3
Lawyers and their clerks, etc.	877	29	+ 63.3
Doctors and Dentists ..	968	33	+ 12.7
Nurses, Midwives, etc. ..	638	22	+ 67.5
Professors, teachers, etc ..	8,667	295	+ 55.1
Musicians, actors, dancers, etc.	1,317	45	— 29.0
Architects, Engineers, Authors, Artists, Astrologers, Journalists, etc. . .	512	17	— 49.5
Rest	1,081	37	+ 69.0

however since 1911 when workers under this head numbered 24,890. Particular care was on this occasion enjoined on the census staff to differentiate between religious mendicancy proper and ordinary beggary. Amongst religious mendicants, a distinction was also made between the ordinary vagrant *sadhu* or *fakir* and the well-nourished variety who resided in *maths* or other monastic abodes. These latter were little distinguished from the religious priest or minister, except that they were *dharmagurus* while the priest officiated in domestic ceremonials and performed the rites at temples. As to other groups lawyers have largely increased. The City Bar is now crowded and young pleaders find few openings and welcome chances elsewhere. The increase in nurses and midwives is due to the large extension in medical and maternity relief to women in many towns of the Raj. Teachers show a large increase. The programme of consolidation of rural primary schools by strengthening their staffs, the increase in the number of schools and facilities for private teaching account for the growth of the teaching profession in the State. The increase in the district inspectional staff of the Education department is also a contributory factor to the variation under this head. Architects, engineers, authors, etc., have declined. But this may be due more to the caprice of the census record than to anything else. Authors and journalists may have described themselves under other names and are compiled according to what they have described. Many more modest—born to blush unseen—may be concealing themselves under “Insufficiently described occupations.” But as we shall see in the Chapter on Language, there has been a real decline in literary pursuits. Perhaps because of economic depression, the production of books has ceased to be profitable.

282. Other occupations—The other sub-classes and groups do not call for much detailed treatment. Transport workers have increased from 11,291 by 40.5 per cent to 15,863. Owners and managers of mechanically driven vehicles show a large increase as the motor cars have multiplied from practically nothing to 860 (including nearly 400 cars in the City alone) in the last ten years. As the road programme is being gradually given effect to, motor buses will cover the countryside and prove a serious rival to the train service. Persons living on their income who number 5,905, have increased by 37 per cent but this fact by itself is no index of increasing wealth as under this class are included people who can hardly be described except with a stretch of imagination as “living on their own income.” Miscellaneous “*ashrits*” (living on the charity of temples or noblemen), scholarship holders, retired public servants, mission pensioners and such like who are far from rolling in wealth, come into this category. Insufficiently described occupations form only 5.4 per cent of the working population against 7 in 1921 and 8 in 1911. The less the proportion in this respect the better is the record. The occupation census of 1931 may therefore claim to be an improvement, though only slight, on its predecessors. The last point to be noted in our general review of employments is about “Unproductive.” Beggars and vagrants have been compiled separately from disreputable occupations since 1921, as it is important to know how far the problem of vagrancy is being met by public effort and a change in social attitude. There is less danger now of religious mendicants being confused with the ordinary beggar, as the census instructions are easily intelligible and the real social distinction between the two classes is well appreciated. Beggars and vagrants show a decline from 4,865 workers in 1921 to 4,223 earners in 1931. It is difficult to imagine working dependency for this class of earner. The decline in figures is real because beggary has ceased to be profitable. Owing to lean years and economic stress, the wells of private charity are drying up. A slight change in the classification which took witches and wizards to the respectable company of letters and arts may have affected the figures also. Inmates of jails and asylums number slightly less but the point to note about them is that unlike previous censuses they are now regarded not as workers or earners but as working dependents if they are under sentence of hard labour, or as non-working dependents if they are merely undertrials or sentenced to simple imprisonment. Lastly prostitutes number 55 only as against 74 ten years back. The record here is defective as many are returned as musicians under Letters, Sciences and Arts and a good few escape record under the more respectable title of dressmakers, midwives or domestic

servants. The peculiar social conditions of Gujarat compel vice to take clandestine forms and the census cannot measure the real extent of this evil.

§ 5. ECONOMIC CONDITION

283. Conspectus of Occupational Distribution—A general review such as this of occupations must include some reference to main facts which bear on the economic condition of the people. In earlier chapters we have at various stages attempted to see how far the facts of economic relations and the standards of life have a bearing on the population growth. Changes in social habits reacting on earning power and on standards of comfort are closely connected with occupational distribution and the grades of work which divide the people horizontally have different results on the size and expansiveness of incomes. Thus a person with a fixed income has less scope for mental and physical activity in the production of wealth than one in another walk of life in which his earnings depend vitally on his intelligence and the amount of physical and mental energy that he is able to give. Thus the problem of economic providence is vitally connected with a form of occupational distribution in which the highest energies are brought into play. It is notorious that “a population on the margin of life engaged in occupations that demand considerable physical but little mental or nervous energy increases at a greater ratio than population in the higher strata of society.” We have had the truth of this strikingly exemplified in the differing ratios of progress in sections that are divided from one another by as wide a chasm as educational equipment can bring about. The first point to get hold of in a survey, even so brief as this, of economic

GROUP			Rate per cent of increase since 1921
Advanced .. ..	..	..	11.4
Intermediate .. ..	..	..	13.6
Illiterate .. ..	..	..	22.2

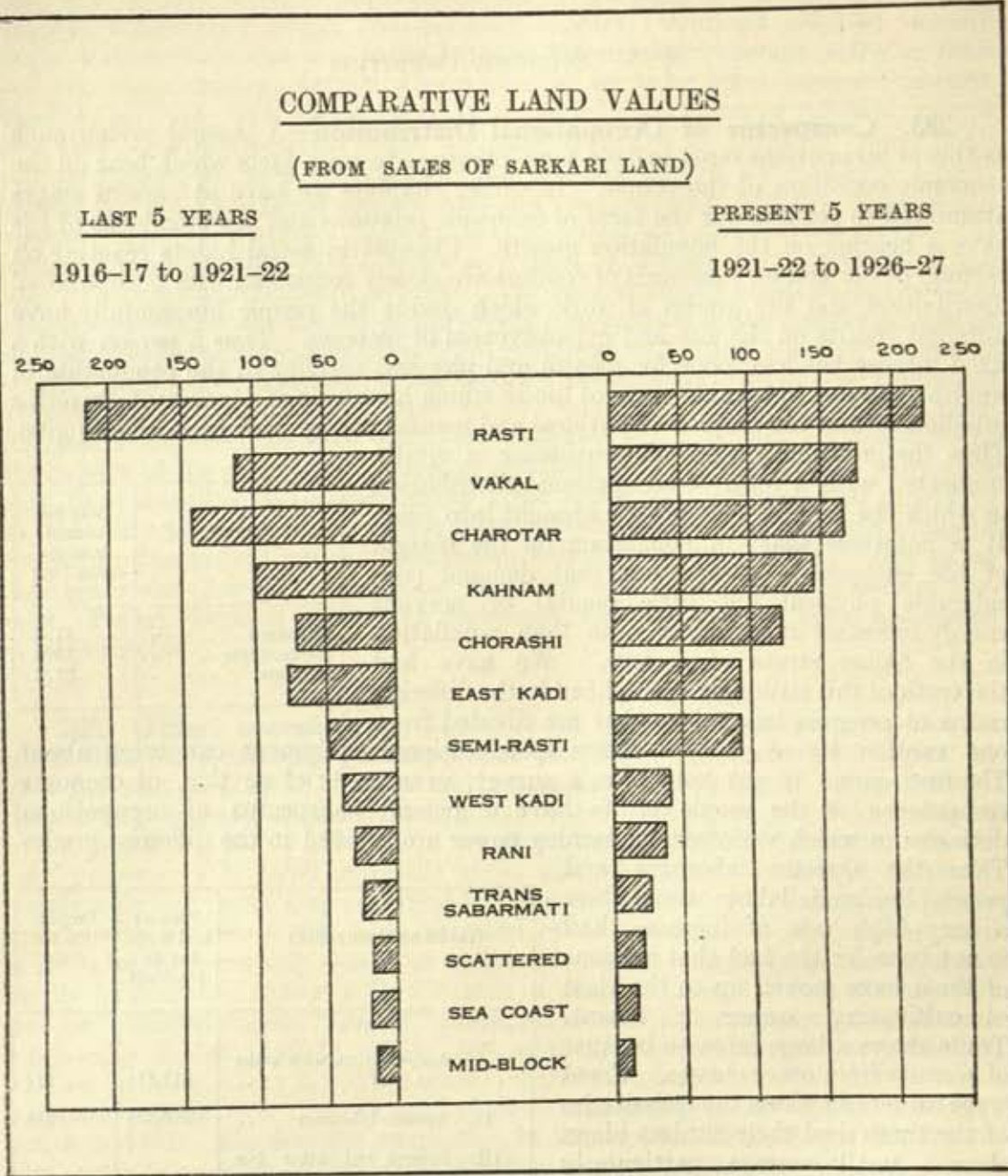
competence of the people is to have a general conspectus of occupational divisions in which variations in earning power are typified in the different grades.

Thus the agrestic labourers and general low grade labour would show a very high rate of increase, had it not been for the fact that sections of them have moved up to the class of cultivating owner or tenant. Trade shows a large increase because of recruits from other classes. Fixed wage earners on whom the vicissitudes of the times deal their hardest blows show a small increase, particularly as the scope for such employments has diminished with the stress of times. These disturbing factors which it is difficult to isolate coupled with disconcerting changes in the occupational scheme brought about from census to census occlude the operation of true causes from our view; but on the whole the proportions above adumbrated appear to be broadly true. As we shall see in the Chapter on Caste, the true agriculturists grow at a much slower rate than the labouring groups, the classes with assured economic competence have large families, while the lowest grades are fertile, thriftless and lavish in their waste of life.*

GRADE OF OCCUPATION	Earners and working dependents	Proportion per mille
I. Agriculturists with stake in land	617,375	510
II. Agrestic labourers ..	200,304	166
III. General and other low grade labour including scavenging, mendicancy and unproductive occupations ..	96,858	80
IV. Industrial workers including transport and exploitation of animals, etc.	1,70,665	141
V. Fixed wage-earners ..	42,000	35
VI. Traders	67,716	55
VII. Professional workers and living on own income.	15,557	13

* For details of how the marginal table in this paragraph is prepared, the reader must refer to para 472 of my Report of 1921. Briefly Groups 2, 3, 4, 17, 103, 105, 112, 114, 183, 189, Sub-classes V and VI and Order 48 go to form Fixed Wage-earners. The other classes are obvious.

284. Value of Agricultural Land—The changes in land values are a most essential index of the economic competence of a people. The marginal diagram is plotted giving



comparative data of land values in the thirteen natural areas in two five-year periods. Land values have markedly increased in Central Gujarat, while in other divisions they have practically remained stationary. Correlating these facts with density we find the closest correspondence in the two sets of variables.

NATURAL DIVISION	Order according to	
	Land values	Density on cultivable area
Rasti	1	2
Vakal	2	3
Charotar	3	1
Kahnani	4	5
Chorashi	5	6
East Kadi	6	4
Semi-Rasti	6	8
West Kadi	7	7
Rani	8	9
Trans-Sabarmati	9	10
Scattered Area	10	13
Sea Coast	11	11
Mid-Block	12	12

285. Size of Holdings—Even more than land values, the variations in the size of agricultural holdings have an important bearing on the wealth of the people. The marginal table shows the variations in the size of holdings, compared with population changes since 1910. As every holding corresponds to a normal family of one worker and two dependents, the rate of increase in its number should be at most one-third of the population growth. Instead, the smallest and the most uneconomic class of holdings shows the greatest rate of increase. The second largest class of holdings (between 100 and 500 bighas) shows the next highest rate of growth.

At one end the cultivating class is receiving recruits from a thriftless and improvident

set of workers, coming up from low grade labour and aspiring to peasant proprietorship. At the other, a non-cultivating type of speculative capitalists is increasingly investing in land. The former would tend to keep the level of agricultural wages low, while the latter's inexperience would leave him at the mercy of rent-paying agriculturists who would dictate terms in the matter of rent leases and get them. At the same time the agriculturist class is ceasing to be of the true cultivating kind, through modern influences. As he becomes richer and more educated he begins to despise manual toil and his women kind, as in Charotar, are imitating the ways of Brahmans and Vantias by not sharing in the labour of cultivation.

SIZE OF HOLDINGS	Variations in size with 1910 as 100 (A Bigha = 3/5 of an Acre)		
	1910	1920	1930
Below 5 bighas	100	107	120
Between 5 and 25 bighas..	100	108	115
Between 25 and 100 bighas	100	104	112
Between 100 and 500 bighas	100	104	119
500 bighas and above ..	100	125	99
Corresponding Population changes	100	104.6	120.2

286. Wage Levels—As indicated above, the result of the incursion of labouring classes into the ranks of cultivators indirectly led to a contraction in the level of wages for agrestic labour.

In 1920, as a short period effect of the war, labour got its own terms for the asking. Since then, the increase of population has led to lowered standards of living. The shifting of cultivation to marginal areas, the contraction in the produce and value of luxury crops, the lower efficiency of the new type of agriculturists, the impact of lean years—all these have helped

DIVISION	AGRICULTURAL WAGE-LEVELS			Index in 1930 as compared to 1920 as 100
	Average in 1916	Average in 1920	Average in 1930 (Daily wages in Annas)	
Central Gujarat ..	8	14.6	10	67
North Gujarat ..	6	10.7	9.5	86
South Gujarat ..	7	9.3	8	89
Kathiawad	6	10	7.85	79

to depress the level of wages. In other grades of labour, railway porters and the like are not getting any enhanced value for their toil. The increase of railway porters and other labourers on railway construction and maintenance from 1,299 to 4,263 has helped also to diminish their individual earnings. The very low level in railway porters' wages in South Gujarat is due to the fact that women from the Raniparaj classes predominate there in this line of work. They are content to remain on the very margin of life and have no prospect or desire of bettering their condition. The rate of growth is very large in this class of worker and it is very tragic to think of this, especially when we remember that the wages have remained practically stationary for the last 15 to 20 years.

DIVISION	DAILY WAGES (IN ANNAS) OF	
	Porters	Others
Central Gujarat ..	7	8
North Gujarat ..	7	8
South Gujarat ..	3	6
Kathiawad	7.9	7.9

287. Index of Industrial Wages—Coming from the labouring groups to the field of industrial wages, we find here also a lowering of levels since 1921 and a tendency to return to the pre-war norm. The earnings of artisans are usually the lowest in Kathiawad and there the variations have been the least disturbing relatively to other parts. The variation in the daily income of three typical classes of artisans as compared to 1920 are instructive. The blacksmiths have practically come down to the pre-war level of their earning power.

DIVISION	Mean Rupee wages (daily) of					
	Carpenter		Blacksmith		Bricklayer	
	1930	Index number as compared to 1920	1930	Index number as compared to 1920	1930	Index number as compared to 1920
Central Gujarat	1-10-0	81	1- 1-0	53	1- 4-0	77
North Gujarat	1-11-0	75	1- 5-0	87	1- 7-0	77
South Gujarat	1-7 -0	77	1- 7-0	64	1- 6-0	79
Kathiawad	1-2 -0	75	1- 1-6	73	1- 1-6	97

288. Cost of Living—Having regard to the scale of wages shown, it is necessary to have a rough idea of the cost of living. The census agency cannot be utilised for the purpose of enquiring into the family budgets of typical sections of the people, for the Act itself which is the legal basis of the organisation prevents the staff from enquiring into a person's income and expenditure. But statistical material is now available through the Commerce department, and the Board of Economic Enquiries recently established has at hand a series of studies by revenue and other officers which if collated and revised properly will yield valuable results. The material collected by the Commerce department's enquiry into the economic condition of a typical Charotar village* is of great interest as throwing light on the varying standards of life. It is estimated that between Rs. 250 to Rs. 300 are required to keep an average family of four persons (two adults) alive on the minimum standard of subsistence. Here again we must distinguish between the standards of food obtaining in Charotar and those prevalent for instance in the Rani area. 6 lbs. of grains daily would be required costing from Rs. 120 to 135 in the year. In the Rani area, the coarsest of grains are eaten and only Rs. 80 will be the cost of such. Rice is disappearing as an article of diet rapidly from the family budget. Ghee, *gur* (molasses), sugar and condiments consume another Rs. 60 to 80. Fuel and light absorb another Rs. 10; with clothes and shoes (Rs. 40), house repairs, etc. (Rs. 10), ceremonials and festivities (Rs. 15) and other miscellaneous items (Rs. 10 to Rs. 20), the budget works up from Rs. 265 to Rs. 310 per year. In rural areas house-rent rarely enters as an item in the budget. The following three representative budgets may be of interest. They are taken from the Bhadkad Economic Enquiry papers:—

TYPE I		TYPE II		TYPE III	
Patidar : 3 persons Income Rs. 1,670 per year		Dharala : 4 adults 2 children Income Rs. 561 per year		Dhed : 2 adults and 4 children Income Rs. 281 per year	
	Rs.		Rs.		Rs.
Food	308	Food	272	Food	198
Clothing, etc.	100	Clothing, etc.	80	Clothes, etc.	60
House, light, fuel	64	House, light, fuel	20	House, light, fuel	9
Ceremonials, etc.	150	Ceremonials, etc.	15	Ceremonials, etc.	10
Miscellaneous including Education	30	Miscellaneous including Education	15	Luxuries including tobacco	3
Cost of keeping horse with interest on loan	300				
	952		402		280

The above items are only confined to cost of living. They do not of course comprise the cost of production on which the income is derived. The income figures quoted above for each type selected are the net sum realised after meeting the normal cost of running a farm for the Patidar or the upkeep of the buffalo from which the Dharala derives his income on milk and *ghee*. Food absorbs from 71.4 per cent in Type III and 67.7 per cent in Type II to only 32.4 in the highest class, of the total expenditure. Luxuries (including ceremonials, the item of the horse and miscellaneous) form just half the expense of the Patidar family, while they are merely 7.4 per cent of the Dharala's and 4.6 of the Dhed's cost of living. The second class would appear just to make two ends meet while the third lives on the barest margin of existence.

289. Agricultural Incomes—The above figures would seem to indicate that an agricultural income of Rs. 750 is the limit below which standards of comfort cannot exist under present day conditions. What size of holding will suffice for this purpose? It is difficult to answer this question for the official records of the income from gross outturn of crops are wild guesses which have no relation to facts. The yearly anna valuation of crops is only a very rough approximation. The actual yield data in maunds and the prices current are still rougher, and the calculations made thereon for the latest year available are so full of mistakes that I have decided to reject them as valueless. Besides these, there are only a few other indications that help us to form some idea. From the sub-letting values of land it is possible to hold that the State revenue demand ranges from about 13 to 21 per cent of the gross profits of the agriculturists. The sub-letting value in Central Gujarat comes to about 3.5 times that of the assessment. In South Gujarat, it is 2.8 times. In North Gujarat, the revenue demand is a little more than 10 per cent of the gross produce. The Indian Taxation Enquiry Committee recommended 25 per cent of the annual net value for fixing assessments. From these general considerations, it is possible to hold that a holding of the size of 30 acres (50 bighas) ought to yield a net income

* *Economic Enquiry into Bhadkad village*, by the State Commerce department. Vide also Dr. Mehta's *Rural Economy of Gujarat*, p. 216, et seq.

of Rs. 750 per annum on an average to the farmer. Dr. J. M. Mehta* estimated on the basis of figures about 1922-24 that an acre in a Charotar village ought to yield a profit of Rs. 25. Taking into account the shrinkage in prices of crops as well as deterioration in the standards of farming, since that time, we put a lower figure of Rs. 18.75 as a fair margin of profit per acre in the present day. On this basis we make the marginal calculations, which give a net income of 12.40 crores as the profits of the non-cultivating and cultivating owners, after paying the land revenue and the cost of production. In 1920, the profits of agriculture were larger. Calculating on the basis of Rs. 20 per bigha, we estimate an income of Rs. 15.37 crores for landlords and cultivating owners for that year. The net income per earner of this class was Rs. 498. We have now to calculate similarly for cultivating tenants and agrestic labourers. Now there are 62,123 cultivating tenants. The bulk of these work on the crop sharing basis which is more profitable to them than the leasing system, but even if the calculation is made on the basis of the rent leases, we can get a fair idea by adopting the sub-letting values of land as above shown. The average sub-letting value is about three times the assessment. The average revenue demand comes to Rs. 1.72 per bigha of occupied area. Now the tenant comes in only in holdings

Number of holdings	Average size in bighas	Income of class in lakhs of rupees	Income per khatadar in rupees
106,484	1.66	26.6	25
167,022	15	375.8	225
75,743	50	568.1	750
7,845	300	231.8	2,955
355	750	37.7	11,250
All Holdings ..	18.7	1,240.0	347

of large sizes, averaging at 50 bighas and over. Thus out of 6.68 million bighas of occupied area, the area of the holdings of this size and over comes to 5.27 million bighas. The sub-letting values come to 272 lakhs of rupees annually. Making allowances for enhanced profits on the crop sharing basis, an estimate of Rs. 280 lakhs as the gross earnings of the tenant class is arrived at. Deducting cost of labour, etc., they are left with Rs. 200 lakhs as net profits which work out at Rs. 322 per earner of this class. For 1921, the sub-letting value should be fixed at 2.5 times and a larger deduction on account of wages of labour, etc., should have to be made. Calculating on these lines, our estimates of income for cultivating tenants in 1920 is 153.7 lakhs of rupees. Coming to agricultural labourers on the basis of the wage index in 1930 shown in para 286 above, we calculate the annual income of an agricultural labourer for 160 working days to be Rs. 97.8 in Central Gujarat, Rs. 92 in North Gujarat, Rs. 79 in Kathiawad and Rs. 82.8 in South Gujarat. In 1921, the corresponding figures of income were Rs. 146, 107, 100 and 93 respectively in the four divisions above named. Thus the net income per labourer has shrunk from Rs. 113.5 to only Rs. 80 in 1931. The census figure for 1921 has been condemned as inadequate in para 268 above; if the real number is greater, the shrinkage in the volume of wages of agricultural labour is even more.

DIVISION	Gross Income in lakhs of rupees according to wage level index in	
	1920	1930
Central Gujarat ..	82.8	55.5
North Gujarat ..	43.4	37.3
South Gujarat ..	61.7	54.9
Kathiawad ..	15.6	12.3
State ..	203.5	160.0

290. Variation in Agricultural Incomes since 1921—The estimates of income for the two censuses are now collected for ready reference. They are based on the census returns of workers in 1921 and earners in 1931: the basis of figures is thus not the same in both cases. Even agricultural labourers cannot afford a satisfactory basis of comparison, as the accuracy of their census figures in 1921 is doubted. The cultivating classes in 1921 must have included, as pointed out already, under workers who are now working dependents; therefore the real income per head of earner in 1921 must be even more than the estimate above shown. To that extent the comparative estimates per worker in each class in the two censuses have to be modified. But such as they are, they are worth considering. On the whole the figures show a general shrinkage in the return from land. The annual income of all kinds of workers engaged in agriculture amounted to Rs. 16 crores in 1931 as against Rs. 18.95 crores ten years ago.

CLASS	Income per individual worker in	
	1920 (Workers)	1930 (Earners)
Landlords and cultivating owners ..	469	347
Cultivating tenant ..	488	322
Agrestic Labour ..	113.5	80
Total per head ..	347	265

* *Vide his Rural Economy of Gujarat*, page 216.

291. Non-Agricultural Incomes : Income-Tax Assesseees—Turning to non-agricultural incomes, we divide them into two

SIZE OF INCOME IN RUPEES	Number of Income-tax Assesseees (Government servants excluded) in		
	1910	1920	1930
750-1,000	2,780	4,613	7,421
1,000-2,500	1,844	3,061	8,544
2,500-5,000	186	388	2,497
5,000-10,000	55	92	713
10,000-15,000	11	12	101
15,000-20,000	8	9	24
20,000 and over	4	14	40
Total ..	4,788	8,189	19,340

tural incomes, we divide them into two broad groups—those who pay income-tax and those who are below the taxable minimum of Rs. 750 per annum. The income-tax payers are the most important group economically in the whole State population, as the marginal table shows. The bulk of them are in trade and commerce. A few are large owners of property. Others are industrialists and not an inconsiderable proportion belongs to the learned professions. Since 1910, the number of assesseees has nearly quadrupled. The organisation of a special income-tax staff has enabled the State to cast its nets wide so that very few now may be said

GOVERNMENT SERVANTS		
SIZE OF INCOME	Number assessed	Total income in lakhs
Total	2,241	41.1
750-1,000	915	5.2
1,000-2,500	921	13.2
2,500-5,000	261	8.6
5,000-10,000	110	7.0
10,000-15,000	13	1.5
15,000-20,000	13	2.4
20,000 and over	8	3.2

to have escaped paying their due. The class of 1,000-2,500 appears to have multiplied by nearly five times in 20 years. The next class has increased by nearly fourteen times. In 1921, the income of these assesseees was calculated (allowing for wilful concealment) to be Rs. 152.68 lakhs. In 1931 the factor of wilful concealment is practically eliminated; from the actual assessment figures by class, the income of these 19,340 earners is stated to be Rs. 357.1 lakhs. Adding a round 10 lakhs for omissions, we get Rs. 367 lakhs as being the real income of non-agriculturists above the taxable level. Besides, the Government servants assessed to income tax number 2,241. Their total in 1920 was 1,726 with an income of 31.65 lakhs.

292. Non-Agriculturists below the Taxable Level—We now come to the remaining workers—non-agriculturists who are below the taxable level. These number 332,559 as against 311,644 in the previous census. They comprise the bulk of the government employees and other receivers of fixed income, the majority of the artisan groups and industrial workers and the whole of general class of non-agrestic labour. The government servants below the minimum pay of Rs. 750 yearly numbering about 18,000 in 1931 have an average income of Rs. 25 per month or Rs. 300 annually. The artisans and industrial workers numbering 170,000 have a rather lower average than this, i.e., about Rs. 240 annually. The fixed wage earners, below the minimum, who are not government employees, number about 21,000. They should be credited with Rs. 20 or Rs. 240 per year. The general labouring class, 97,000, at 6 annas daily for 24 days in the month, should have an average Rs. 108 per year per worker. The total income for this class in 1931 should be Rs. 104.7 lakhs. The remainder, 26,500, are small traders, domestic servants, transport workers and the like. These should be credited with Rs. 200 annually. Altogether these several classes on the above basis earn an annual income of Rs. 670 lakhs, according to the 1931 figures of earners. It is difficult to estimate the income of these groups in 1921. The rate of income of low grade labour has remained very much the same. The wages of artisans have declined but workers in organised industries now get more. Instead of Rs. 240 per worker under these heads, an income of Rs. 327 per worker is calculated on the figures available of industrial wages. Government employes are now paid much more but they number less than in 1921. The other fixed wage earners are at the same level as before: on these grounds, we can assume Rs. 200 to be the income per worker of both these sections of receivers of fixed incomes, who are below the taxable limit. Small traders and others earn a little more than they did in 1921. On these bases, the incomes of the various classes in 1921 may be calculated.

293. Total Income calculated per Head of Population—We have now come to the end of our calculation. Coming back to the general occupational conspectus, with which we started this discussion, we set out the complete results in the margin. The estimates suffer from many defects as the data are far from reliable, but it is hoped that the assumptions made are in accordance with generally accepted facts. The total incomes per class are based on the actual census returns of workers, but as the basis of comparison is not the same and the record itself is not accurate, the estimates themselves are only approaches to the truth. In that sense they may be accepted by the reader as tentative contributions to the problem of measurement of earning power. If they fail

in exactness as indicative of the distribution and variation in the income levels of different sections of the people from census to census, they have at least the value of faithfully reproducing general tendencies in the economic life of the country.

294. Summary of conclusions—It is time to close this review with a summary of the general conclusions. The occupational distribution does not disclose any marked feature of change in the social economy of the people since 1921. Agriculture still continues in its primacy of place in the occupational field, but with diminishing returns, deterioration in its standards

GRADE	Total income in lakhs of rupees			
	1931		1921	
	Total	Per head of earner	Total	Per head of worker
Agriculturists	1,240	347	1,537.8	469
Cultivating tenants with stake in land	200	322	153.7	488
Agrestic labour	160	80	203.5	113.5
General low grade labour ..	104.7	108	66.13	108
Industrial workers including arts and crafts	408	240	425	327
Fixed wage earners non-tax paying	104.4	268	104.0	200
Small traders, etc. non-tax paying	53.0	200	34.39	180
Non-Agriculturists paying income-tax (i) Official ..	41.1	1,834	31.65	1,834
(ii) Non-official	367.0	1,898	152.68	1,864
Total Income	2,678.2	276	2,708.85	312.9
Income per head of population	109.6		127.4	

and undoubted shrinkage in the actual earning power of its workers. The volume of labour does not seem to have increased much because many from its ranks have promoted themselves to farmers and cultivators; but the labouring classes (i.e. castes that contribute most to the workers in that grade) have exhibited the highest rate of growth: and yet these have actually less incomes per head than before. Their standards of living have been considerably lowered and their wage level now allows them only such food and raiment as are below even any reasonable conception of poverty. These form a little more than 12 per cent of earners. At the other end of the scale, 105,504 persons—agriculturists and income tax payers with an average income of Rs. 750 and above, or only 4 per cent may be said to live above the minimum standards of material comfort. Between these two, the vast majority of workers (84 per cent) have incomes ranging from Rs. 200 to Rs. 750. There is thus a noticeable chasm between this middle section and the lower and higher groups. The general income per head of population is less than in 1921 but the diminution of agricultural incomes is serious and calls for earnest attention of administrators and publicists alike. It is this contraction in earning capacity in the bulk of the population that is at the root of the deepening unrest that has riddled the life of Gujarat in recent years. Whether these circumstances will continue and eventually lead to a reordering of occupational groups, the future alone will be able to tell. Industrial progress has been so far retarded by many causes some of which are too obvious to mention. Education has advanced in all classes, and in the next chapter we shall see on which sections of the population the energies of educational agencies should be concentrated in the immediate future: but how best the plan of education should be altered and developed, and what steps should be taken both by the Government and the people for improvement in social and economic efficiency it is not the province of this Report to show, for its function is the humbler one of pointing to the trend of sweeping forces.

SUBSIDIARY TABLE I

EARNERS (PRINCIPAL OCCUPATION) AND WORKING DEPENDENTS

CLASS, SUB-CLASS AND ORDER	Number of earners (showing occupation as principal) and working dependents per 10,000 of total population	Number of earners showing occupation as subsidiary per 10,000 of total population
1	2	3
All Occupations [Earners (principal occupation) and Working Dependents] ..	4,955	271
A—Production of Raw Materials	3,512	133
<i>I—Exploitation of Animals and Vegetation</i>	3,504	133
1 Pasture and Agriculture	3,496	133
(a) Cultivation	3,342	114
(b) Special crops (cultivation of special crops, fruits, etc.)	8	1
(c) Forestry	9	9
(d) Stock raising	137	9
(e) Raising of insects, etc. (raising of small animals and insects) ..	....	....
2 Fishing and Hunting	8	....
<i>II—Exploitation of Minerals</i>	8	....
4 Non-metallic Minerals	8	....
B—Preparation and Supply of Material Substances	870	74
<i>III—Industry</i>	530	38
5 Textiles	158	9
6 Hides, skins and hard materials from the animal kingdom	33	5
7 Wood	54	5
8 Metals	22	2
9 Ceramics	57	6
10 Chemical products, properly so called and analogous	18	1
11 Food industries	23	2
12 Industries of dress and toilet	91	5
13 Furniture industries	1	....
14 Building industries	25	2
15 Construction of means of transport	1	....
16 Production and transmission of physical force; (heat, light, electricity, motive power, etc.) gas works and electric light and power.	1	....
17 Miscellaneous and undefined industries	46	1
<i>IV—Transport</i>	65	6
19 Transport by water	4	....
20 Transport by road	28	6
21 Transport by rail	29	....
22 Post Office, Telegraph and Telephone services	4	....
<i>V—Trade</i>	275	30
23 Banks, establishments of credit, exchange and insurance (bank managers, money-lenders, exchange and insurance agents, money changers and their brokers and their employés)	26	8
24 Brokerage commission and export (brokers' commission agents, commercial travellers, warehouse owners and employés)	3	1
25 Trade in textiles (trade in piece-goods, wool, cotton, silk, hair and other textiles)	24	2
26 Trade in skins, leather and furs (trade in skins, leather, furs, feathers, horn, etc., and the articles made from these)	1	....

SUBSIDIARY TABLE I—concl'd.

EARNERS (PRINCIPAL OCCUPATION) AND WORKING DEPENDENTS

CLASS, SUB-CLASS AND ORDER	Number of earners (showing occupation as principal) and working dependents per 10,000 of total population	Number of earners showing occupation as subsidiary per 10,000 of total population
1	2	3
27 Trade in wood	2	....
28 Trade in metals (trade in metals, machinery, knives, tools, etc.) ..	4	....
29 Trade in pottery, bricks and tiles .. .. .	....	....
30 Trade in chemical products (drugs, dyes, paints, petroleum, explosives, etc.)	2	....
31 Hotels, cafés, restaurants, etc.	16	1
32 Other trade in foodstuffs	153	13
33 Trade in clothing and toilet articles	1	....
34 Trade in furniture	2	....
35 Trade in building materials	2	....
36 Trade in means of transport	8	2
37 Trade in fuel	5	1
38 Trade in articles of luxury and those pertaining to letters and arts and sciences	7	....
39 Trade of other sorts	19	2
C—Public Administration and Liberal Arts.. .. .	229	29
<i>VI—Public Force</i>	<i>57</i>	<i>9</i>
40 Army	17	....
43 Police	40	9
<i>VII—Public Administration</i>	<i>51</i>	<i>10</i>
44 Public Administration	51	10
<i>VIII—Professions and Liberal Arts</i>	<i>121</i>	<i>10</i>
45 Religion	63	7
46 Law	4	....
47 Medicine	7	....
48 Instruction	35	1
49 Letters, Arts and Sciences (other than 44)	12	2
D—Miscellaneous	344	35
<i>IX—Persons living on their income (Order 50) persons living principally on their income</i>	<i>24</i>	<i>4</i>
50 Proprietors (other than of agricultural land) fund and scholarship-holders and pensioners	24	4
<i>X—Domestic Service</i>	<i>32</i>	<i>1</i>
51 Domestic service	32	1
<i>XI—Insufficiently described occupations</i>	<i>267</i>	<i>29</i>
52 General terms which do not indicate a definite occupation	267	29
<i>XII—Unproductive</i>	<i>21</i>	<i>1</i>
53 Inmates of Jails, Asylums and Alms houses	3	....
54 Beggars, Vagrants, and Prostitutes	17	1
55 Other unclassified non-productive industries	1	....

SUBSIDIARY TABLE II—A

DISTRIBUTION OF EARNERS (PRINCIPAL OCCUPATION) AND WORKING DEPENDENTS
BY SUB-CLASSES AND NATURAL DIVISIONS

NATURAL DIVISION	TOTAL 1,000			NUMBER PER MILLE OF THE TOTAL POPULATION OCCUPIED AS EARNERS (PRINCIPAL OCCUPATION) AND WORKING DEPENDENTS IN											
	Non-working dependents	Working dependents	Earners (principal occupation)	Sub-Class I Exploitation of animals and Vegetation	Sub-Class II Exploitation of Minerals	Sub-Class III Industry	Sub-Class IV Transport	Sub-Class V Trade	Sub-Class VI Public Force	Sub-Class VII Public Administration	Sub-Class VIII Professions and liberal arts	Sub-Class IX Persons living on their income (Order 50) persons living principally on their income.	Sub-Class X Domestic Service	Sub-Class XI Insufficiently described occupations	Sub-Class XII Unproductive
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Baroda State ..	504	103	393	707	2	107	13	55	12	10	24	5	7	54	4
Baroda City ..	597	19	384	63	..	309	72	147	110	80	74	32	21	66	26
Central Gujarat ..	512	67	421	740	2	101	8	43	8	8	23	3	5	55	4
North Gujarat ..	498	147	355	712	..	110	10	64	6	7	23	6	4	54	4
South Gujarat ..	462	77	461	801	2	68	13	28	8	6	12	1	12	47	2
Kathiawad ..	546	109	345	654	10	107	19	72	14	12	42	4	5	56	5

SUBSIDIARY TABLE II—B

DISTRIBUTION OF EARNERS (SUBSIDIARY OCCUPATION) BY SUB-CLASSES AND
NATURAL DIVISIONS

NATURAL DIVISION	NUMBER PER MILLE OF TOTAL POPULATION, OF EARNERS HAVING A SUBSIDIARY OCCUPATION IN											
	Sub-Class I	Sub-Class II	Sub-Class III	Sub-Class IV	Sub-Class V	Sub-Class VI	Sub-Class VII	Sub-Class VIII	Sub-Class IX	Sub-Class X	Sub-Class XI	Sub-Class XII
1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State	491	..	139	23	109	32	37	39	15	5	105	5
Baroda City	175	..	141	15	227	..	13	72	281	..	39	37
Central Gujarat	566	..	106	6	78	37	31	45	11	4	111	5
North Gujarat	413	..	294	12	145	35	48	44	16	4	74	5
South Gujarat	564	1	90	54	68	27	22	16	5	7	143	3
Kathiawad	432	3	96	32	152	21	54	62	12	3	128	5

SUBSIDIARY TABLE III

OCCUPATIONS OF FEMALES BY SUB-CLASSES

and

Selected Orders and Groups

Group No.	OCCUPATION	NUMBER OF EARNERS AND WORKING DEPENDENTS		Number of Females per 1000 Males
		Males	Females	
1	2	3	4	5
	Total Working Population	756,177	454,298	600
	A—Production of Raw Materials	506,697	351,196	693
	<i>I—Exploitation of Animals and Vegetation</i>	<i>505,372</i>	<i>350,541</i>	<i>693</i>
	1 Pasture and Agriculture	504,105	349,786	694
	(a) Cultivation	479,412	336,877	702
	(i) Non-cultivators deriving income from agricultural land	12,392	8,823	712
1	Non-cultivating proprietors taking rent in money or kind	11,908	8,823	741
	(ii) Cultivators of land permanently under cultivation.	467,020	328,054	702
5	Cultivating owners	317,332	191,760	604
6	Cultivating tenants	61,272	24,406	398
7	Agricultural labourers	88,416	111,888	1,265
	(b) Cultivation of special crops, fruits, etc.	1,257	617	491
16	(ii) Market gardeners, flower and fruit growers	1,204	617	512
	(c) Forestry	1,984	102	51
18	Wood cutters and charcoal burners	1,615	93	57
	(d) Stock raising	21,408	12,177	569
21	Cattle and buffalo breeders and keepers	6,596	7,272	1,102
23	Herdsman, shepherds and breeders of other animals	13,404	4,885	364
	2 Fishing and hunting	1,267	755	596
27	Fishing and pearling	1,255	755	601
	<i>II—Exploitation of Minerals</i>	<i>1,325</i>	<i>655</i>	<i>494</i>
	4 Non-Metallic Minerals	1,325	655	494
37	Building materials (including stone, materials for cement manufacture and clays)	939	400	426
40	Salt, Saltpetre and other saline substances	386	255	661
	B—Preparation and Supply of Material Substances	159,826	52,762	330
	<i>III—Industry</i>	<i>93,546</i>	<i>36,114</i>	<i>386</i>
	5 Textiles	25,647	13,026	508
42	Cotton ginning, cleaning and pressing	5,864	2,456	419
43	Cotton spinning, sizing and weaving	16,710	8,519	510
45	Rope, twine, string and other fibres	122	384	3,147
46	Wool carding, spinning and weaving	392	67	171
47	Silk spinning and weaving	337	245	727
49	Dyeing, bleaching, printing, preparation and sponging of textiles	2,051	546	266

SUBSIDIARY TABLE III—*contd.*

Group No.	OCCUPATION	NUMBER OF EARNERS AND WORKING DEPENDENTS		Number of Females per 1000 Males
		Males	Females	
1	2	3	4	5
50	Lace, crepe, embroideries, fringes, etc., and insufficiently described textile industries	171	808	4,725
6	Hides, skins and hard materials from the animal kingdom.	5,689	2,347	413
51	Working in leather	5,562	2,345	422
7	Wood	11,708	1,585	135
56	Basket makers and other industries of woody materials, including leaves and thatchers and builders working with bamboos, reeds or similar materials	1,760	1,506	856
8	Metals	5,084	392	77
9	Ceramics	7,918	5,969	754
63	Potters and makers of earthenware	5,600	4,816	860
64	Brick and tile makers	2,149	1,069	497
10	Chemical products, properly so called, and analogous ..	2,796	1,485	531
66	Manufacture of matches, fire-works and other explosives	488	282	578
68	Manufacture and refining of vegetable oils	2,130	1,200	563
11	Food Industries	3,426	2,221	648
71	Rice pounders and huskers and flour grinders	679	1,610	2,371
78	Manufacture of Tobacco	980	362	369
12	Industries of dress and the toilet	16,264	5,941	365
82	Boot, shoe, sandal and clog makers	2,885	783	271
83	Tailors, milliners, dress-makers and darners	5,344	4,161	778
85	Washing and cleaning	1,006	840	835
14	Building Industries	5,614	558	99
90	Lime burners, cement workers, excavators and well sinkers; stone cutters and dressers; brick layers and masons; builders (other than buildings made of bamboo or similar materials), painters, decorators of houses, tilers, plumbers, etc.	5,614	558	99
17	Miscellaneous and undefined industries	8,747	2,488	284
100	Scavenging	3,652	2,425	664
	<i>IV—Transport</i>	13,333	2,530	189
20	Transport by road	4,743	2,236	471
111	Porters and messengers	1,755	1,877	1,070
21	Transport by rail	6,743	281	42
113	Labourers employed on railway construction and maintenance; and coolies and porters employed on railway premises	3,986	281	70
	<i>V—Trade</i>	52,947	14,118	266
115	23 Banks, establishments of credit, exchange and insurance (Bank managers, money lenders, exchange and insurance agents, money-changers and brokers and their employees)	5,817	600	103
	31 Hotels, cafes, restaurants, etc.	3,513	286	81
	32 Other trade in food stuffs	25,566	11,798	461
129	Grain and pulse dealers	12,073	1,107	92

SUBSIDIARY TABLE III—concl'd.

Group No.	OCCUPATION	NUMBER OF EARNERS AND WORKING DEPENDENTS		Number of Females per 1000 Males
		Males	Females	
1	2	3	4	5
130	Dealers in sweetmeats, sugar and spices	6,782	6,813	1,004
131	Dealers in dairy products, eggs and poultry	1,612	2,994	1,857
133	Dealers in fodder for animals	210	194	924
134	Dealers in other food stuffs	1,712	384	224
135	Dealers in tobacco	2,882	290	101
	37 Trade in fuel	678	549	810
145	Dealers in firewood, charcoal, coal, cowdung, etc. ..	678	549	810
	39 Trade of other sorts	4,301	390	93
150	General store-keepers and shop-keepers otherwise unspecified	3,269	360	110
	C—Public Administration and Liberal Arts	52,392	3,482	66
	<i>VII—44 Public Administration</i>	<i>12,026</i>	<i>388</i>	<i>32</i>
161	Municipal and other local (not village) service	965	164	170
162	Village officials and servants other than watchmen ..	1,793	216	120
	<i>VIII—Professions and Liberal Arts</i>	<i>26,345</i>	<i>3,094</i>	<i>117</i>
	45 Religion	13,446	1,933	144
164	Monks, nuns, religious mendicants	8,746	1,571	180
166	Servants in religious edifices, burial and burning grounds, pilgrim conductors, circumcisers, etc.	2,953	284	96
	47 Medicine	1,286	320	249
172	Midwives, vaccinators, compounders, nurses, masseurs, etc.	340	298	876
	48 Instruction	7,944	723	91
174	Professors and teachers of all kinds	7,210	561	78
175	Clerks and servants connected with education	734	162	220
	49 Letters, arts and sciences (other than 44)	2,792	118	42
182	Musicians (composers and performers other than military), actors, dancers	1,254	63	50
	D—Miscellaneous	37,262	46,858	1,257
	<i>IX—Persons living on their income (order 50) Persons living principally on their income</i>	<i>3,484</i>	<i>2,421</i>	<i>695</i>
185	50 Proprietors (other than of agricultural land), fund and scholarship holders and pensioners	3,484	2,421	695
	<i>X—51 Domestic Service</i>	<i>5,399</i>	<i>2,517</i>	<i>466</i>
187	Other domestic service	5,027	2,517	500
	<i>XI—Insufficiently described occupations (order 52)</i>	<i>24,540</i>	<i>40,582</i>	<i>1,653</i>
	52 General terms which do not indicate a definite occupation.	24,540	40,582	1,653
191	Labourers and workmen otherwise unspecified	22,306	40,567	1,818
	<i>XII—Unproductive</i>	<i>3,839</i>	<i>1,338</i>	<i>348</i>
	54 Beggars, vagrants, prostitutes	3,085	1,193	387
193	Beggars and Vagrants	3,085	1,138	369

SUBSIDIARY TABLE IV

SELECTED OCCUPATIONS

Group No.	OCCUPATION *	WORKING POPULATION IN 1931*				Actual Workers in 1921*
		Earners and Working Dependents	Total Earners showing Occupation as Principal	Total Working Dependents	Earners as Subsidiary Occupation	
1	2	3	4	5	6	7
	ALL OCCUPATIONS	1,210,475	958,961	251,514	66,251	866,021
	Class A—Production of Raw Materials ..	857,893	634,740	223,153	32,592	570,387
	<i>SUB-CLASS I—Exploitation of Animals and Vegetation</i>	<i>855,913</i>	<i>632,785</i>	<i>223,128</i>	<i>32,558</i>	<i>570,227</i>
	<i>Order I—Pasture and Agriculture</i>	<i>853,891</i>	<i>630,814</i>	<i>223,077</i>	<i>32,436</i>	<i>569,009</i>
1	Non-cultivating proprietors taking rent in money or kind	20,731	20,731	..	5,958	6,787
2, 3, 4	Estate Agents and Managers, of owners, of Government; and rent collectors, clerks, etc.	484	484	..	27	2,216
5	Cultivating owners	509,092	320,152	188,940	8,453	326,891
6	Cultivating tenants	85,678	62,123	23,555	4,970	31,513
7	Agricultural labourers	200,304	200,304	..	8,290	179,271
13, 16	Cultivation of special crops, fruits, etc. ..	1,874	1,511	363	195	1,102
18	Wood cutters and charcoal burners	1,708	1,527	181	2,251	623
21	Cattle and buffalo breeders and keepers ..	13,868	10,472	3,396	1,575	12,352
23	Herdsmen, shepherds and breeders of other animals	18,289	11,794	6,495	543	7,188
	<i>Order 2—Fishing and Hunting</i>	<i>2,022</i>	<i>1,971</i>	<i>51</i>	<i>122</i>	<i>1,218</i>
27	Fishing and Pearling	2,010	1,959	51	118	1,217
	<i>SUB-CLASS II—Exploitation of Minerals</i> ..	<i>1,980</i>	<i>1,955</i>	<i>25</i>	<i>34</i>	<i>160</i>
	Class B—Preparation and Supply of Material Substances	212,588	185,758	26,830	17,929	166,155
	<i>SUB-CLASS III—Industry</i>	<i>129,660</i>	<i>111,331</i>	<i>18,329</i>	<i>9,214</i>	<i>104,635</i>
	<i>Order 5—Textiles</i>	<i>38,673</i>	<i>37,554</i>	<i>1,119</i>	<i>2,068</i>	<i>26,777</i>
42	Cotton ginning, cleaning and pressing ..	8,320	8,320	..	1,027	6,099
43	Cotton spinning, sizing and weaving ..	25,229	24,885	344	787	17,060
45	Rope, twine, string, and other fibres ..	506	382	124	46	471
46	Wool carding, spinning and weaving ..	459	448	11	37	103
47	Silk spinning and weaving	582	471	111	30	338
49	Dyeing, bleaching, printing, preparation and sponging of textiles	2,597	2,207	390	101	2,024
	<i>Order 6—Hides, skins and hard materials from the animal kingdom</i>	<i>8,036</i>	<i>5,572</i>	<i>2,464</i>	<i>1,118</i>	<i>5,861</i>
51	Working in leather	7,907	5,452	2,455	1,118	5,724
53	Bone, ivory, horn, shell, etc., workers (except button)	127	118	9	..	111
	<i>Order 7—Wood</i>	<i>13,293</i>	<i>12,016</i>	<i>1,277</i>	<i>1,302</i>	<i>10,965</i>
54-55	Sawyers, carpenters, turners and joiners, etc.	10,027	9,439	588	873	8,249
56	Basket makers and other industries of woody materials, including leaves and thatchers and builders working with bamboo, reeds or similar materials	3,266	2,577	689	429	2,716
	<i>Order 8—Metals</i>	<i>5,476</i>	<i>4,811</i>	<i>665</i>	<i>440</i>	<i>4,975</i>
57	Smelting, forging and rolling of iron and other metals	51	51	..	15	66
59	Blacksmiths, other workers in iron makers of implements	4,458	3,882	576	411	4,018
60	Workers in brass, copper and bell metal ..	769	698	71	12	689
61	Workers in other metals (except precious metals)	169	157	12	2	194
	<i>Order 9—Ceramics</i>	<i>13,887</i>	<i>8,496</i>	<i>5,391</i>	<i>1,419</i>	<i>12,844</i>
63	Potters and makers of earthenware	10,416	5,976	4,440	290	10,979
64	Brick and tile makers	3,218	2,328	890	459	1,772
	<i>Order 10—Chemical products properly so called and analogous</i>	<i>4,281</i>	<i>3,013</i>	<i>1,268</i>	<i>281</i>	<i>4,039</i>
	<i>Order 11—Food industries</i>	<i>5,647</i>	<i>5,077</i>	<i>570</i>	<i>495</i>	<i>4,126</i>
71	Rice pounders, etc.	2,289	2,010	279	47	2,432
72	Grain parchers, etc.	293	237	56	3	222

* Figures for 1931 and 1921 do not precisely correspond.

SUBSIDIARY TABLE IV—*contd.*

SELECTED OCCUPATIONS

Group No.	OCCUPATION	WORKING POPULATION IN 1931 *				Actual Workers in 1921*
		Earners and Working Dependents	Total Earners showing Occupation as Principal	Total Working Dependents	Earners as Subsidiary Occupation	
1	2	3	4	5	6	7
73	Butchers	434	400	34	2	475
75	Sweetmeat and condiment makers	495	425	70	59	357
78, 79 and 81	Manufacturers of tobacco, opium and others ..	1,831	1,701	130	110	539
	<i>Order 12—Industries of dress and the toilet ..</i>	<i>22,205</i>	<i>17,926</i>	<i>4,279</i>	<i>1,153</i>	<i>18,677</i>
82	Boot, shoe, sandal and clog makers	3,668	2,760	908	123	3,033
85	Tailors, etc.	9,505	7,046	2,459	258	7,567
86	Barbers, hair dressers and wig makers ..	7,141	6,726	415	747	6,494
90	<i>Order 14—Building industries</i>	<i>6,172</i>	<i>5,988</i>	<i>184</i>	<i>560</i>	<i>6,259</i>
	<i>Order 17—Miscellaneous and undefined industries</i>	<i>11,235</i>	<i>10,192</i>	<i>1,043</i>	<i>316</i>	<i>9,679</i>
98	Makers of jewellery and ornaments	4,278	3,829	449	53	2,644
100	Scavenging	6,077	5,499	578	211	5,020
	<i>SUB-CLASS IV—Transport</i>	<i>15,863</i>	<i>15,418</i>	<i>445</i>	<i>1,501</i>	<i>11,291</i>
	<i>Order 20—Transport by road</i>	<i>6,979</i>	<i>6,567</i>	<i>412</i>	<i>1,309</i>	<i>3,931</i>
107	Owners, managers and employés (excluding personal servants) connected with mechanically driven vehicles (including trams) ..	480	476	4	11	146
108	Owners, managers and employés (excluding personal servants) connected with other vehicles	1,327	1,327	..	54	2,321
110	Pack elephant, camel, mule, ass and bullock owners and drivers	1,382	982	400	1,167	262
111	Porters and messengers	3,632	3,624	8	70	1,103
	<i>Order 21—Transport by rail</i>	<i>7,024</i>	<i>7,019</i>	<i>5</i>	<i>93</i>	<i>5,353</i>
112	Railway employés of all kinds other than coolies	2,757	2,756	1	28	4,554
113	Labourers employed on railway construction and maintenance and coolies and porters employed on railway premises	4,267	4,263	4	65	1,299
114	<i>Order 22—Post Office, Telegraph and Telephone services</i>	<i>878</i>	<i>878</i>	<i>..</i>	<i>26</i>	<i>586</i>
	<i>SUB-CLASS V—Trade</i>	<i>67,065</i>	<i>59,009</i>	<i>8,056</i>	<i>7,214</i>	<i>50,221</i>
115	<i>Order 23—Banks, establishments of credit exchange and insurance (bank managers, money lenders, exchange and insurance agents, money changers and brokers and their employés) ..</i>	<i>6,417</i>	<i>6,062</i>	<i>355</i>	<i>1,921</i>	<i>5,096</i>
116	<i>Order 24—Brokerage, commission and export (brokers, commission agents, commercial travellers, warehouse owners and employés)</i>	<i>657</i>	<i>645</i>	<i>12</i>	<i>127</i>	<i>502</i>
117	<i>Order 25—Trade in textiles (trade in piece-goods, wool, cotton, silk, hair and other textiles) ..</i>	<i>5,877</i>	<i>5,452</i>	<i>425</i>	<i>464</i>	<i>4,451</i>
118	<i>Order 26—Trade in skins, leather and furs (trade in skins, leather, furs, feathers, horns, etc., and the articles made from these)</i>	<i>165</i>	<i>162</i>	<i>3</i>	<i>82</i>	<i>234</i>
119 } 121 } and 122 }	<i>Order 27—Trade in wood (trade in wood not fire-wood) bamboos, canes, thatches and other forest produce</i>	<i>584</i>	<i>558</i>	<i>26</i>	<i>44</i>	<i>492</i>
123	<i>Order 28—Trade in metals (trade in metals, machinery, knives, tools, etc.)</i>	<i>1,018</i>	<i>943</i>	<i>75</i>	<i>16</i>	<i>205</i>
124	<i>Order 29—Trade in pottery, bricks and tiles ..</i>	<i>103</i>	<i>91</i>	<i>12</i>	<i>4</i>	<i>152</i>
125	<i>Order 30—Trade in chemical products (drugs, dyes, paints, petroleum, explosives, etc.) ..</i>	<i>382</i>	<i>368</i>	<i>14</i>	<i>19</i>	<i>133</i>
	<i>Order 31—Hotels, cafés, restaurants, etc. ..</i>	<i>3,799</i>	<i>3,548</i>	<i>251</i>	<i>334</i>	<i>1,478</i>
126	Vendors of wine, liquors, aerated waters and ice ..	936	849	87	224	892

* Figures for 1931 and 1921 do not precisely correspond.

SUBSIDIARY TABLE IV—*contd.*

SELECTED OCCUPATIONS

Group No.	OCCUPATION	WORKING POPULATION IN 1931 *				Actual Workers in 1921 *
		Earners and Working Dependents	Total Earners showing Occupation as Principal	Total Working Dependents	Earners as Subsidiary Occupation	
1	2	3	4	5	6	7
127	Owners and managers of hotels, cook-shops; sarais, etc., and their employes	2,527	2,377	150	96	586
	<i>Order 32—Other trade in foodstuffs</i>	<i>37,364</i>	<i>31,584</i>	<i>5,780</i>	<i>3,026</i>	<i>23,439</i>
129	Grain and pulse dealers	13,180	11,471	1,709	1,080	10,200
130	Dealers in sweetmeats, sugar and spices ..	13,595	10,957	2,638	569	8,249
131	Dealers in dairy product, eggs and poultry ..	4,606	3,846	760	913	1,688
132	Dealers in animals for food	144	141	3	9	43
133	Dealers in fodder for animals	404	367	37	35	214
134	Dealers in other foodstuffs	2,096	1,706	390	153	1,849
135 } 136 } 137 }	Dealers in tobacco, opium and ganja ..	3,339	3,096	243	267	1,196
138	<i>Order 33—Trade in clothing and toilet articles ..</i>	<i>224</i>	<i>205</i>	<i>19</i>	<i>5</i>	<i>338</i>
	<i>Order 34—Trade in furniture</i>	<i>398</i>	<i>388</i>	<i>10</i>	<i>19</i>	<i>434</i>
139	Trade in furniture, carpets, curtains and bedding	138	132	6	19	96
141	<i>Order 35—Trade in building materials</i>	<i>448</i>	<i>381</i>	<i>67</i>	<i>8</i>	<i>255</i>
142 } 143 } 144 }	<i>Order 36—Trade in means of transport</i>	<i>2,043</i>	<i>1,931</i>	<i>112</i>	<i>400</i>	<i>2,177</i>
145	<i>Order 37—Trade in fuel</i>	<i>1,227</i>	<i>1,111</i>	<i>116</i>	<i>227</i>	<i>795</i>
	<i>Order 38—Trade in articles of luxury and those pertaining to letters and the arts and sciences ..</i>	<i>1,659</i>	<i>1,503</i>	<i>156</i>	<i>62</i>	<i>1,407</i>
146	Dealers in precious stones, jewellery (real and imitation), clocks, optical instruments, etc.	684	648	36	26	661
147	Dealers in common bangles, bead necklaces, fans, small articles, toys, hunting and fishing tackles, flowers, etc.	746	642	104	32	578
148	Publishers, book-sellers, stationers, dealers in music, pictures, musical instruments and curiosities	229	213	16	4	168
	<i>Order 39—Trade of other sorts</i>	<i>4,700</i>	<i>4,077</i>	<i>623</i>	<i>456</i>	<i>8,583</i>
149	Dealers in rags, stable refuse, etc.	102	93	9	2	159
151	Itinerant traders, pedlars and hawkers (of other than food, etc.)	895	887	8	25	1,343
	Class C—Public Administration and Liberal Arts	55,874	55,150	724	7,149	54,588
	<i>SUB-CLASS VI—Public Force</i>	<i>14,021</i>	<i>13,998</i>	<i>23</i>	<i>2,123</i>	<i>10,579</i>
	<i>Order 40—Army</i>	<i>4,156</i>	<i>4,156</i>	<i>..</i>	<i>..</i>	<i>4,088</i>
153	Army (Imperial)	541	541	..	..	75
154	Army (Indian States)	3,615	3,615	..	..	4,013
	<i>Order 43—Police</i>	<i>9,865</i>	<i>9,842</i>	<i>23</i>	<i>2,123</i>	<i>6,491</i>
157	Police	4,544	4,544	..	53	3,997
158	Village watchmen	5,321	5,298	23	2,070	2,494
	<i>SUB-CLASS VII—44 Public Administration ..</i>	<i>12,414</i>	<i>12,381</i>	<i>33</i>	<i>2,449</i>	<i>14,803</i>
159	Service of the State	8,845	8,845	..	914	10,861
160	Service of Indian and Foreign States ..	431	431	..	15	512
161	Municipal and other local (not village service)	1,129	1,129	..	15	1,672
162	Village officials and servants other than watchmen	2,009	1,976	33	1,505	1,758

* Figures for 1931 and 1921 do not precisely correspond.

SUBSIDIARY TABLE IV—concl'd.

SELECTED OCCUPATIONS

Group No.	OCCUPATION	WORKING POPULATION IN 1931 *				Actual Workers in 1921 *
		Earners and Working Dependents	Total Earners showing Occupation as Principal	Total Working Dependents	Earners as Subsidiary Occupation	
1	2	3	4	5	6	7
	SUB-CLASS VIII—Professions and Liberal Arts	29,439	28,771	668	2,577	29,206
	<i>Order 45 Religion</i>	15,379	14,810	569	1,835	18,635
163	Priests, ministers, etc.	1,345	1,332	13	149	8,323
164	Monks, nuns and religious mendicants ..	10,317	9,901	416	1,148	7,047
165	Other religious workers	480	468	12	46	186
166	Servants in religious edifices, burial and burning grounds, pilgrim conductors, circumcisers, etc.	3,237	3,109	128	492	3,079
	<i>Order 46—Law</i>	877	875	2	29	537
167	Lawyers of all kinds including Kazis, law agents and Mukhtars	361	361	..	7	445
168	Lawyers' clerks, petition writers, etc. ..	516	514	2	22	92
	<i>Order 47—Medicine</i>	1,606	1,593	13	117	1,240
169 170 171 and 173	Registered and non-registered medical practitioners including oculists, dentists and veterinary surgeons	968	955	13	99	859
172	Midwives, vaccinators, compounders, nurses, masseurs, etc.	638	638	..	18	381
174 and 175	<i>Order 48—Instruction (professors and teachers of all kinds, and clerks and servants connected with education)</i>	8,667	8,667	..	177	5,590
	<i>Order 49—Letters, Arts and Sciences (other than 44)</i>	2,910	2,826	84	419	3,204
182	Musicians, (composers and performers other than military) actors, dancers, etc. ..	1,317	1,244	73	339	1,854
	Class D—Miscellaneous	84,120	83,313	807	8,581	74,891
185	SUB-CLASS IX—50—Persons living on their income (proprietors other than of agricultural land) fund and scholarship holders and pensioners	5,905	5,905	..	978	4,309
	SUB-CLASS X—51—Domestic service ..	7,916	7,914	2	303	4,804
186	Private motor-drivers and cleaners	372	370	2	9	38
187	Other domestic service	7,544	7,544	..	294	4,766
	SUB-CLASS XI—52—Insufficiently described occupations (general terms which do not indicate a definite occupation)	65,122	65,044	78	6,977	59,612
188	Manufacturers, businessmen and contractors otherwise unspecified	651	619	32	63	404
189	Cashiers, accountants, book-keepers, clerks and other employes in unspecified offices, warehouses and shops	1,476	1,430	46	69	16,265
190	Mechanics otherwise unspecified	122	122	..	14	115
	SUB-CLASS XII—Unproductive	5,177	4,450	727	323	6,166
192	<i>Order 53—Inmates of jails, asylums and almshouses</i>	712	..	712	..	763
193 and 194	<i>Order 54—Beggars, vagrants and prostitutes ..</i>	4,278	4,278	..	314	4,938

* Figures for 1931 and 1921 do not precisely correspond.

SUBSIDIARY TABLE V

OCCUPATION OF SELECTED CASTES

CASTE AND OCCUPATION	Number per 1,000 earners engaged on each occupation	Number of female earners per 1,000 males	CASTE AND OCCUPATION	Number per 1,000 earners engaged on each occupation	Number of female earners per 1,000 males
1	2	3	1	2	3
ADVANCED					
Hindu and Jain			Brahman-Tapodhan (Temple servants)		
Bhavsar (Calenderers and dyers)			Cultivators	327	21
Trade	481	93	Other occupations	279	837
Calenderers and Dyers	197	351	Industries	186	22
Other occupations	155	350	Temple servants	105	312
Labourers unspecified	92	2,740	Arts and Professions	103	74
Industries	75	330	Ghanchi (Oil-pressers and sellers)		
Brahmabhat and Barot (Bards and genealogists)			Oil-pressers and sellers	367	112
Cultivators	466	20	Trade	340	95
Other occupations	332	482	Other occupations	141	425
Trade	120	21	Labourers unspecified	132	2,231
Bards and genealogists	45	49	Cultivators	20	42
Labourers unspecified	37	1,446	Kachhia (Khambhar) (Cultivators and vegetable sellers)		
Brahman—Anavala (Landlords and cultivators)			Cultivators and vegetable sellers	414	95
Landlords and cultivators	710	62	Industries	297	653
Other occupations	96	110	Trade	161	49
Arts and Professions	78	..	Other occupations	74	361
Public Administration	59	..	Labourers unspecified	54	2,160
Trade	57	..	Lewa Patidar (Cultivators)		
Brahman—Audich (Priests)			Cultivators	790	124
Other occupations	356	406	Other occupations	77	360
Priests	209	171	Field labourers, etc.	73	2,010
Cultivators	165	65	Trade	39	187
Arts and Professions	160	71	Income from rent of land	21	492
Trade	110	26	Luhana (Traders)		
Brahman—Deshastha (Priests)			Traders	725	61
Public Administration	375	2	Other occupations	153	208
Other occupations	282	122	Cultivators	61	22
Arts and Professions	171	180	Labourers unspecified	39	1,014
Priests	98	147	Field labourers, etc.	22	7,300
Persons living on their income	74	204	Maratha-Kshatriya (Military and dominant)		
Brahman—Mewada (Priests)			Other occupations	476	353
Other occupations	387	444	Military and dominant	230	..
Cultivators	239	61	Public Administration	193	43
Priests	197	125	Public Force	64	..
Arts and Professions	115	24	Labourers unspecified	37	1,514
Trade	62	86	Soni (Goldsmiths)		
Brahman—Modh (Priests)			Goldsmiths	839	6
Other occupations	316	249	Other occupations	106	1,289
Priests	227	249	Industries	31	1,762
Arts and Professions	195	94	Trade	20	56
Cultivators	168	12	Public Administration	4	..
Income from rent of land	94	649	Sutar (Carpenters)		
Brahman—Nagar (Priests and Learned Professions)			Carpenters	796	1
Other occupations	353	299	Other occupations	105	4,109
Priests and learned Professions	309	85	Cultivators	59	99
Income from rent of land	178	274	Industries	32	781
Arts and Professions	144	182	Trade	8	222
Public Administration	16	27	Vania-Dishawal (Traders)		
			Traders	613	22
			Other occupations	155	575
			Persons living on their income	122	938
			Industries	58	47
			Public Administration	52	..

SUBSIDIARY TABLE V—*contd.*

OCCUPATION OF SELECTED CASTES

CASTE AND OCCUPATION	Number per 1,000 earners engaged on each occupation	Number of female earners per 1,000 males	CASTE AND OCCUPATION	Number per 1,000 earners engaged on each occupation	Number of female earners per 1,000 males
1	2	3	1	2	3
Vania-Lad (Traders)			INTERMEDIATE		
<i>Traders</i>	554	17	Hindu, Jain and Tribal		
<i>Other occupations</i>	158	114	<i>Anjana Chaudhari (Cultivators)</i>		
<i>Persons living on their income</i>	113	578	<i>Cultivators</i>	738	337
<i>Income from rent of land</i>	96	64	<i>Field labourers, etc.</i>	196	1,402
<i>Public Administration</i>	79	..	<i>Other occupations</i>	32	688
			<i>Income from rent of land</i>	25	2,277
			<i>Labourers unspecified</i>	9	586
Vania-Shrimali (Traders)			Baria (Cultivators and Field labourers)		
<i>Traders</i>	770	37	<i>Cultivators and Field labourers</i>	794	372
<i>Other occupations</i>	153	580	<i>Labourers unspecified</i>	91	17,582
<i>Industries</i>	31	280	<i>Other occupations</i>	45	291
<i>Income from rent of land</i>	30	300	<i>Trade</i>	37	404
<i>Public Administration</i>	16	..	<i>Industries</i>	33	579
Muslim			Bava and Gosain (Devotees)		
Memon (Traders and Pedlars)			<i>Devotees</i>	410	124
<i>Traders and Pedlars</i>	626	47	<i>Cultivators</i>	225	27
<i>Cultivators</i>	192	4	<i>Other occupations</i>	187	308
<i>Other occupations</i>	105	308	<i>Arts and Professions</i>	141	41
<i>Labourers unspecified</i>	61	866	<i>Field labourers, etc.</i>	37	1,456
<i>Field labourers, etc.</i>	16	667	Chamar-Khalpa (Tanners)		
Pinjara (Cotton-carders)			<i>Field labourers, etc.</i>	319	1,600
<i>Trade</i>	407	246	<i>Tanners</i>	303	65
<i>Other occupations</i>	285	251	<i>Labourers unspecified</i>	198	1,924
<i>Cotton-carders</i>	164	497	<i>Cultivators</i>	152	93
<i>Labourers unspecified</i>	74	1,420	<i>Other occupations</i>	28	117
<i>Cultivators</i>	70	117	Darji (Tailors)		
Saiyad (Priests)			<i>Tailors</i>	940	359
<i>Other occupations</i>	507	217	<i>Other occupations</i>	29	1,282
<i>Cultivators</i>	215	25	<i>Cultivators</i>	14	26
<i>Public Administration</i>	105	6	<i>Labourers unspecified</i>	10	8,167
<i>Arts and Professions</i>	104	39	<i>Industries</i>	7	53
<i>Priests</i>	69	265	Garoda (Priests and Beggars)		
Vohra-Agricultural (Cultivators)			<i>Priests and Beggars</i>	479	88
<i>Cultivators</i>	794	153	<i>Labourers unspecified</i>	194	6,634
<i>Other occupations</i>	103	636	<i>Field labourers, etc.</i>	120	20,555
<i>Trade</i>	69	107	<i>Other occupations</i>	114	121
<i>Field labourers, etc.</i>	21	1,512	<i>Industries</i>	93	1,594
<i>Labourers unspecified</i>	13	1,321	Gola-Rice pounders (Rice-pounders)		
Vohra-Trading (Traders)			<i>Labourers unspecified</i>	333	2,267
<i>Traders</i>	685	29	<i>Rice-pounders</i>	277	1,065
<i>Industries</i>	158	567	<i>Other occupations</i>	207	23
<i>Other occupations</i>	93	230	<i>Trade</i>	175	62
<i>Arts and Professions</i>	48	55	<i>Cultivators</i>	8	150
<i>Labourers unspecified</i>	16	378	Kadwa Patidar (Cultivators)		
Parsi			<i>Cultivators</i>	679	56
Parsi (Traders)			<i>Field labourers, etc.</i>	196	4,102
<i>Other occupations</i>	289	111	<i>Other occupations</i>	74	797
<i>Traders</i>	240	330	<i>Industries</i>	41	1,137
<i>Industries</i>	213	2,586	<i>Income from rent of land</i>	10	1,218
<i>Arts and Professions</i>	141	153	Karadia (Cultivators)		
<i>Cultivators</i>	117	9	<i>Cultivators</i>	915	55
			<i>Labourers unspecified</i>	44	1,690
			<i>Other occupations</i>	19	136
			<i>Public Force</i>	15	..
			<i>Field labourers, etc.</i>	7	1,833

SUBSIDIARY TABLE V—*contd.*

OCCUPATION OF SELECTED CASTES

CASTE AND OCCUPATION	Number per 1,000 earners engaged on each occupation	Number of female earners per 1,000 males	CASTE AND OCCUPATION	Number per 1,000 earners engaged on each occupation	Number of female earners per 1,000 males
1	2	3	1	2	3
Kumbhar (Potters)			Sathwara (Vegetable growers and sellers)		
Potters	364	200	Vegetable growers and sellers ..	402	634
Cultivators	217	43	Industries	253	..
Field labourers, etc.	195	2,531	Labourers unspecified	175	4,152
Other occupations	145	489	Other occupations	102	140
Labourers unspecified	79	2,104	Field labourers, etc.	68	4,719
Luhar (Blacksmiths)			Talabda (Cultivators and agricultural labourers)		
Blacksmiths	528	21	Cultivators and agricultural labourers	734	376
Cultivators	156	60	Labourers unspecified	124	2,469
Industries	140	29	Industries	75	112
Other occupations	129	2,059	Other occupations	56	274
Field labourers, etc.	47	7,135	Trade	11	367
Mochi (Shoe-makers)			Targala (Actors, dancers and singers)		
Shoe-makers	734	44	Actors, dancers and singers	373	..
Other occupations	96	364	Other occupations	258	474
Labourers unspecified	67	4,341	Cultivators	228	24
Field labourers, etc.	61	1,792	Labourers unspecified	122	10,278
Cultivators	42	355	Field labourers, etc.	19	1,214
Patanwadia (Cultivators and Agricultural labourers)			Valand (Barbers)		
Cultivators and Agricultural labourers	842	472	Barbers	657	9
Other occupations	65	346	Other occupations	198	3,413
Labourers unspecified	52	1,566	Cultivators	106	145
Industries	36	1,328	Public Administration	24	41
Trade	5	917	Arts and Professions	15	426
Primitive and Forest Tribes			Vankar (Dhed) (Weavers)		
Chodhra (Cultivators and Agricultural labourers)			Field labourers, etc.	377	1,148
Cultivators and agricultural labourers	878	503	Weavers	234	371
Transport	42	364	Cultivators	177	203
Other occupations	39	143	Labourers unspecified	122	1,543
Labourers unspecified	25	1,018	Other occupations	90	233
Industries	16	663	Muslim		
Dhanka (Cultivators and agricultural labourers)			Fakir (Mendicants and Beggars)		
Cultivators and agricultural labourers	867	629	Mendicants and beggars	518	195
Other occupations	92	200	Cultivators	189	85
Labourers unspecified	16	389	Other occupations	172	117
Industries	13	176	Field labourers, etc.	65	1,203
Transport	12	..	Labourers unspecified	56	1,431
Dhodia (Cultivators and agricultural labourers)			Ghanchi (Oil-pressers and sellers)		
Cultivators and agricultural labourers	968	908	Oil-pressers and sellers	392	91
Other occupations	40	325	Other occupations	237	365
Raisers of livestock, milkmen and herdsmen	25	400	Cultivators	164	77
Industries	18	171	Trade	176	201
Labourers unspecified	9	549	Field labourers, etc.	31	1,419
Rajput (Military and dominant)			Malek (Cultivators)		
Cultivators	643	37	Cultivators	561	120
Other occupations	189	441	Other occupations	237	105
Field labourers, etc.	105	577	Industries	101	179
Income from rent of land	33	1,655	Labourers unspecified	58	1,370
Military and dominant	30	..	Field labourers, etc.	43	1,927
			Molesalam (Cultivators)		
			Cultivators	738	81
			Other occupations	126	468
			Field labourers, etc.	69	2,556
			Industries	34	50
			Labourers unspecified	33	1,123

SUBSIDIARY TABLE V—concl'd.

OCCUPATION OF SELECTED CASTES

CASTE AND OCCUPATION	Number per 1,000 earners engaged on each occupation	Number of female earners per 1,000 males	CASTE AND OCCUPATION	Number per 1,000 earners engaged on each occupation	Number of female earners per 1,000 males
1	2	3	1	2	3
Momna (Cultivators)			Gamit (Cultivators and Agricultural labourers)		
Cultivators	853	82	Cultivators and agricultural labourers	951	430
Other occupations	63	274	Other occupations	24	141
Industries	53	109	Labourers unspecified	14	451
Field labourers, etc.	16	1,185	Raisers of livestock, milkmen and herdsmen	8	115
Labourers unspecified	15	2,053	Transport	3	81
Pathan (Cultivators)			Nayakda (Cultivators and Agricultural labourers)		
Other occupations	391	241	Cultivators and agricultural labourers	871	883
Cultivators	277	108	Other occupations	55	283
Public force	115	..	Raisers of livestock, milkmen and herdsmen	34	215
Public Administration	110	2	Labourers unspecified	26	486
Industries	107	134	Industries	14	438
Shaikh (Cultivators)			Ravalia (Tape-weavers and drummers)		
Other occupations	420	162	Trade	384	1,458
Cultivators	201	186	Transport	202	45
Industries	193	135	Other occupations	185	358
Trade	161	49	Labourers unspecified	169	747
Field labourers, etc.	25	917	Tape-weavers and drummers	60	200
Christian			Shenva (Village watchmen and rope-makers)		
Indian Christian.			Labourers unspecified	370	1,173
Industries	375	94	Field labourers, etc.	304	1,019
Other occupations	267	182	Cultivators	188	14
Cultivators	170	207	Other occupations	92	269
Labourers unspecified	98	244	Village watchmen and Rope-makers	46	..
Field labourers, etc.	90	302	Thakarda (Cultivators and Agricultural labourers)		
ILLITERATE			Cultivators and agricultural labourers	795	113
Bhangi (Scavengers)			Labourers unspecified	121	1,542
Scavengers	366	570	Other occupations	42	195
Field labourers, etc.	336	945	Industries	36	774
Labourers unspecified	153	1,236	Trade	6	61
Other occupations	84	299	Vagher (Military and dominant)		
Cultivators	61	40	Cultivators	740	8
Bharwad (Cattle-breeders and graziers)			Other occupations	101	692
Cattle-breeders and graziers	523	56	Field labourers, etc.	94	2,652
Cultivators	203	53	Labourers unspecified	65	828
Labourers unspecified	107	8,728	Military and dominant .. .. .	..	..
Field labourers, etc.	90	1,033	Vaghri (Hunters and Fowlers)		
Others occupations	77	181	Other occupations	304	418
Chunvalia (Cultivators and Agricultural labourers)			Labourers unspecified	285	915
Cultivators and agricultural labourers	594	391	Field labourers, etc.	238	536
Labourers unspecified	273	1,231	Cultivators	172	53
Other occupations	121	70	Hunters and Fowlers	1	..
Industries	6	538			
Trade	6	..			
Primitive and Forest Tribes					
Bhil (Cultivators and Agricultural labourers)					
Cultivators and agricultural labourers	906	588			
Labourers unspecified	46	787			
Others occupations	31	183			
Raisers of livestock, milkmen and herdsmen	10	42			
Industries	7	563			

SUBSIDIARY TABLE VI
OCCUPATION OF ENGLISH LITERATES

OCCUPATION	POPULATION DEALT WITH			BARODA CITY		AMBALI DIVISION	
	Persons	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8
Earners and Working Dependents ..	19,443	19,210	233	5,271	112	1,039	4
I <i>Exploitation of Animals and Vegetation</i>	2,551	2,543	8	72	1	80	2
Landlords	47	47	..	8	..	3	..
Agriculture (cultivating owners and tenants)	2,504	2,496	8	64	1	77	2
II <i>Exploitation of Minerals</i> .. .. .	..	..	..	..	..	..	..
III <i>Industries</i>	517	487	30	118	1	46	..
IV <i>Transport</i>	1,758	1,756	2	769	..	37	..
Steamer Service	42	40	2	..	..	..	..
Railway	1,399	1,399	..	625	..	19	..
Post and Telegraph	314	314	..	142	..	17	..
Telephone	3	3	..	2	..	1	..
V <i>Trade</i>	3,249	3,242	7	599	..	319	1
VI <i>Public Force</i>	545	545	..	288	..	35	..
Army	175	175	..	155	..	8	..
Police	370	370	..	133	..	27	..
VII <i>Public Administration</i>	3,226	3,216	10	1,643	8	196	1
Other government servants (except teachers and doctors)	3,226	3,216	10	1,643	8	196	1
VIII <i>Professions and Liberal Arts</i>	2,728	2,582	146	687	81	148	..
Religious Preachers	115	109	6	29	..	..	..
Mendicants	40	40	..	16	..	9	..
Lawyers	274	274	..	103	..	14	..
Doctors	586	515	71	142	46	30	..
Teachers in State employ	1,339	1,302	37	258	30	91	..
Teachers in Private service	273	241	32	58	5	3	..
Engineering Department	81	81	..	63	..	1	..
Electric Department	16	16	..	14	..	..	..
Astrologers	4	4	..	4	..	..	..
IX <i>Persons living on their Income</i>	1,596	1,571	25	423	18	50	..
Income from other sources	1,219	1,202	17	158	10	34	..
Pensioners	309	309	..	215	..	8	..
Scholarship holders	68	60	8	50	8	8	..
X <i>Domestic Service</i>	141	139	2	90	2	..	..
Domestic service	73	71	2	57	2	..	..
Motor drivers	68	68	..	33	..	..	..
XI <i>Insufficiently described Occupations</i>	3,132	3,129	3	582	1	128	..
Contractors	5	5	..	3	..	..	..
Private service	2,216	2,215	1	513	1	119	..
Others	911	909	2	66	..	9	..
XII <i>Unproductive</i> .. .. .	..	..	..	..	..	..	..
Non-working Dependents	12,579	11,008	1,571	3,951	887	583	35

SUBSIDIARY TABLE VI

OCCUPATION OF ENGLISH LITERATES

BARODA DIVISION		MEHSANA DIVISION		NAVSARI DIVISION		OKHAMANDAL		OCCUPATION
Males	Females	Males	Females	Males	Females	Males	Females	
9	10	11	12	13	14	15	16	1
5,236	41	4,082	16	3,082	58	500	2	Earners and Working Dependents
1,344	2	300	..	745	3	2	..	I <i>Exploitation of Animals and Vegetation</i>
36	..	..	..	..	..	..	..	Landlords
1,308	2	300	..	745	3	2	..	Agriculture (cultivating owners and tenants)
..	..	..	..	..	..	..	..	II <i>Exploitation of Minerals</i>
106	1	114	..	97	28	6	..	III <i>Industries</i>
333	..	377	..	156	..	84	..	IV <i>Transport</i>
..	..	..	..	..	..	40	2	Steamer Service
287	..	316	..	114	..	38	..	Railway
46	..	61	..	42	..	6	..	Post and Telegraph
..	..	..	..	..	..	..	..	Telephone
727	3	1,054	2	477	1	66	..	V <i>Trade</i>
52	..	101	..	61	..	8	..	VI <i>Public Force</i>
1	..	4	..	1	..	6	..	Army
51	..	97	..	60	..	2	..	Police
418	..	509	1	347	..	103	..	VII <i>Public Administration</i>
418	..	509	1	347	..	103	..	Other government servants (except teachers and doctors)
676	33	576	11	454	21	41	..	VIII <i>Professions and Liberal Arts</i>
12	5	..	..	68	1	..	..	Religious Preachers
13	..	..	..	..	..	2	..	Mendicants
52	..	69	..	30	..	6	..	Lawyers
119	7	112	10	102	8	10	..	Doctors
422	3	346	1	163	3	22	..	Teachers in State employ
51	18	49	..	79	9	1	..	Teachers in Private service
7	..	..	..	10	..	..	..	Engineering Department
..	..	..	..	2	..	..	..	Electric Department
..	..	..	..	..	..	..	..	Astrologers
490	1	360	2	235	4	13	..	IX <i>Persons living on their Income</i>
443	1	360	2	203	4	4	..	Income from other sources
47	..	..	..	32	..	7	..	Pensioners
..	..	..	..	..	..	2	..	Scholarship holders
7	..	6	..	35	..	1	..	X <i>Domestic Service</i>
..	..	2	..	12	..	..	..	Domestic service
7	..	4	..	23	..	1	..	Motor drivers
1,083	1	685	..	475	1	176	..	XI <i>Insufficiently described Occupations</i>
2	..	..	..	..	..	..	..	Contractors
514	..	503	..	424	..	142	..	Private service
567	1	182	..	51	1	34	..	Others
..	..	..	..	..	..	..	..	XII <i>Unproductive</i>
2,563	177	2,299	121	1,507	332	105	19	Non-working Dependents

SUBSIDIARY TABLE VII

NUMBER OF PERSONS EMPLOYED IN IRRIGATION, POST AND TELEGRAPH AND RAILWAY DEPARTMENTS ON THE 26TH FEBRUARY 1931

CLASS OF PERSONS EMPLOYED										Europeans and Anglo-Indian	Indian		
(A) IRRIGATION DEPARTMENT													
Total Persons Employed .. .. .										....	43		
Persons Directly Employed .. .. .										....	43		
Officers .. .. .										....	....
Upper Subordinates .. .. .										....	....
Lower Subordinates .. .. .										....	....
Clerks .. .. .										....	11		
Peons and other servants .. .. .										....	26		
Coolies .. .. .										....	6		
Persons Indirectly Employed .. .. .										....	....
Contractors .. .. .										....	....
Contractors' regular employees .. .. .										....	....
Coolies .. .. .										....	....
(B) RAILWAYS													
Total Persons Employed										16	6,623		
Officers										1	12		
Subordinates on scale of pay rising to Rs. 250 per mensem or over										7	19		
Subordinates on scale of pay rising from Rs. 30 to Rs. 249 per mensem										7	1,775		
Subordinates on scale of pay under Rs. 30										1	4,817		
(C) POSTS & TELEGRAPHS													
CLASS OF PERSONS EMPLOYED										Post Office		Telegraph Department	
										Europeans and Anglo-Indian	Indian	Europeans and Anglo-Indian	Indian
Total Persons Employed .. .. .										....	1,111	3	16
(1) Posts and Telegraphs .. .. .										....	912	3	16
Supervising officers (including Probationary Superintendents and Inspectors of Post Offices and Assistant and Deputy Superintendents of Telegraphs and all officers of higher rank than these) .. .. .										....	6	1	....
Postmasters, including Deputy Assistant, Sub and Branch Postmasters .. .. .										....	65	....	....
Signalling establishment including warrant officers, non-commissioned officers, military telegraphists and other employees .. .. .										....	1	....	....
Miscellaneous agents, school masters, station masters, etc. .. .. .										....	241	....	....
Clerks of all kinds .. .. .										....	123	....	....
Postmen .. .. .										....	365	2	....
Skilled and labour establishment, including foremen, instrument makers, carpenters, blacksmiths, mechanics, sub-inspectors, linemen and line-riders and other employees .. .. .										....	....	....	16
Unskilled labour establishment including line coolies, cable guards, battery-men, telegraph messengers, peons and other employees .. .. .										....	57	....	....
Road establishment consisting of overseers, runners, clerks and booking agents, boatmen, syces, coachmen, bearers and others .. .. .										....	54	....	....
(2) Railway Mail Service .. .. .										....	132	....	....
Supervising officers (including Superintendents and Inspectors of sorting) .. .. .										....	3	....	....
Clerks of all kinds .. .. .										....	1	....	....
Sorters .. .. .										....	85	....	....
Mail Guards, mail agents, van peons, porters, etc. .. .. .										....	43	....	....
(3) Combined Officers .. .. .										....	67	....	....
Singnallers .. .. .										....	7	....	....
Messengers and other servants .. .. .										....	60	....	....

APPENDIX III

DISAPPEARING INDUSTRIES IN BARODA STATE

(By S. N. OKE, B. COM.)

1. Homecrafts in Baroda State—The strength of the home workers as apart from factory operatives has already been discussed in the body of the Chapter on Occupation. Such information about common homecrafts as is available to us, is due to the efforts of the State Department of Commerce and Industries which has always made it a point to interest itself in cottage industries. It is mainly from the bulletins of this department published from time to time, that one learns about the condition of the various cottage industries. Recently it has been definitely noticeable that crafts which were the specialities of certain localities are gradually dying out. The most noteworthy amongst these are :—

- (i) the weaving industry in Baroda City and Gandevi,
- (ii) the lacquerwork of Sankheda,
- (iii) the art of dyeing and printing by the Bhavsars and
- (iv) the metal work of Visnagar.

A perusal of recent brochures by the Commerce department in regard to these industries reveals how far they are lapsing into disuse.

2. Handloom Weaving in Baroda—Baroda and Gandevi are cited as typical centres of the old hand-weaving industry, and their condition might indicate the trend of decay of this craft in Baroda State. Weaving was by far the most important cottage industry which was flourishing all over the State. Baroda City is a typical locality of honourable traditions in this respect. During Mughal times Baroda was well-known for its fabrics; travellers like Tavernier have praised them. The cloths special to Baroda were however freely copied by weavers later on in a number of places like Nagpur, Sholapur and Bhivandi and finally by mills. The only reason which keeps alive for Baroda its modicum of handloom-weaving is the impossibility of imitating the handwoven *sarees* of fine count single yarn on power-looms. The varieties of cloth celebrated of Baroda are *maheshwari sarees*, *pitambars* (*silk dhotis*), turban fabrics, *chanderi khands* (blouse cloth) and garments with embroidered border and 'solid' border. The marginal

table gives the castes engaged in the work, the number of looms and of workers and the kinds of cloth special to each caste. 52 families of Vohras and 90 of (Dhed) Vankars have given up weaving. 40 families of Ravalia weave *newar* (putties or tape) and are not technically weavers. In addition there is a small handful of Bandhara and Dhed weavers. All the looms except one are of the primitive type. One or two factories started on the tide of Swadeshim, used fly shuttle

CASTE	LOOMS		Number of families	Actual workers	Dependents	Kind of cloth woven by caste
	Running	Idle				
1	2	3	4	5	6	7
Khatris	128	122	59	94	173	Sarees, Khands Pitambars, embroidered border cloth and other fine count fabrics. Ghagrapat and Lungis.
Khatris Pancholi:	7	2	7	11	21	
Tai	32	18	50	76	187	
Vohra	116	46	96	164	298	Paghdi (Turban cloth).
Total ..	283	188	212	345	679	

and automatic looms, but with the ebb of the fervour the factories lapsed into idleness. The raw material—cotton and silk yarn is now provided by the mills; preliminary processes such as warping, sizing, dyeing, etc., are entrusted to local specialists. Hardly 30 weavers have their own capital and they derive no advantage except independence, from it. The others resort

to the inevitable middleman and are content to receive the weaving wage only. The average monthly income of a weaver is hardly 8 rupees a month and supplemented by an even more meagre earning of his wife (if she works), he ekes out a miserable existence. The merchant who finds the market for these people's production grumble that their standard does not come up to that set by weavers of Dholka and other competing places. The gradual sinking of the industry appears to be due not only to the mill competition as is the universal belief, but also to the lack of energy, inventive originality and effort to study the demand, on the part of the weavers themselves; they could if they chose, always be a step ahead of the mills in designs. But their apathy is not altogether due to want of intelligence; indebtedness and the struggle for existence as well as a fickle public taste is apt to dishearten them. They have now so much an air of being completely beaten, that efforts on the part of the Commerce department to give them a co-operative society, a weaver's store and to help them with demonstrations have met with little response hitherto.

3. Handloom Weaving in Gandevi—The story of Gandevi is much the same as Baroda. A long tradition of artistic craft, competition of the machine and a gradual sinking, spasmodically revived by the veering of public opinion in favour of handwoven cloth—these are various stages that the industry has undergone. Till the end of the nineteenth century Gandevi held its place as a prominent weaving centre. It mainly catered to the rough needs of the primitive Dublas and Chodhras round about. Later on it took to weaving silk bordered cloth and continued to supply the simple needs of the good folk of a considerable region of South Gujarat. The last seven years however disturbed this happy routine and forced many a weaver out of his occupation and even out of the country, by the influx of cheap machine-made goods. Their protests having left the local authorities, importers of mill-cloth and buyers all equally unmoved, they took to other avocations like tailoring or migrated to foreign countries like Africa and the

Fiji Islands. At present Khatri still form the bulk of the weaving class; the *entrepreneur* is as prominent among them as anywhere else though the Muslim weavers do not share this doubtful advantage. The marginal table gives the castes and families occupied in the callings. There are 252 old handlooms, 56 fly shuttle sleys and 74 dobbies. The kinds of cloth produced are cotton *sarees* of various types—with plain, mercerised or silk borders. 30 to 40 looms have profited by the guidance of the Commerce department demonstrations class and are producing the Cambay type of fine count cotton *sarees*. The 56 fly shuttles and 74 dobbies also are introduced through

CASTE	Families	Workers	Depen- dents
1	2	3	4
Khatri	88	252	147
Tai	21	50	67
Ghanchi	64	133	174
Khatri Pancholi ..	4	8	8
Dubla	3	6	11
Pathan	9	17	27
Total ..	189	466	434

the efforts of the class which has thus achieved better success than in the City of Baroda. Practically all the preliminary processes except dyeing (done by the local Galiaras) are finished in other places like Surat and Bombay before the yarn is put on the loom. The idea of a Co-operative Society or a weaver's store appeals to Gandevi weavers no more than to their brethren in Baroda.

4. The Lacquerwork of Sankheda—The lacquer work articles produced in Sankheda had this advantage over other handicraft productions, that their individuality could not be overshadowed by foreign or machine-made substitutes. The industry thus had better hopes of surviving than other cottage industries. The articles produced were moreover peculiarly suited to the local demand, *e.g.*, cradle-stands, four-legged stools for worship, cots, swingcots, temple equipment for deities and orthodox type of toys. The demand looked like being steadily continuous before the War, but the increase in prices which the artisans were forced to make during that event, and the subsequent depression which tempted the usual buyers of these articles to go in for cheaper foreign substitutes, drove many a worker out of this craft into carpentry or trade in wood. Whereas formerly Kharadiwad—the stronghold of these workers—supported nearly 30 families with about 150 persons, now there are only 4 families with 20 persons engaged in this work. The Department of Industries has come to the rescue of this craft in several ways such as:—

- (i) by giving publicity to the articles in exhibitions, by arrangements of sales, catalogues, etc.,
- (ii) by securing orders for them,
- (iii) by suggesting improvements in design to suit changing tastes, *e.g.*, varying the old colours, and instructing them to make things more likely to appeal to modern

demand—things like electric lamp stands, flowerpots, hatstands, chess boards, paper-weights, pin-cushions, etc., and

(iv) by opening a class to teach better methods.

The buying public however does not show the old interest, and even the articles of orthodox demand are outrivalled by competitive production in other places.

5. Cloth Dyeing and Printing by Bhavsars and Chhipas—This industry appears almost uniformly all over the State, but notable centres are Padra, Bahadarpur, Sinor, Vadnagar, Kathor, Gandevi and Amreli. The Bhavsars and Chhipas and some Muslim Galiaras who do similar work have certain stock types of printed and dyed cloth such as *chhidris*, skirtcloth and quilt covers, and they seldom attempt any new enterprise in other directions. They bulk more largely in Padra, Gandevi and Amreli than the other centres. As in other industries, cheaper and better machine printed substitutes have been the ruin of this one too. Only the villages where custom dies hard, the good old Bhavsar prints are still patronised. There is no incentive to artistic work as the machine cannot be outdone at any price and consequently quality and quantity of these peoples' work has declined. The dyeing materials formerly used were indigo, *kasumbi*, and *kasilo* for blue, red and black colours respectively. Foreign synthetic dyes have long displaced these native ingredients. With a view to improve the lot of these people, the Department of Industries has engaged a demonstrator to teach them methods of cheap and easy dyeing. Six scholarships are given to sons of Bhavsars to learn new methods and it is hoped that such learners will make due use of their knowledge in their traditional occupation.

6. Metal Work of Visnagar—The fame of Visnagar metalware (particularly brass and copper vessels) is of a long standing and once the name was a virtual hall-mark of quality in distant markets. Machine production has given the usual set back to this industry as to all others. However certain articles yet continue to command a sale because of their sound quality: the joint-soldering work of this place is particularly celebrated. There are still about 75 families engaged in this work. Though the competition of machine-made goods renders the making of goods of utility uneconomic, artistic production has yet a definite though small market. The superiority of handicraft in this respect is not likely to be discounted by even the best manufactured products, and Visnagar artisans have a better hope in this line. The most notable work is of Mistry Raghunath Tribhovandas who specialises in highly artistic articles of furniture of carved wood covered with brass or copper sheets, brass inlaid work, brass and silver worked stools for Jain shrines and various ornamental and costly pieces of metal-sheeted furniture for palaces and royal households. His work is universally appreciated and patronised by Europeans, and other tourists. Others are also working in this direction. The only help the Department of Industries gives to these artisans is publicity to their products.

APPENDIX IV

CENSUS OF LIVESTOCK

(Some Inferences)

(By J. T. PATEL, B.A., LL.B.)

1. Introductory—Until 1920, no regular census of livestock was taken in the State. Only a rough estimate is prepared every year by the Revenue department, to assess the sufficiency or otherwise of the State's agricultural wealth. This was, however, not considered enough, as before the time of the last census, several causes such as the succession of bad years, scarcity of milk and *ghee* and the consequent effect on the physical and economic condition of the people, the rumours about the exportation of cattle and the growth of creameries had led the public to believe that unless Government interfered and took stock of the actual state of things the agricultural livestock would be exhausted, with distressing effect on the general and economic conditions of its agriculturist population. It was therefore at the instance of the Head of the Census department that the first regular census of livestock was ordered by the Government and taken in the year 1920 : but the figures obtained were not of much use for comparison or help for measuring the real condition of the agricultural cattle in the State.

2. Results of 1920 Regular Census of Livestock—The conditions disclosed by the regular census were found to be generally satisfactory throughout the State except in some mahals. On a review of the results, however, it was recommended that a regular census of the kind should be taken at the end of every five years to keep in touch with the agricultural wealth of the State and to allay public apprehensions ; but the recommendation does not appear to have found favour with either the Agricultural or the Revenue department, who should have moved in the matter. It was therefore decided to have along with the general census of the population, a second regular census of the livestock.

3. Preliminary Arrangements—This census was taken in October 1930, along with the work of house-numbering which was then going on. In order to collect this information, the same form as is used by the Bombay Presidency Census of livestock was adopted and tacked on to the house list. Along with each numbered household with the name of its head, the number of its cattle and of its ploughs and carts was recorded. The same procedure as was adopted in 1920 was continued in this census and it must be said that we had without doubt for the second time in the State, a complete and accurate census of livestock.

4. Main Results of the Census—State Table IX gives figures of cattle in general as

Kind of Animals, etc.	Census Year		Variation per cent
	1930	1920	
Agricultural Cattle	1,379,488	1,345,692	+ 2.51
<i>Cows</i>	<i>178,566</i>	<i>194,541</i>	<i>— 8.21</i>
<i>Bulls and Bullocks</i>	<i>424,870</i>	<i>426,258</i>	<i>— 0.30</i>
<i>Buffaloes</i>	<i>345,040</i>	<i>317,553</i>	<i>+ 8.65</i>
<i>He-buffaloes</i>	<i>12,342</i>	<i>16,675</i>	<i>— 25.98</i>
Non-agricultural Cattle	397,618	433,079	— 8.18
<i>Sheep and Goats</i>	<i>347,077</i>	<i>379,324</i>	<i>— 8.50</i>
<i>Horses, Mares and young stock</i> ..	<i>45,177</i>	<i>47,857</i>	<i>— 5.60</i>
<i>Donkeys and Mules</i>	<i>28,164</i>	<i>30,892</i>	<i>— 8.83</i>
<i>Camel</i>	<i>4,344</i>	<i>4,156</i>	<i>+ 4.52</i>
Ploughs (small and big)	206,113	199,640	+ 3.24
Carts and Carriages etc.	101,596	86,541	+ 17.39

also those of ploughs, carts and carriages. The marginal table compares the main figures as revealed in the present census with those of 1920. The agricultural cattle show an increase of 2.5 per cent but the non-agricultural have declined by 8.2 per cent. The largest decline under the agricultural class is amongst he-buffaloes. The decline in the number of cows is serious but is more than made up by an increase in the number of buffaloes. The combined strength of bulls and bullocks has only slightly decreased during the decade, though in reality, the bullocks have increased by about 2 per cent. It should be mentioned here that there was no serious outbreak of disease amongst the cattle during the

decade. The increase in the ploughs may to some extent be put down to more land having been brought under cultivation.

5. Distribution of Cattle per Inhabited House—An inhabited house for census purposes denotes a family. The total number of inhabited houses as ascertained at the present census is 562,798 as against 512,845 of the previous census. The margin compares the distribution of cattle per every 100 inhabited houses for the last two censuses. It will be seen that there are less cattle per family under all heads in the present census, showing thereby that the increase in the livestock has not kept pace with the increase in the number of families, during the present decade.

Kind of Animal, etc.	Number per 100 inhabited houses in	
	1930	1920
Cows	32	35
Bulls and Bullocks	76	83
Calves	31	32
Buffaloes	61	65
He-buffaloes	2	3
Young buffaloes	44	44
Sheep and goats	62	73
Horses, mares and their young stock	8	9
Camels	8	8
Small and big ploughs	37	39
Carts, carriages, etc.	18	17

6. Agricultural Cattle—The major part of the population of the State is agricultural and it is in this connection that we are more concerned with the census of livestock. Though non-agricultural cattle, as at the last census, have been counted this year also, a study of their numbers is not so vital to us as that of the agricultural cattle. We will therefore confine ourselves, in this note, more particularly to a discussion of the sufficiency or otherwise of agricultural and milch cattle.

7. Distribution of Agricultural Cattle by Division—The following Table gives comparative figures of the distribution of agricultural cattle per division :—

KIND	CENTRAL GUJARAT		SOUTH GUJARAT		NORTH GUJARAT		KATHIAWAD		BARODA STATE	
	Number in 1930	Variation per cent since 1920	Number in 1930	Variation per cent since 1920	Number in 1930	Variation per cent since 1920	Number in 1930	Variation per cent since 1920	Number in 1930	Variation per cent since 1920
1	2	3	4	5	6	7	8	9	10	11
Cows	23,437	— 14.6	51,151	— 5.2	76,165	— 8.4	27,813	— 7.1	178,566	— 8.2
Bullocks	110,259	— .8	86,187	+ 9.3	176,698	— .4	39,166	+ 5.5	412,310	+ 1.9
Bulls	734	— 39.1	1,662	— 58.6	6,731	— 40.1	3,433	— 33.5	12,560	— 41.9
Calves	28,710	— 17.1	58,700	+ 1.9	60,991	+ 22.5	23,421	+ 12.7	171,822	+ 5.5
Total	163,140	— 6.5	197,700	+ 1.6	32,585	— .3	93,833	+ .8	775,258	— 1.06
Female buffaloes	93,185	— 17.6	34,906	+ 15.9	198,844	+ 4.2	18,105	+ 4.0	345,040	+ 8.6
Male buffaloes	3,202	— 23.4	2,306	— 22.6	6,105	— 29.0	729	— 11.7	12,342	— 25.9
Young stock	71,224	+ 4.5	24,994	+ 21.9	140,130	+ 8.9	10,500	— .7	246,848	+ 8.3
Total	167,611	+ 10.5	62,206	+ 16.0	345,079	+ 5.1	29,334	+ 1.8	604,230	+ 7.4
Grand Total	1,379,488	+ 1.4	259,906	+ 4.7	665,664	+ 2.4	123,167	+ 1.1	1,379,488	+ 2.5

We have seen already that there has been an aggregate increase of 2.5 per cent in the agricultural cattle and while this increase is the greatest in South Gujarat, being 4.7 per cent, it is the lowest in Kathiawad where it is only 1.1 per cent. Dividing the agricultural cattle into two families viz., the cow and the buffalo, we find the latter has increased by 7.4 per cent while the former has decreased by a little over 1 per cent, though there is a small increase visible in South Gujarat and Kathiawad. Cows have decreased and buffaloes have increased in all the districts. Bullocks have increased in South Gujarat and Kathiawad but Central and North Gujarat register a slight decline. Bulls and male buffaloes have decreased throughout the State in all the districts. Amongst the young stock of both the families, there has been an increase everywhere except that the young stock of cows has decreased in Central Gujarat while that of the buffaloes has declined only slightly in Kathiawad.

8. Distribution of Agricultural Cattle according to Utility—Agricultural cattle may again be divided according to the use. Thus they can be divided into classes like (1) purely agricultural, (2) milk-giving and (3) stock supplying (young stock). The following gives

the distribution of the cattle by division, as also their variation per cent (given in brackets) since 1920 :—

DIVISION	Agricultural	Milk-giving	Young stock	Proportion of young stock to 1,000 milk-giving cattle
1	2	3	4	5
Central Gujarat	114,195 (—2.1)	116,622 (+9.2)	99,934 (—2.8)	857
South Gujarat	90,155 (+5.0)	86,057 (+2.3)	83,694 (+7.2)	972
North Gujarat	189,534 (—3.9)	275,009 (+0.4)	201,121 (+12.8)	731
Kathiawad	43,328 (+0.5)	45,918 (—3.0)	33,921 (+8.1)	738
Total ..	437,212 (+1.3)	523,606 (+2.2)	418,670 (+7.2)	799

The total number of agricultural cattle is 1,379,488. This shows that 32 per cent of the total belong to the agricultural class ; 38 per cent to the milk-giving class and the remaining 30 per cent cover the young stock. From the above analysis, we find as at the last census, that the milch cattle exceed in number the agricultural ones. Looking to divisional distribution it appears that reverse is the case in South Gujarat only. In the 1920 Census, South Gujarat shared this position with Central Gujarat but the latter appears to have retrieved its position since then, in regard to its milch cattle, though its number of agricultural cattle has decreased in this census. Again Central Gujarat and North Gujarat show a serious decline in agricultural cattle. The floods in 1927 occasioned a serious loss of cattle. The following years were in addition full of hardships to the agriculturists in these districts on account of frost, locusts, fall of prices, etc., and this also led them to part with their valuable cattle more than before. Kathiawad is known for its good breed of cows and buffaloes and the decline there in the milch cattle appears to be purely due to loss through migration. Turning to young stock, we find that Central and South Gujarat have proportionately a greater number of young stock than the other two divisions, which lose through exportation over one-fourth of their number. This points to the conclusion that while Central and South Gujarat replenish their stock of agricultural cattle largely from their indigenous breed, North Gujarat and Kathiawad have to rely at least for more than a quarter of their supply upon adjoining territories for their stock.

9. Agricultural Cattle correlated with Cultivated Land—To determine the scarcity or otherwise of the agricultural cattle, it will be useful here to institute a comparison between the area of cultivated land and the number of agricultural cattle as neither the one nor the other alone is sufficient to arrive at a true solution of the general belief that agricultural cattle are decreasing day by day. The following table correlates the number of agricultural cattle with the area of cultivated land for the past three censuses.

DIVISION	Agricultural cattle and cultivated land (in Bighas)	CENSUS YEAR		
		1910	1920	1930
Baroda State	Cultivated Area	4,009,962	5,155,276	5,635,096
	Agricultural Cattle	334,801	442,933	437,212
Central Gujarat	Cultivated Area	1,210,617	1,420,916	1,548,986
	Agricultural Cattle	88,657	116,641	114,195
South Gujarat	Cultivated Area	668,069	774,716	832,469
	Agricultural Cattle	69,392	85,844	90,155
North Gujarat	Cultivated Area	1,568,639	2,269,137	2,437,843
	Agricultural Cattle	143,758	197,352	189,534
Kathiawad	Cultivated Area	562,637	690,507	815,798
	Agricultural Cattle	32,994	43,096	43,328

It will be seen from the above table that there has been a large increase in the cultivated area since the last census but there is not a comparative increase visible in the agricultural cattle. The total strength of agricultural cattle in the State has decreased and so also in all the districts except South Gujarat ; but there also, the increase does not appear to be appreciable. Absolute figures however can lead to no true inference of the situation and all agricultural cattle are not plough cattle. We shall therefore try and work out the burden of cultivated area on a pair of bullocks in each district. The margin compares the figures for the last three decades. It appears from the table that the incidence is highest in Kathiawad and lowest in South Gujarat, as usual. The increase in incidence is almost uniform in the Central and North Gujarat while it is the highest in Kathiawad, being 10 bighas more per pair of bullocks and lowest in South Gujarat where it averages 1.6 bighas per pair. In the last census it was found that North Gujarat suffered from deficient supply of bullocks while Kathiawad takes its turn in this census. The higher average in Kathiawad is either due to a steady increase in cultivated area unaccompanied by a similar increase in its bullock supply or to loss through migration. The latter part of the decade was of successive lean years and it had told very heavily on the economic resources of the people. It is very probable therefore that the average is forced up by a loss through migration as the stringent economic conditions might have led people to part with their cattle. The following Table gives comparative figures of the average of cultivated area per pair of bullocks by mahals for the last two censuses.

YEAR	Baroda State	Central Gujarat	South Gujarat	North Gujarat	Kathiawad
1910 ..	23.9	27.3	19.2	21.8	34.1
1920 ..	23.2	24.3	18.0	23.0	31.6
1930 ..	27.6	28.1	19.6	27.5	41.6

NAME OF MAHAL	Area cultivated per pair of bullock		NAME OF MAHAL	Area cultivated per pair of bullock	
	1930	1920		1930	1920
CENTRAL GUJARAT			NORTH GUJARAT		
Baroda	23.3	20.5	Visnagar	22.7	22.1
Tilakwada	23.8	18.2	Patan	22.9	23.7
Sankheda	25.1	23.1	Atarumba	23.5	16.8
Bhadran	26.1	25.7	Sidhpur	23.1	24.5
Vaghodia	27.0	26.3	Mehsana	25.3	22.2
Petlad	28.7	26.0	Kheralu	26.3	20.8
Sinor	29.5	31.8	Vijapur	27.5	13.2
Padra	29.5	23.6	Dehgam	28.1	27.4
Dabhoi	30.1	23.9	Kalol	29.6	25.1
Karjan	29.5	31.8	Chanasma	33.1	27.0
Savli	33.1	21.2	Kadi	35.2	22.8
			Harij	42.6	28.6
KATHIAWAD			SOUTH GUJARAT		
Beyt	20.4	16.8	Gandevi	8.7	6.8
Kodinar	21.6	17.3	Vyara	14.3	14.7
Okhamandal	35.9	32.2	Navsari	15.4	14.5
Bhimkatta	38.5	38.9	Mahuva	15.7	15.0
Khambha	42.3	38.6	Songadh	17.3	18.1
Dhari	51.2	35.1	Mangrol	22.5	21.2
Damnagar	58.0	45.4	Palsana	27.4	24.4
Ratanpur	60.7	31.7	Kamrej	27.8	26.5
Amreli	61.1	43.2			

The normal area which a pair of bullocks can easily cultivate is supposed to 20 Bighas. At this rate, it can be seen from the table that almost all the mahals except the first five of South Gujarat lack in a sufficient supply of plough cattle. But this estimate is rather too low as conditions of cultivation vary in different divisions of the State. Some crops do not require much cultivation. In non-irriguous areas, more land could be easily tilled. There is also a practice obtaining in a varying degree to keep the land fallow in the different divisions. After allowing for all these reasons, I think we shall not be far wrong if we assume 30 bighas as the normal area for a pair of plough cattle to till. On this assumption, we find that Savli in Central Gujarat, Chanasma, Kadi and Harij in North Gujarat and all the mahals of Kathiawad except Beyt and Kodinar suffer from a deficiency of plough cattle.

10. Comparison with British Gujarat—It would be instructive to compare here the

BARODA STATE DIVISION	Average land in Bighas cultivated per pair of plough cattle	British Gujarat Division	Average land in Bighas cultivated per pair of plough cattle
Baroda State	27.6	British Gujarat ..	28.6
Baroda Division ..	28.1	Kaira	24.7
Navsari	19.6	Surat	21.8
Mehsana	27.5	Broach	37.1
Amreli (including Okha- mal)	41.6	Panch Mahals ..	14.6
		Ahmedabad ..	50.8

burden of a Baroda pair of bullocks with that of British Gujarat. The margin sets out the averages for the Baroda and British Gujarat districts. It will be seen at first sight that the incidence of burden is lighter in this State than in British Gujarat. The smaller average persists in divisions also. The figures are so striking that they do not require explanation.

11. Khatedars and Agricultural Cattle—The figures of *khatedars* as supplied by the Revenue department show that there were in all 357,389 *khatedars* in the State during the year 1930. The agricultural cattle as ascertained in the preceding paragraph include bulls and male buffaloes. But it is well known that bulls and male buffaloes are rarely if ever used as plough cattle. We shall therefore leave them out of account in our correlation of *khatedars* with the agricultural cattle, as the bulls and he-buffaloes that are at all used for the plough are not likely to be more than the bullocks used for other than agricultural purposes. The following Table gives comparative figures of the average number of bullocks per *khata* in the different divisions of the State for the last two censuses.

DIVISION	Khatedars (registered land-holders)	Bullocks (plough- cattle)	Average num- ber of bullocks per khata (1930)	Average num- ber of bullocks per khata (1920)
1	2	3	4	5
Central Gujarat	114,000	110,259	0.97	1.02
South Gujarat	57,029	86,187	1.51	1.45
North Gujarat	166,380	176,698	1.06	1.20
Kathiawad	20,020	39,166	1.95	2.06
Total ..	357,429	412,310	1.15	1.23

We see at a glance that the situation on the whole is worse than that disclosed at the preceding census. The average of bullock per *khata* in Central Gujarat has fallen from 1.02 to .97. This means that a large number of *khatedars* has to be without enough plough cattle for cultivation; it may be, this is so, because of the greater proportion of small holdings there. The condition of North Gujarat also cannot be said to be satisfactory. The South Gujarat average shows a progress and has increased from 1.45 to 1.51. In Kathiawad, the *khatedars* have just sufficient cattle for their plough but as we shall see later on, the pair there has to till the largest extent of land compared to other districts.

12. Agricultural Implements (Ploughs)—The following Table determines the sufficiency or otherwise of the ploughs and the area cultivated per plough :—

DIVISION	Bullocks	Number of ploughs	Average number of bullocks per plough	Ploughs necessary in propor- tion to num- ber of bul- locks	Area cul- tivated per plough (Bighas)
1	2	3	4	5	6
Central Gujarat	110,259	58,463	1.8	55,129	26.5
South Gujarat	86,187	39,266	2.1	43,093	21.2
North Gujarat	176,698	89,705	1.9	88,349	27.2
Kathiawad	39,166	17,816	2.2	19,583	47.5

It will be seen from the table that Central and North Gujarat have a sufficient supply of ploughs but not of bullocks while South Gujarat and Kathiawar have less ploughs than are essential for the agricultural purposes, though having regard to the area cultivated per plough in Kathiawad, the supply of bullocks cannot be said to be satisfactory. The system of *sāndhal* (co-operative use of bullocks by owners of one bullock) prevailing to some extent in Central and North Gujarat among *khatedars* of small holdings makes up for the deficiency in plough cattle in those divisions. On the whole therefore the situation can be said to be normal, if we take into consideration the quality of the soil, the seasons of cultivation, the use of harrow in some places, the system of keeping the land fallow, etc., prevailing to more or less extent in the different divisions.

13. Milch Cattle—Turning to milch cattle, we find that on the whole there has been an increase of 2.2 per cent amongst them since 1920. We have also seen that the cows have decreased while buffaloes have increased in all the districts. The following Table shows the number of cows and buffaloes by divisions as also the average number of *khatedars* who have one cow or one buffalo between them :—

DIVISION	Cows	She buffaloes	Total	Number of khatedars who have between them			
				One cow		One buffalo	
				1930	1920	1930	1920
1	2	3	4	5	6	7	8
Central Gujarat	23,437	93,185	116,622	4.9	3.9	1.2	1.3
South Gujarat	51,151	34,906	86,057	1.1	0.9	1.6	1.7
North Gujarat	76,165	198,844	275,009	2.2	1.7	0.8	0.7
Kathiawad	27,813	18,105	45,918	0.7	0.5	1.1	0.9
Total ..	178,566	345,040	523,606	2.0	1.6	1.0	1.0

These statistics show that Central Gujarat is less inclined towards breeding of the cows. It has one cow only between 5 of its *khatedars*. Kathiawad alone has more than one cow per *khata* while in South Gujarat, there is almost one cow per *khata*. North Gujarat has one cow between 2.2 *khatedars*. In regard to buffaloes, however, North Gujarat stands first. Every *khatedar* there has one buffalo and more. The condition in Central Gujarat and Kathiawad almost approaches equality while in South Gujarat almost one-third of the *khatedars* are without a buffalo. That the general situation, however, in regard to the supply of milch cattle to *khatedars*, is worse than at the last census will be clearly seen from the comparative figures given in the above table.

14. Cattle Breeding : (a) Cows—The following Table gives the figures regarding the sufficiency or otherwise of the bulls required for purposes of breeding with comparative figures of the preceding census :—

DIVISION	Bulls	Cows	Number of cows per one bull	Number of cows per one bull
	1930		1930	1920
Central Gujarat	734	23,437	31	22
South Gujarat	1,662	51,151	30	13
North Gujarat	6,731	76,165	11	7
Kathiawad	3,433	27,813	8	5

It will be seen that the condition in this respect appears to be worse than 1920. Central and South Gujarat divisions do not have a sufficient supply of bulls. The low proportion of cows per bull in North Gujarat and Kathiawad at the last census was doubted but that it was not so will be evident from the proportions worked out for this census ; but it is evident that the supply of bulls in both these divisions has diminished to a large extent.

(b) *Buffaloes*—In respect of bull buffaloes, South Gujarat fares better than other divisions.

NATURAL DIVISION	1930		1930	1920
	Bull Buffaloes	Buffaloes	Average number of buffaloes per one male buffalo	Average number of buffaloes per one male buffalo
Central Gujarat ..	3,202	93,185	29	19
South Gujarat ..	2,306	34,906	15	13
North Gujarat ..	6,105	198,844	32	22
Kathiawad ..	729	18,105	24	21

Next comes Kathiawad with 24 buffaloes to a bull followed by Central and North Gujarat with 29 and 32 buffaloes to a bull. From a reference to figures in both these tables, it appears that Central Gujarat needs both bulls and he-buffaloes and that too of a nobler breed while South Gujarat needs bulls, North Gujarat falls short of good male buffaloes. Kathiawad has got a goodly number of bulls but lacks in male buffaloes.

What is wanted however for a better breed of the agricultural cattle is not the number of bulls but the supply of a superior breed of them. It is worthy of note here that the Agricultural department of the State has directed its attention towards this object and arranged to supply a superior breed of Kankrej and Gir bulls to villages which need them, under the rules framed in this behalf.

15. Population and Milk-Supply—The question of milch cattle leads us to the consideration of milk supply in relation to the population of the State. The following Table gives the comparative proportions of persons per each head of milch cattle and supply of milk per head of population :—

DIVISION	Milch cattle: cows and buffaloes	Population 1931	Proportion of persons per each head of milch cattle		Daily supply of milk in the State in seers	Average supply per individual in seers	
			1931	1921		1931	1921
Central Gujarat	116,622	824,341	7.3	6.6	443,889	0.54	0.54
South Gujarat	86,057	404,377	4.6	4.0	272,169	0.67	0.75
North Gujarat	275,009	1,010,007	3.4	3.3	894,798	0.88	0.95
Kathiawad	45,918	204,282	4.4	3.8	206,631	1.01	1.06
Total ..	523,606	2,443,007	4.6	4.1	1,817,487	0.74	0.79

Unlike all other divisions, Kathiawad has more cows than buffaloes. A cow however does not give as much milk as a buffalo; of the two the latter is the more important. In order therefore to properly assess the quantity of milk supply, we will have to fix values for their capacity to supply milk. At the last census, it was assumed that "in Kathiawad, the cows can rightly be considered equal in milk supply to the buffaloes of that division. North Gujarat cows are useless for milk giving purposes, and can safely be ignored. In the remaining two divisions from the point of view of milk giving proportion, the cows may be considered in ratio of four cows to one buffalo in Central Gujarat and two in South Gujarat". According to the above computation of the number of milch cattle and taking an average supply of $4\frac{1}{2}$ seers of milk per day per each head of cattle, the average supply of milk per head of population comes to three quarters of seer per day in the State. Kathiawad has got the highest supply, it being one seer per head. Central Gujarat supply is the least while that in North and South Gujarat is .67 and .54 seers respectively. Comparing the present average with that during the previous decade we find that the situation is worse in all the districts except in Central Gujarat where it has continued to be the same. Milk is an important item of nourishment for life and should therefore earnestly engage the attention of both the Government and the people to improve its supply particularly as the belief is growing that coming generations are deteriorating in healthiness day by day.

16. Conclusion—Before closing however, it must be mentioned that though the decade was a fairly healthy one, it did not result in a relative rise in the supply of agricultural cattle. The deficiency appears to be due to loss through migration, consequent on the close succession of years of depression during the latter part of the decade, which forced the people to part with their cattle more than before. Ten years is too long a period to assess the sufficiency or otherwise of the agricultural stock and the contributory causes leading thereto. It is therefore once again suggested and hoped that Government will order the census of livestock to be taken every five years to get at the real state of things.

APPENDIX V

FOOD SURVEY OF PRINCIPAL CASTES IN BARODA STATE

(By DR. F. P. ANTIA, M.COM., Ph.D. (ECON.), LONDON, F.S.S.

and

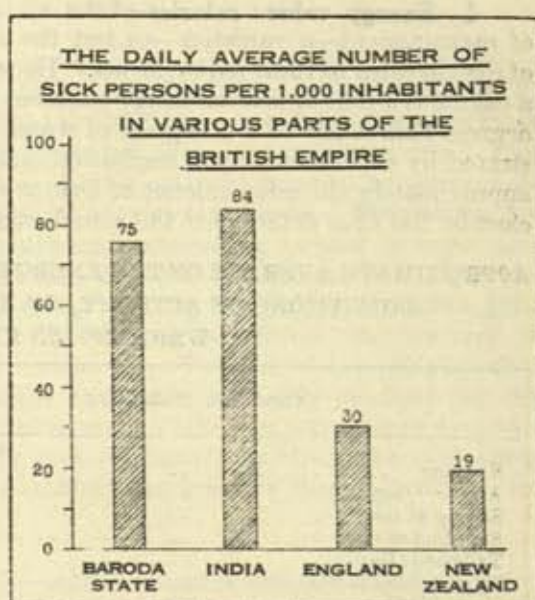
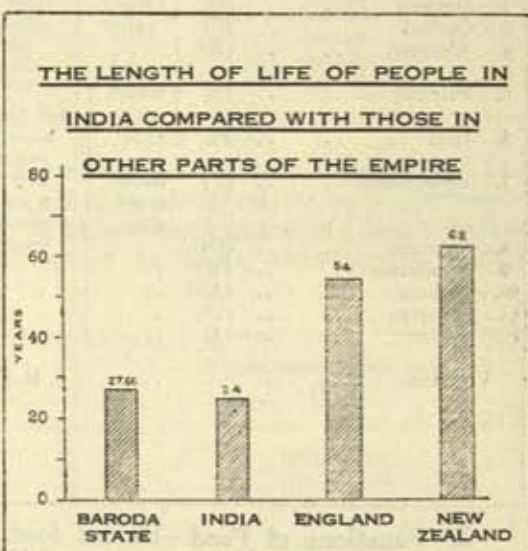
F. S. KALE, B.A. (BOM.), A.R.S.I. (LOND.), F.A.P.S. (N. Y.)

1. General Considerations : Introductory—Individual and communal efficiency depend primarily upon the health and strength of the populace, and these in turn, to a material extent, upon its dietary. Food provides not only heat and energy but also body-building tissue and bone-building calcium. Usage and tradition have tested the utility of foods and have accustomed particular people to particular dietaries. Hence the difference that obtains between diets according to climate, region, race or religion. Any deviation from the tested path, if not demonstrably for the better, is bound to lead to malnutrition and contribute to a slackening of growth and efficiency and a shortening of the span of life. The marginal diagrams will show how we stand in comparison with the rest of India and other countries in this latter connection.

It is not even that this short span of life is full of sweetness and fragrance like that of the Alpine flower. The Raj and India generally are more prone to ill-health than other countries. Taking the same countries into account the position stands :—

It is obvious then that life in Baroda though capable of showing a better statistical position than that in the rest of India, is both short and miserably lived. The principles underlying the maintenance of bodily health are either not known or the knowledge being there, are incapable of being observed.

2. Food Composition—Confining attention to dietetics for the present, foodstuffs can be classified into fats, carbohydrates, proteins, essential salts, vitamins and water—the food sextet. It is the difference in the proportions constituting the article under examination that accounts for its characteristic appearance, flavour or taste. Human physique and human mind being in need of a certain proportion of each under varying conditions of climate, exertion, etc., it is necessary so to choose one's food as to supply them with these in the correct compound so as to obviate any chance of malnutrition and consequently of disease, ill-health or premature death arising,* plant or animal organism can neither come into existence, nor grow nor function in the absence of a supply of certain basic chemical elements. Life will cease if the supply is discontinued. Disease will result if the supply is deficient or ill-balanced in its chemical composition. A recent authority thus tabulates the Food composition, its uses, and requirements.†



* For statement showing sources of food elements, see Statement C at the end.

† Strong A. G. *Domestic Science*, p. 226.

Elements composing Our Food					Form in which they occur	Daily amount required by an Adult	The Use our bodies make of them
1. Hydrogen (H)	2. Oxygen (O)				Water	3 seers	Body regulator, carrying food to the tissues and waste away from them.
1. Hydrogen (H)	2. Oxygen (O)	3. Carbon (C)			Carbohydrates	67 per cent of diet 360 to 450 grams.	(a) Gives heat and energy measured by calories. (b) Roughage.
					(a) Sugar, starches		
					(b) Cellulose		
1. Hydrogen (H)	2. Oxygen (O)	3. Carbon (C)			Fats and oils and some times organic acids.	17 per cent of diet. 80 to 90 grams.	Gives heat and energy measured by calories.
1. Hydrogen (H)	2. Oxygen (O)	3. Carbon (C)	4. Nitrogen (N)	Principally	Proteins. Built up from amino acids by plants and animals.	10 to 15 per cent of diet. 90 to 100 grams.	(1) Builds body tissues for growth and repair. (2) Also gives heat and energy measured by calories.
5. Sulphur (S)				Small amounts	Ash. Constitutes partly as mineral salts and partly in combination with carbohydrates, fats, proteins and other organic compounds.	.67 (CaO) 1.32 (P ₂ O ₅). .015 (Fe.)	Body regulators, and also important for body structure. $\frac{2}{3}$
6. Iron Fe.							
7. Phosphorus (P)				Occasionally.			
8. Calcium (Ca)	9. Potassium (K)	10. Sodium (Na)	11. Chlorine (Cl)	12. Iodine (I)			
Vitamins					A, B, C, D, E..	Daily supply required, as they cannot be stored by the body.	Regulate metabolism promote growth and reproduction. Protect from deficiency diseases.

3. Functions of Food—Human food in fact has a four-fold function to perform—(i) to supply the elements necessary to build up living cells, (ii) to supply the energy and heat necessary for movement and action, internal and external, (iii) to regulate the vital processes of the body in such a harmonious manner as to give the body a tone of health and well-being, and lastly (iv) to add to the joys of life.

4. Energy value : calories—Like all other scientists, the bio-chemist adopts a unit of measurement—a yardstick—to test the adequacy or otherwise of the heat and energy value of diet to cater to these requirements. He reduces all foods to their calorie value. Technically a calorie is a unit of heat or energy sufficient to raise the temperature of a pound of water by 4 degrees Fahrenheit or a Kilogram of water to one degree Centigrade. It has been demonstrated by experiments upon respiration calorimeters that food consumed in the body gives off approximately the same amount of heat or energy as when burnt in a calorimeter. The bio-chemist has thus determined the actual calorie consumption of food per hour as under :—

APPROXIMATE AVERAGE OF THE ENERGY EXPENDITURE PER HOUR, UNDER DIFFERING CONDITIONS OF ACTIVITY, OF AN AVERAGE SIZED MAN IN BARODA, WEIGHING 55 KILOGRAMS (121 lbs.):—

Condition of Activity	Calories per hour
Sleeping	50-55
Awake, lying still	55-70
Sitting at rest	80
Standing at rest	90
Tailoring (Darji)	105
Type-writing rapidly	110
Book Binding	135
Light exercise	135
Severe exercise	355
Sawing wood	380
Shoemaking (Mochi)	140
Walking slowly about 2½ miles per hour	160
Carpentering	190
Active exercise	230
Walking rapidly about 3½ miles per hour	235
Stone working	315
Running 5½ miles per hour	395
Very severe exercise	470

Nor does this consumption depend upon activity or want of it alone. Age is a vital factor determining calorie need. The growing child, for example, needs over and above the usual ration for heat and energy and replacement of worn out tissues, from fifteen per cent of energy value of the food, to forty per cent of protein, for purposes of growth alone. After the first year while the allowance of food per unit of time may increase, it decreases per unit of weight. This requirement may be tabulated as under :—

AGE UNDER	CALORIES	
	Per kilogram	Per lb.
1 Year	100	45
1—2 Years	100—90	45—40
2—5	90—80	40—36
6—9	80—70	36—32
10—13	75—60	34—27
14—17	65—53	32—30
18—25	55—40	25—18

For boys and girls of growing age, in colder countries, the caloric requirements have been computed as under. It is necessary to point out that taking infants as proportions of adults as regards caloric needs is utterly misleading. The food requirements of a family demand calculation with reference to each individual constituent of the family, considered in relation to age, sex, occupation, physical exertion, etc. :—

AGE	SEX	Calorie consumption per day
1—2	Both	1000—1200
2—5		1200—1500
6—9		1400—2000
10—13	Girls	1800—2400
	Boys	2300—3000
14—17	Girls	2200—2600
	Boys	2800—4000

Calories, however, though an important and for the dietician an indispensable unit of measurement, should not occupy the whole of the canvas. Caloric measurement is only a quantitative test. Healthy functioning depends upon calories generated from particular elements in particular proportions. Thus calories generated from carbohydrates could never replace those generated from proteins. Each group has its assigned function to perform and it is quite possible to overfeed a man calorifically until he starves to death. Voit relates, how an English physician died a victim to his own experiment of nourishing himself on sugar alone for a month—a diet which undoubtedly supplied him with the required number of calories. For whereas the sugar would generate heat and energy to keep the physical machine going, the absence of a tissue building protein together with that of the soluble vitamins and the regulating salts, meant that he subjected himself continuously to a state of nutritic starvation. Mrs. Strong's studies for Baroda show that though rice would cost only an anna per 1000 calories, *ghee* five annas and three pies, and milk five annas and nine pies, for an equal number of calories we find that not even the poorest family lives exclusively on rice. Resort is always had to other articles in however deficient a quantity, and however poor a quality. One of these essential substances is protein.

5. Proteins—Investigations show that the protein requirements of the body can be set out with fair precision. Recent experiments have demonstrated the enormous waste that an unnecessarily high proteid diet used to entail, *inter alia*, by reason of an immense strain upon the digestion to grind up food in quantities that the body could not possibly absorb. "A daily metabolism of proteid matter equal to an exchange of 0.10 to 0.12 grams of nitrogen per kilogram of body weight is quite adequate for physiological needs, provided a sufficient amount of non-nitrogenous foods—fats and carbohydrates—is taken to meet the energy requirements of the body¹. An allowance of 60 grams is thus theoretically adequate, but a margin of safety

1. Chittenden: *The Nutrition of Man*, p. 227.

in addition to this is necessary. Mrs. Strong puts this figure at 75 grams, and it is proposed to adopt this as the standard requirement for this study. Proteins again differ materially *inter se*. Animal proteins containing certain amino-acids being nearly of the same composition as human tissue are the most suitable—vegetable proteins less so. Lusk is emphatic upon giving milk, egg, fish and meat proteins a higher value over those from wheat, *dal*, potato, maize, etc., though this should by no means suggest that it is impossible to obtain sufficient proteins from exclusively vegetable sources. Milk is an ideal food, containing the required substances in an ideal blend, and should provide a good corrective to an otherwise ill-balanced vegetable diet.

6. Vitamins—Almost equal emphasis should be laid upon the necessity of including vitamins in the diet. McCullom in the course of his bio-chemic experiments, found that a group of rats when given a diet containing $1\frac{1}{2}$ per cent butter thrived and reproduced their species. When however 5 per cent vegetable oil was substituted for the butter, metabolism ceased, and so did reproduction. The reason obviously was the absence of a substance which butter fat possesses and vegetable oil does not. Five different varieties of these were, later found in different natural unrefined foods—all very essential for the maintenance of health, growth and reproduction since their absence in diet invariably led to disease of one sort or another.

7. Mineral Salts—Besides these, are necessary the mineral salts. The natural human instinct for sodium chloride—the common table salt—is very suggestive. All natural foods possess this element, and a properly selected natural diet would contain enough salt for nutritive purposes. Modern dietaries lack this mineral element and we supply the deficiency to a certain extent by adding salt at the table. The minerals that are necessary may be listed as potassium, magnesium, sulphur, iodine, phosphorous, calcium, iron, chlorine, sodium, etc. The three most important constituents in which human diet is likely to be deficient are calcium, phosphorous and iron, each of these forming a constituent of our bones, tissue and blood.

8. Prefatory Note upon the Investigation: The Collection of the Data—By order of His Highness the Maharaja Saheb, a dietetic survey of the whole Raj was undertaken along with the general census operations. The purpose was to investigate into the sufficiency or otherwise of the nutritive value of the food, normally consumed by His Highness's subjects. A questionnaire was issued to the census committees in two parts, the first of a general nature, the second relating to articles composing the dietary, their quantity and quality with reference to each group or caste in the taluka. 23 dietaries have been thus examined.

9. Limitations of the data—It needs of course to be realised that a dietetic survey is more likely to give precise results if entrusted as his whole time work to a bio-chemist than when entrusted as a side-issue to a statistician. The *piece de resistance* is in the collection of data. It is, in the first place, impossible to give the exact weight or measurement of the quantity taken per day particularly with reference to the non-standardised non-commercialised home prepared dietary of the Indian. The quantity bought at the grocers can hardly furnish a clue, as the edible portion in many cases may differ, both as regards chemical properties as well as measurement, from the quantity purchased. When the unit of measurement is the daily dietary, as it was with regard to the present investigation, each little inaccuracy contributes towards swelling the margin of error in the monthly dietary. And the month has to be brought in as the intermediate unit if the occasional deviations from the normal beaten track are to be taken into consideration. The usually rice and *bajri* eating Patidar indulges not infrequently in wheat and *kodri* and the Brahmabhat in wheat and *bavata*. This applies with greater force to the non-vegetarian portion of the population. Mainly, it seems, because of economic reasons the deviation from vegetarianism is fairly unusual and if the Parsis and to a less extent Mahomedans are excepted, indulgence in non-vegetarian diet in the normally accepted European sense of the term—fish and meat for each of the two meals and eggs for breakfast—is wholly absent. The Rajput takes meat and fish but once a week, and eggs but once a fortnight, while the Bhangi and the Dhed resort to a smaller quantity of it even less frequently.

10. Difficulties in assigning Chemical Values—It is necessary to make a reference to the enormous difficulty encountered in the process of reducing the food articles to their chemical values. Bio-chemistry is in its infancy in India, and barring exceptions little work has been done upon Indian foodstuffs. Results are available, no doubt, of tests made in English or American laboratories upon their own foods. Naturally enough, they concentrate upon the standardised marketable packet foods or restaurant served varieties—hardly applicable to our conditions. Again when equivalents are found for articles common to both dietaries, it is but to be expected that their values differ because of climatic factors and dietetic requirements of the people. An American Mutton chop, for example, has a caloric value of 1660 calories per lb., contains 15 per cent of protein and 31.4 per cent of fat, while the leanest portion, the leg, generating 795 calories will have 18.6 per cent protein and 27.4

per cent fat¹. The Indian meat on the other hand equals between 576 and 672 in fuel value, has between 21.05 and 25.26 per cent protein and between 4.38 and 7.88 per cent of fat². Even in cases where Indian values are available, the regional peculiarities make varieties different in their chemical value and it is the sphere of the food chemist to say whether or not the varieties examined in Coonoor—values whereof have here been adopted—have the same chemical values as those applicable in the different portions of the Raj. Attempt has of course been made to obtain Indian values wherever possible, but in some cases, resort had to be had—particularly regarding the examination of mineral salt contents—to some American analysis.

11. Analysis of Diets : Foodstuffs of Common Consumption—Several articles, it will be observed from the tables, are common to all castes. Amongst these are rice, *dal* (pulse), potatoes, greens and one or more cereals—either wheat or *juwar* or *bajri*. So also are the dressings and seasoning substances like chillies, spices, salt, oil and *ghee*. Some of the latter, oil and *ghee*, for example, though not eaten mainly for their food value contribute materially to it. Thus whereas a lb. of greens—the eggplant has been taken as a representative sample—generates 130 calories energy, a tola and a quarter of oil or a tola and half of *ghee* or three tolas of chillies or spices—pepper taken as representative—used to season the greens, generate as much more. In broad terms it may be laid down that the main energy providing substances are rice, *dal* and one or more other cereals,—wheat being a luxury to all except the higher castes,—while *dal* and milk with curds occasionally thrown in, provide for the protein requirements. In themselves these latter would be woefully deficient in protein, considering that their intake is very limited by reason of their bulk. Cereals also contribute a large part of the protein intake. This of course takes it for granted that they are consumed in their normal and unrefined state, so as not to deprive them of their natural constituents.

12. Diets in different Castes—Of the selected castes whose dietary was finally submitted for examination, a dozen are vegetarians and an equal number non-vegetarian, the whole group constituting 46 per cent of the population of the Raj. The presence of Thakardas, Muslims, Rajputs, Bhils and Dheds in the latter category however accounts for their constituting a major proportion of the dietaries analysed, i.e., 30.03 per cent of the population or 69.5 per cent of those under survey. Table A (Summary Table) shows the whole position at a glance. It requires however to be supplemented by an explanatory note. The requisite standard has been taken at the minimum necessary for maintenance of human health, on the basis propounded by Mrs. A. G. Strong, formerly Director, Household Arts, in the State. The figures that she sets out, however, viz., 2,500 to 3,000 calories of fuel value, 75-90 grams of protein, .45 to .67 grams of calcium, 1.44 grams of phosphorous and .015 grams of iron, make no allowance for wastage. It has been proved though, that not all the food intake is likely to be assimilated in the system. It is usual therefore “to deduct 10 per cent from the theoretical caloric value of a mixed diet to allow for the loss due to non-assimilation which is more marked on a vegetable than on an animal diet³”. Colonel McCarrison, the Director of Nutritional Research at the Pasteur Institute, Coonoor, applies this wastage allowance with uniform regularity. After reducing the dietary to its daily chemical value, 10 per cent has, in every case, been deducted to provide for this wastage, and the remainder tested against the standard set by Mrs. Strong. This seems to be the fairest procedure, since, it is not so much the mere intake, as the actual function of the intake in a normal human organism, that should be the purpose of a dietetic survey. Mrs. Strong's standards have thus been taken as criteria of effective consumption or in other words of actual absorption necessary into the system. That this was her intention is evident from the values assigned by her to a minimum and a maximum diet theoretically planned by her, where the values compare as under⁴ :—

							Calories	Protein grams	Calcium	Phospho- rous grams	Iron
Maximum	..	..	..	..	..	..	2,562	75	.47	.107	.016
Maximum	..	..	..	..	..	..	3,077	93	1.05	2.434	.030

These, it should be noted, are the absorption standards for a clerk, i.e., for a man of sedentary pursuits. Not all the castes here scheduled however are prone to pursuits involving physical non-activity, and it is quite conceivable that for healthy functioning of the human machine,

¹. Macfadden : *Encyclopædia of Physical Culture*, Volume II, page 812.

². McCarrison R. : *Food*, page 115 *et seq.*

³. Mukerji Radhakamal : *Food and Food Requirements of Indian Labourers*; paper submitted to the 15th Indian Economic Conference, 1932.

⁴. Strong, A. G. : *Indian Journal of Sociology*, Vol. I, p. 184

absorption should increase *pari passu* with the expenditure of energy involved in an active avocation. The largest group of people amongst the vegetarians, the Lewa Patidars, are thus cultivators and not clerks, and it would have been only fair to judge their effective consumption against a high standard—say 2,750-3,000 calories and 90 grams of protein, etc. The same remarks apply to the varied categories of Brahmans, few of whom pursue their traditional calling. Amongst the non-vegetarians, but few may belong to sedentary professions, for a bulk of them are petty traders, cultivators, weavers and agricultural labourers¹. There were two motives however in making the minimum, as against a flexible adaptable standard, the touchstone. The questionnaires issued in the first place had taken account of only certain items of food, to the exclusion of others. Thus tea, sugar and butter milk, to common knowledge though figuring on the menu of every caste, fail to appear on the questionnaire, and if not the first two, the last is certainly an item of considerable importance from the dietetist's point of view, especially when its almost general use is borne in mind. Again, with such of the data as is collected, the margin of error in measurement needs to be accounted for in view of the agency employed to gather the information. Secondly, it was felt that the strictest fairness and impartiality could be betrayed by the adoption of a minimum standard, and not a flexible one, where there may creep in a chance of previous prejudices—nurtured upon the catchword of "India's starving millions"—influencing the judgment in assigning absorption level to each caste individually.

13. Calories in Foods of Different Castes—Examining Table A, in few instances it will be noted, does the calorie value exceed the minimum requirement. Amongst the vegetarians, the Patidar, the Audich Brahman and the Dasha Lad Vania belong to that category; amongst the non-vegetarians, the Thakardas and the Golas. The range of such excess is however very limited, being from 86 to 216 in the first category and from 183 to 317 in the second. In terms of *tolas* of rice, these calories mean at their highest $216 \div 45$, i.e. 4.8 and $317 \div 45$ i.e., 7.04. The deficiencies however are the usual feature, ranging from 24 calories among the Anavala Brahmans to 465 amongst the Kachhiyas, and from 34 amongst the Muslims to 1165 amongst the Dublas. The vegetarian is defective up to $465.5 \div 45$, i.e., 10.3 and the non-vegetarian up to $1165.1 \div 45$, i.e., 25.8 *tolas* of rice per day. This, if anything, corroborates Mrs. Strong's analysis in 1920 of the military rations, where the combatants fall short in their diet by 100 calories, and the non-combatants by as many as 433 calories. The analysis made by a bio-chemist in Madras, of an average non-vegetarian Hindu diet indicates a similar deficiency in calorie value, though the standard against which the diet was tested here was nearer 3,000 than 2,500².

14. Protein Consumption—Coming to proteins, the analysis unfolds a more doleful tale. The vegetarians barring two exceptions,—Lewa Patidars and Audich Brahmans,—are all under provided. The surplus though, in the case of the Patidars and Audich Brahmans, of 6.38 and 4.42 equals $6.38 \div 2.40$ and $4.42 \div 2.40$ —no more than 2.65 and 1.85 *tolas* of meat. The deficiencies range from 3.70 *tolas* for Brāhmabhats to 19.26 *tolas* for Kansaras. The Patidar's position is the strongest by virtue of his consumption of *dal*, milk and curds, and though other castes resort to these three articles too, their consumption is limited both in quantity and frequency. This only illustrates the point previously set out, viz. that milk and milk products alone can provide an appropriate corrective to a vegetarian diet. The non-vegetarians are in this regard better situated with four castes enjoying a surplus of from 1.02 grams to 21.02, equal in meat value to .45 to 8.76 *tolas*. It will be noticed though that except in the case of the Parsi where the percentage is 41.1 and the Mahomedan whose percentage is 27.3, the proportion the non-vegetarian group of foods contributes to the total protein supply is very limited. And since none of them resort to milk products in as large quantities as the vegetarians do, it may be suggested that it is only to supply the want of amino-acids in their otherwise vegetarian diet deficient in milk proteins, that they have recourse to animal food. It is even possible that the fact that the vegetarians fail to get any complete protein from the source of the bulk of their protein supply, which milk is not, leaves their diet, theoretically at least, more deficient than that of the non-vegetarians who do get a small supply of these complete proteins.

15. Calcium in Vegetarian Diet—With regard to calcium, *dal*, milk and curds again constitute the principal sources of supply. The Patidars score again with a surplus of .225, i.e., 50 per cent of the requirement. It is to be noted that of the monthly supply of 22.473 grams in case of the Lewa Patidar these three items account for no less than 19.98, i.e., 88.88 per cent—and with regard to the Nagar for 16.40 out of a total 19.54, i.e., 83.8 per cent. Similarly the use of milk and curds puts the Deccani Brahman in a favourable situation. The diets deficient in calcium, it will be found, are deficient also in milk and curds, *dal* being included

¹ Vide Table XI, Volume XIX, Census of India: Baroda, 1931.

² McCarrison Robert: *Food* (1928), p. 114.

everywhere in a smaller or larger quantity. An inspection of the non-vegetarian diets—most of them poor in calcium—confirms this statement. For though the Parsi and the Mahomedan diets show a substantial consumption of non-vegetarian foods, their values remain more or less deficient in respect of this substance. If some intrusion upon the sphere of the bio-chemist is permitted, it may be suggested that the typical tall and broad structure of the Patidar has some correlation with the sufficiency of his calcium supply which goes to give tone to his bony frame-work.

16. Phosphorous-producing Foods—By far the strongest position obtains with regard to phosphorous supply, amongst the vegetarians particularly. Only the Kachhiya, the Bhavsar and the Kansara has a small deficiency, while the surpluses range from .180 in the case of Nagar Brahmans to .590 in the case of Brahmabhats. It is notable that Mrs. Strong's analysis gave a similar surplus in phosphorous, not only in the case of the better fed military combatant, but even regarding the apparently half-starved follower*. The most potent source of phosphorous is *dal*, with wheat and *bajri* closely following. These being the principal items in a vegetarian dietary, the surplus can be easily explained. Coming to the non-vegetarians, the position becomes less favourable with six of the eleven castes suffering a substantial deficiency ranging from .126 to .581 grams whilst the rest enjoy a surplus between .235 and .351 grams. It will be noted that the deficient diets err in respect of a shorter than usual supply of *dal*, and often a total absence of wheat. Though milk and curds contribute towards phosphorous supply, the gap left by *dal*, wheat and *bajri* is difficult to fill up. And animal food even amongst the bulk of the non-vegetarians is too poor in quantity to compensate for the absence of other phosphorescent items.

17. Shortage of Iron—Iron appears to suffer a general deficiency, as great as that of protein. Only the Audich Brahmans and the Nagars have a small surplus and the deficiency among the rest ranges from .0007 to .0054 in a total requisite supply of .015 grams. *Dal*, wheat and salt are the principal sources in order of importance amongst the vegetarians. The consumption of salt being for obvious reasons limited, the Audichas by reason of a liberal supply of both and the Nagars for whom wheat constitutes a major portion of their total cereal supply find themselves favourably situated, whilst the Patidar who consumes no less of *dal* than the other neighbouring castes, suffers a deficit—the only one in his dietary,—because of his confining wheat to occasional use only. Amongst the non-vegetarians the surplus occurs only with castes in habitual use of mutton, etc.—the Mahomedan and the Parsi. In their case too, to this source—meat and eggs—is added a moderately liberal supply of wheat and *dals*. It is noticeable that even amongst the Parsis, the non-vegetarian items do not account for more than .25 grams of iron out of a total monthly supply of .71 grams, whilst wheat happens to be the largest single supplier of the substance.

18. Vitamins: the Absence of a Measure—With regard to the presence of vitamins in the diet, it is regrettable that no yardstick to measure their presence quantitatively is available. The substance did not occur in the bio-chemist's stock of trade until after the World War, when the effect of deviations from natural foods was studied as an important dietetic problem. Only recently have five Vitamins been isolated and their function, in promoting and regulating health, metabolism, reproduction, etc. determined. Though cereals and pulses do contain them in small quantities, it is mostly animal products like milk, curds, *ghee*, mutton and eggs which possess them in any abundance. Other articles of diet being the same, non-vegetarians will therefore enjoy an advantage over their vegetarian brethren, in respect of vitamin supply. Considered generally, however, it seems very unlikely that the substance is available in adequate proportions. A rough test the bio-chemist applies to ascertain the presence of vitamins is whether the food is taken in its natural form and bears the mineral salts normally occurring in it. When the germ is removed from the grain, for example from the wheat, in the process of bleaching the flour or of polishing the rice, the effects are baneful both upon the salts and the vitamins. If this principle is acceptable—that the presence of salts will insure the presence of vitamins alongside, a deficiency in the salt supply can only lead us to conclude that the vitamin allowance is also short.

19. Conclusion: the Ideal Diet—Considered in broad aspects, the survey gives rather alarming results. The Audich Brahmans alone emerge successful through the test,—though with a very narrow margin sometimes—with the Lewa Patidars close upon their heels. The reasons for the deficit may be variously stated from rank poverty in the case of Dublas to ignorance of dietetic principles in the case of the Parsis. The narrow uniformity of the diet is another notable feature, though the want of scope in the questionnaire may have a great deal to do with the results obtained. It seems certainly essential that His Highness's subjects should

* *Vide* article in the Indian Journal of Sociology, Vol. I, p. 184.

eat more food of better quality, greater variety and richer chemical worth. It will not be out of place to conclude with a daily dietary theoretically applicable to India as devised by a bio-chemist (Colonel McCarrison). It will be noted that his requisite standard is far higher than that adopted for the purposes of our test*.

FOODSTUFF	Amount in Ounces	IN GRAMMES			Calories
		Proteins	Fats	Carbohydrates	
<i>Atta</i>	12	48.80	6.48	244.2	1,222
Rice : home pounded	6	13.80	0.51	133.8	595
Meat (Mutton)	2	11.94	3.96	0.0	84
Milk	20	18.80	20.40	27.2	360
Vegetable oil	1	0.00	28.00	0.0	252
<i>Ghee</i>	1.5	0.00	34.60	0.0	312
Root vegetables	8	4.40	0.36	31.8	148
Cabbage	8	3.10	0.24	10.2	56
Mango	4	0.16	0.88	20.8	92
<i>Dal</i>	1	6.50	0.99	16.2	100
Less 10 per cent for waste	63.5	105.50	96.42	484.2	3,221
	6.3	10.50	9.64	48.4	322
Total	57.2	95.00	86.78	435.8	2,899

* McCarrison Robert : *Food* page 113.

TABLE A

DAILY EFFECTIVE CONSUMPTION IN DIETS OF SELECTED CASTES

CASTE	Percentage of Population	Calories	Surplus + or Deficiency —	Proteins (grams)	Surplus + or Deficiency —
1	2	3	4	5	6
VEGETARIAN					
Lewa Patidar	9.28	2,692.04	+ 192.04	81.38	+ 6.38
Audich Brahman	1.85	2,836.00	+ 86.00	79.42	+ 4.42
Shravak Vania	1.39	2,079.10	— 430.90	60.03	— 14.97
Goldsmith .. .. .	.54	2,367.90	— 132.10	64.91	— 11.01
Brahmabhat .. .. .	.41	2,152.50	— 347.50	71.30	— 3.70
Anavla .. .. .	.48	2,476.00	— 24.00	70.70	— 4.30
Decani Brahman .. .. .	.42	2,430.30	— 219.70	66.23	— 13.77
Nagar Brahman .. .. .	.33	2,292.30	— 207.70	66.22	— 9.78
Lad Vania .. .. .	.31	2,716.50	+ 216.50	65.16	— 9.84
Kachhiya .. .. .	.33	2,284.50	— 465.50	58.07	— 16.93
Bhavsar .. .. .	.24	2,216.80	— 284.20	55.90	— 19.10
Kansara .. .. .	.08	2,158.00	— 342.00	55.74	— 19.26
NON-VEGETARIAN					
Thakarda	7.78	2,817.70	+ 317.70	79.87	+ 4.87
Muslim	7.47	2,465.47	— 34.53	84.67	+ 9.67
Dhed	4.37	1,719.00	— 781.00	52.65	— 22.44
Rajput	3.88	2,139.10	— 620.90	61.05	— 18.95
Bhil	2.23	2,146.55	— 353.45	63.94	— 12.06
Bhangi	1.26	1,476.60	— 1,023.40	36.20	— 38.80
Valand	1.14	1,676.70	— 823.30	42.21	— 32.79
Maratha .. .. .	.69	2,354.40	— 381.00	71.58	— 3.42
Dubla .. .. .	.52	1,334.90	— 1,165.10	41.39	— 34.07
Parsi .. .. .	.29	2,154.70	— 345.30	96.02	+ 21.02
Gola .. .. .	.26	2,683.10	+ 183.10	76.02	+ 1.02

CASTE	Calcium (grams)	Surplus + or Deficiency —	Phospho- rous (grams)	Surplus + or Deficiency —	Iron (grams)	Surplus + or Deficiency —
1	7	8	9	10	11	12
VEGETARIAN						
Lewa Patidar .. .. .	.675	+ .225	1.752	+ .312	.0133	— .0017
Audich Brahman .. .. .	.453	+ .003	2.010	+ .570	.0157	+ .0007
Shravak Vania .. .. .	.405	— .045	1.771	— .331	.0117	— .0033
Goldsmith .. .. .	.384	— .066	1.620	— .180	.0115	— .0035
Brahmabhat .. .. .	.479	+ .029	2.030	+ .590	.0125	— .0025
Anavla .. .. .	.426	— .024	1.739	— .299	.0133	— .0017
Deccani Brahman .. .. .	.554	+ .104	1.655	+ .215	.0122	— .0028
Nagar Brahman .. .. .	.586	+ .136	1.620	+ .180	.0169	+ .0019
Lad Vania .. .. .	.403	— .047	1.649	— .209	.0114	— .0036
Kachhiya .. .. .	.260	— .189	1.403	— .037	.0098	— .0082
Bhavsar .. .. .	.216	— .234	1.417	— .023	.0096	— .0054
Kansara .. .. .	.251	— .199	1.410	— .030	.0095	— .0055
NON-VEGETARIAN						
Thakarda .. .. .	.165	— .285	1.791	+ .351	.0097	— .0053
Muslim .. .. .	.340	— .110	1.780	+ .340	.0189	+ .0039
Dhed .. .. .	.084	— .366	1.116	— .324	.0043	— .0107
Rajput .. .. .	.355	— .195	1.314	— .126	.0096	— .0054
Bhil .. .. .	.151	— .299	1.695	+ .235	.0054	— .0095
Bhangi .. .. .	.087	— .363	1.003	— .437	.0039	— .0779
Valand .. .. .	.079	— .371	.859	— .581	.0050	— .0100
Maratha .. .. .	.456	+ .006	1.256	— .184	.0109	— .0041
Dubla .. .. .	.134	— .316	1.242	— .198	.0043	— .0107
Parsi .. .. .	.447	— .030	1.696	+ .256	.0214	+ .0064
Gola .. .. .	.156	— .297	1.731	+ .291	.0099	— .0059

TABLE B

CHEMICAL COMPOSITION OF THE EVERYDAY FOOD OF TYPICAL CASTES

FOOD ITEM	CONSUMPTION (TOLAS)*		CALORIE VALUE		PROTEIN CONTENTS (GRAMS)		VITAMINS †			
	Per day	Per month	Per Tola	Per month	Per Tola	Per month	A	B	C	D
1	2	3	4	5	6	7	8	9	10	11
<i>Leva Patidar (226,871) Vegetarian</i>										
Wheat (Atta)	15	150	40.8	6,120.0	1.56	234.00	X	XX	..	..
Rice, or	18	360	45.2	16,272.0	0.72	259.20	..	L	..	..
Kodri	15	150	35.6	5,340.0	1.18	177.00	..	..	..	..
Bajri, or	20	600	43.6	26,160.0	1.11	666.00	X	XX	..	..
Juwar	20	600	40.4	24,240.0	1.16	696.00	X	XX	..	..
Potatoes	4	120	14.4	1,728.0	0.28	33.60	L	X	..	..
Greens	8	240	3.25	780.0	0.14	33.60	..	X	X	..
Dal	10	300	40.0	12,000.0	2.50	750.00	X	XX	..	..
Chillies	1	22½	45.0	1,012.5	1.07	24.07	..	..	..	..
Masala	1	15	44.4	666.0	1.76	26.40	..	..	..	..
Oil	1½	45	100.8	2,592.0	..	..	L	..	..	..
Salt	1	22½	..	..	..	..	..	..	..	..
Milk	20	600	12.0	7,200.0	0.54	324.00	XXX	X	X	X
Curds	15	330	7.2	2,376.0	0.56	184.80	XX	X	X	..
Ghee	3	90	83.2	7,488.0	..	..	XXX	..	..	X
Total per month				89,734.50		2,712.67	13	12½	3	2
Total per day				2,991.15		86.43				
Less 10% waste				299.11		9.04				
				2,692.04		81.38				
Standard requirement ..				2,500.00		75.00				
Surplus + or deficiency —				+ 192.04		+ 6.38				
<i>Audich Brahman (45,222) Vegetarian</i>										
Wheat (Atta)	15	450	40.8	18,360.0	1.56	702.00	X	XX	..	..
Rice, or	15	375	45.2	16,950.0	0.72	270.00	..	L	..	..
Kodri	10	50	35.6	1,780.0	1.18	59.00	..	..	..	..
Bajri	20	600	43.6	26,160.0	1.11	666.00	X	XX	..	..
Potatoes	5	150	14.4	2,160.0	0.28	42.00	L	X	..	..
Greens	10	300	3.25	975.0	0.14	42.00	..	X	X	..
Dal	7	210	40.0	8,400.0	2.50	525.00	X	XX	..	..
Chillies	1	15	45.0	675.0	1.07	16.05	..	..	..	..
Masala	1	15	44.4	666.0	1.76	26.40	..	..	..	..
Oil	2	60	100.8	6,048.0	..	..	L	..	..	..
Salt	1	30	..	..	..	..	..	..	..	..
Milk	15	450	12.0	5,400.0	0.54	243.00	XXX	X	X	X
Curds	10	100	7.2	720.0	0.56	56.00	XX	X	X	..
Ghee	2½	75	83.2	6,240.0	..	..	XXX	..	..	X
Total per month				95,534.0		2,647.45	13	10½	3	2
Total per day				3,151.1		88.24				
Less 10% waste				315.1		8.82				
				2,836.0		79.42				
Standard requirement ..				2,750.0		75.00				
Surplus + or deficiency —				+ 86.0		+ 4.42				
<i>Thakarda (190,195) Non-Vegetarian</i>										
Wheat (Atta)	20	80	40.8	3,264.0	1.56	124.8	X	XX	..	..
Rice, or	20	360	45.2	16,272.0	0.72	259.2	..	L	..	..
Kodri	30	360	35.6	12,860.0	1.18	424.8	..	..	..	..
Bajri	30	750	43.6	32,700.0	1.11	832.5	X	XX	..	..
Bavta	30	150	40.0	6,000.0	0.90	135.0	..	..	..	..
Potatoes	10	300	14.4	4,320.0	0.28	84.0	L	X	..	..
Greens	15	450	3.25	1,462.5	0.14	63.0	..	X	X	..
Dal	10	150	40.0	6,000.0	2.50	375.0	X	XX	..	..
Chillies	1½	45	45.0	2,025.0	1.07	48.15	..	..	..	..
Masala	1	30	44.4	1,332.0	1.76	62.8	..	..	..	..
Oil	1	22½	100.8	2,268.0	..	..	L	..	..	..
Salt	1	30	..	..	..	..	..	..	..	..
Ghee	1½	45	83.2	3,744.0	..	..	XXX	..	..	X
Mutton	15	75	16.8	1,260.0	2.40	180.0	L	X	L	X
Fish	10	20	8.8	176.0	2.06	41.2	..	X	..	..
Eggs	10	10	16.8	168.0	1.52	15.2	XX	XXX	..	X
Chicken	10	10	12.0	120.0	2.70	27.0	X	X	..	..
Total per month				93,927.5		2,662.65	10½	14½	1½	3
Total per day				3,138.8		88.75				
Less 10% waste				313.1		8.88				
				2,817.7		79.87				
Standard requirement ..				2,500.0		75.00				
Surplus + or deficiency —				+ 317.7		+ 4.87				

* Monthly food consumption is calculated by multiplying the daily quantity of the food item by the number of days on which it is taken during the month.

† X=fair supply, XX=good, XXX=very good, L=little.

TABLE B

CHEMICAL COMPOSITION OF THE EVERYDAY FOOD OF TYPICAL CASTES

FOOD ITEM	CONSUMPTION (TOLAS)*		CALORIE VALUE		PROTEIN CONTENTS (GRAMS)		VITAMINS †			
	Per day	Per month	Per Tola	Per month	Per Tola	Per month	A	B	C	D
1	2	3	4	5	6	7	8	9	10	11
Mahomedan (182,630) Non-Vegetarian										
Wheat (Atta)	20	360	40.8	14,688.0	1.56	561.6	X	XX	..	..
Rice	15	450	45.2	20,340.0	0.72	324.0	..	L	..	..
Bajri	20	30	43.6	13,080.0	1.11	333.0	X	XX	..	..
Potatoes	5	150	14.4	2,160.0	0.28	42.0	L	X	..	..
Greens	10	300	3.25	975.0	0.14	42.0	..	X	X	..
Dal	7	210	40.0	8,400.0	2.50	525.0	X	X	..	..
Chillies	4	22½	45.0	1,012.5	1.07	24.075	..	..	..	..
Masala	1	22½	44.4	999.0	1.76	39.6	..	..	..	..
Oil	2	60	100.8	6,048.0	..	..	L	..	..	..
Salt	1	30	..	..	..	..	..	..	..	..
Milk	10	300	12.0	3,600.0	0.54	162.0	XXX	X	X	X
Ghee	2	60	83.2	4,992.0	..	..	XXX	..	..	X
Mutton	10	160	16.8	2,688.0	2.40	384.0	L	X	L	X
Fish	10	50	8.8	440.0	2.06	103.0	..	X	..	..
Eggs	10	150	16.8	2,520.0	1.52	228.0	XX	XXX	..	X
Chicken	10	20	12.0	240.0	2.70	54.0	X	X	..	..
Total per month				82,182.5		2,822.275	12½	13½	2½	4
Total per day				2,739.41		94.07				
Less 10% waste				273.94		9.40				
				2,465.47		84.67				
Standard requirement				2,500.00		74.00				
Surplus + or deficiency —				— 34.53		+ 9.67				
FOOD ITEM	MINERAL SALTS (GRAMS)									
	CALCIUM		PHOSPHOROUS		IRON					
	Per Tola	Per month	Per Tola	Per month	Per Tola	Per month				
1	12	13	14	15	16	17				
Mahomedan (182,630) Non-Vegetarian										
Wheat (Atta) .. .. .	.0051	1.800	.0480	17.28	.0005	.180				
Rice .. .. .	.0010	.450	.0109	4.90	.0001	.045				
Bajri .. .. .	.0016	.480	.0370	11.10	..	..		
Potatoes .. .. .	.0014	.210	.0066	.99	..	..		
Greens .. .. .	.0010	.300	.0040	1.20	.00005	.015				
Dal .. .. .	.0120	2.520	.0496	10.41	.0009	.189				
Chillies .. .. .	..	..	..	..	..	..
Masala .. .. .	..	..	..	..	..	..
Oil .. .. .	..	..	..	..	..	..
Salt .. .. .	..	..	..	..	.00056	.0168				
Milk .. .. .	.0130	3.900	.0100	3.00	.00003	.0090				
Ghee .. .. .	..	..	..	..	..	..
Mutton .. .. .	.0024	.384	.0440	7.04	.00060	.0960				
Fish .. .. .	..	..	..	..	..	..
Eggs .. .. .	.0090	1.350	.0240	3.60	.00040	.0600				
Chicken .. .. .	..	..	..	..	..	..
Total per month		11.394		59.52		.6408				
Total per day .. .. .		.378		1.98		.0210				
Less 10% waste .. .. .		.038		.20		.0021				
		.340		1.78		.0189				
Standard requirement .. .. .		.450		1.44		.0150				
Surplus + or deficiency —		— .110		+ .34		+ .0039				

* Monthly food consumption is calculated by multiplying the daily quantity of the food item by the number of days on which it is taken during the month.

† X=fair supply, XX=good, XXX=very good, L=little.

STATEMENT C

SOURCES OF FOOD ELEMENTS

CHEMICAL ELEMENT	SOURCES	
	Animal	Vegetable
1. <i>Body building Materials</i>		
Proteins	Milk, eggs, meat, fish, fowl ..	Pulses, grams, <i>dals</i> , wheat, <i>bajri</i> , nuts, leafy vegetables.
2. <i>Body Regulators</i>		
i. Calcium	Milk, butter milk, curds, whey, egg yolk.	<i>Dals</i> , nuts, fruits, grams, leafy vegetables.
ii. Phosphorous	Milk, butter milk, eggs, meat, fish.	Beans, lentils, nuts, wheat, oats, barley, leafy and succulent vegetables—spinach, radish, cucumber, carrot, cauliflower.
iii. Iron	Liver, red meats, eggs	<i>Dal</i> , whole cereals, leafy and succulent vegetables and fruits.
iv. Iodine	Seafish and oils	Sea-weed, fruits and green leafy vegetables.
3. <i>Indispensable helpers to body building proteins</i>		
i. Vitamin A	Fats and fish oils, liver, kidney, egg yolk, butter and ghee, whole milk.	Green leafy vegetables and vegetable tops, bamboo sprouts, lucerne, gram, sprouted grain, yellow root vegetables, carrots and sweet potato, tomato, <i>Bajri</i> , yeast, tomato, lettuce, spinach and leafy vegetables, walnuts, <i>atta</i> .
ii. Vitamin B	Eggs, liver, brain, heart, kidney.	Yeast, tomato, lettuce, spinach and leafy vegetables, walnut, <i>atta</i> , <i>bajri</i> , <i>dal</i> , milk.
iii. Vitamin C	Liver, blood, milk	Green leafy fresh vegetables, fresh fruits, prouted grains and <i>dal</i> , raw carrot, orange juice and peel.
iv. Vitamin D	Cod liver oil, milk, ghee, butter, egg yolk, fish.	Sea plants, vegetables grown in sunlight, oils and grains.
v. Vitamin E .. ..	....	Whole wheat, vegetables.
4. <i>Fuel Foods</i>		
Fats	Butter, ghee, cream, milk, fish oils, dripping.	Vegetable oils, <i>til</i> , olive, groundnuts.
5. <i>Carbohydrates</i>		
i. Sugar .. ..	....	In fruits jaggery, <i>gul</i> , treacle, white and brown sugar, honey.
ii. Starches .. ..	....	In cereal grains, <i>dal</i> , beans, nuts, <i>tur</i> , root vegetables, bananas, cellulose (or roughage) the woody fibre found in vegetables and fruits.
6. <i>Temperature Regulators, body flushers, etc., water sources</i>	Meats, milk	Green spinach fruits, etc.

CHAPTER IX

LITERACY

§ 1. CONSIDERATION OF ABSOLUTE FIGURES

295. Reference to Statistics—The statistics round which this chapter is written are of three kinds. In the first place with a view to test how far the educational policy of the State has succeeded in liquidating ignorance, the census so devised its questionnaire as to enable the figures compiled to divide the population into three categories: (a) literates who are able to read and write in any language, (b) partially literates, who though not able to combine both functions of reading and writing are still able to read only, and (c) wholly illiterates, comprising the rest of the population who have not these qualifications.

These three categories were introduced in 1921, and have been continued in this census also. Secondly the census sought to know how far people were acquainted with English on the one hand and Hindi and Urdu on the other. Apart from these two kinds of figures, this chapter presents details of schools and scholars obtained from the Education department and seeks to correlate them with literacy results. The census figures are compiled in :—

- (i) Imperial Table XIII which gives the general results by age, sex and religion, first for the whole State, and then, for the City and the different administrative divisions.
- (ii) Imperial Table XIV, which gives the number of literates and literates in English (aged 7 and over) in selected castes, arranged into three classes—Advanced, Intermediate and Illiterate—according to a percentage scale already explained in the Chapter on Civil Condition.
- (iii) State Table II, which gives the population by talukas distributed by religion, sex, age and literacy.
- (iv) State Table VI which has six parts, Parts A to C giving details of literacy by script, Parts D and E showing figures of full and partial literacy by age, sex and chief religions in all the talukas and towns of the State. Part F shows literacy for wards of the City.

In respect of these tables, it is necessary to mention that in Imperial Table XIII, all persons returned as “literate” below 5 years of age were neglected, and the age-groups of literates were also smoothed like those of the general population (*vide* Chapter IV).

296. Basis of Figures—As progress in this regard is a matter of vital interest, literacy figures in the different censuses have to be compared, and it is necessary therefore to know how far, if at all, the basis of the statistics has altered from decade to decade. Literacy is defined since 1911 as the ability to read a letter from a friend and to write a reply to it. In 1901 no general indication was given as to the standard to be adopted when a person was to be entered as a literate. In 1911, instructions as to what constituted a person's literacy were first laid down in the handbook for the superior census staff: the enumerators being left with the general instruction that one's claim to be able “both to read

and write any language " should be allowed without demur. In 1921 and 1931, the more detailed test applied in 1911 was included in the general instructions which were broadcast to all enumerators. In the instruction classes, special emphasis was laid on this point. It was desired that the literacy record was to be strictly confined to those who were able to read and write. With a view to this end, the category of the partially literate was specially devised in 1921, (i) as a check on indiscriminate returns of persons whose claims to literacy did not come up to the standard required, and (ii) as a valuable indication by which we could gauge the extent of the lapse from literacy in later ages. The test for partial literacy laid down since 1921 is the ability to read printed or other books or letters; but mere power to scrawl a signature was not enough. There is another point to be remembered while comparing figures prior to 1901. In 1881 and 1891, there were three categories—literate, learning and illiterate. The division seemed natural enough, but in practice it gave rise to many anomalies. In the first place it was not logical, because a learner may be either literate or not able to read and write at all. Secondly the return was vitiated by the omission " at one end of children who had not been long at school and at the other, of many of the more advanced students who returned themselves as literates. There were thus marked discrepancies between departmental returns and the census figures of children under instruction." For these reasons, only the two broad categories of literate and illiterate were retained by the all-India census, while the addition of the third category of partial literacy in the State census helped materially to enhance the relative accuracy of the returns. For those who were able to read only, the instruction was first to enter a cross (or " no ") against column 16 and then in the line below it, against the query, " If not literate, whether able to read only, " enter the affirmative sign.

297. Data regarding Groups—In regard to the second kind of statistics, it is also necessary to find out the basis of the figures. Knowledge of English is always part of the census questionnaire regarding literacy. Here again the standard has varied a little from time to time, though formal instructions have not been much altered. Knowledge of English more or less involves ability to read and write in it. The ability to speak it is not asked for here, as in the Ceylon Censuses of 1911 and 1921. In 1901, literacy in the principal scripts was recorded. Ten years after, compilation by scripts was abandoned. In 1921, it was again introduced, but endless difficulties were experienced at the tabulation stage; the different combinations led to complicated sortings. Claims to polylingualism were so extravagant that the results compiled were not of much value. In the present census, we decided to conform to the all-India minimum in this regard contenting ourselves merely to record scripts of Hindi or Urdu. Where a person claimed knowledge of Hindi or Urdu in addition to his mother tongue, he had simply to show it as an additional qualification; he had first to write " yes " to the general query whether he was literate or not and then enter " yes " against one or other or both of the scripts which he professed to know. If a person was literate in English, whether it was his mother tongue or not, he was to be shown as literate in column 16 and literate in English in column 17. Lastly it must be remembered that a person was not directly asked if he was literate, or at least partially so, in his own vernacular. If he was shown as literate in column 16 without any mention of script, it was presumed that he was so in his own vernacular; though the presumption is not always correct. Many Deccanis residing in the State and educated in the schools where there is no facility of teaching in Marathi learn only to read and write in Gujarati. Owing to similar causes, many Gujarat Muslims, although claiming Hindustani as their vernacular, read and write only in Gujarati.

298. General Results—The number of literates in the State has increased from 272,418 to 434,734 or by 162,316 or over 59 per cent. Taking the figures by sex, the male literates have increased to 355,067 or by 54 per cent while the female literates have nearly doubled themselves, having grown from 41,300 to 79,667 or by 93 per cent. Wherever there is scope for increase, the number of literates has

increased by leaps and bounds. The State consists of the City, 32 mahals and 8 peta mahals. In 27 mahals, the increase is well over 50 per cent in respect of males and 100 per cent in respect of females. In the whole of Mehsana *prant*, female literacy has increased by 126 per cent. Palsana, Kodinar, Tilakwada and Dhari mahals record increases in female literacy from 200 to 337 per cent. Padra (196 per cent), Baroda (191), Vaghodia (191), Bhadran (168), Dabhoi (192) in Baroda *prant*; Mahuva (181) in Navsari *prant*; Sidhpur (190), Visnagar (189) and Vijapur (185) in Mehsana *prant*, and Khamba (189) in Amreli come next in order of progress in female education. In male literacy, the highest increases

LITERACY				
DIVISION			Variation per cent since 1921	
			Male	Female
Baroda City .. .. .	..	..	18.4	13
Amreli Division .. ..	..	..	56.4	141
Highest ratio in Prant (Kodinar) ..	..	..	98	211
Baroda Division .. ..	..	..	66	111
Highest ratio (Tilakwada) .. ..	..	..	205	337
Mehsana Division .. ..	..	..	59	126
Highest ratio (Visnagar) .. ..	..	..	81	189
Navsari Division .. ..	..	..	45	93
Highest ratio (Mahuva) .. ..	..	..	84	181
Okhamandal .. .. .	..	..	23	25

recorded are in Tilakwada (205), Baroda (101), Kodinar (98), Vaghodia (97), Padra (88), Bhadran (87), Mahuva (84), Visnagar (81) and Vyara (80). The marginal table gives the general rate of increase in literacy by sex in the different divisions (with the highest ratio recorded for both sexes within each division). In Baroda City and Okhamandal, the smallest rates of increase are registered in the former because there is the least scope there for further advance under present social conditions; and in the latter, because owing to the backward nature of the country and the continued seasonal depressions, compulsory provisions were relaxed and the schools declined both in number and attendance.

299. Variation in Number of Literates in the Main Religions—The

RELIGION	Total strength in 1931	Variation per cent in total strength since 1921	Literacy strength in 1931	Variation per cent in number of literates since 1921
Total ..	2,443,007	+ 14.9	434,734	+ 59.6
Hindu Brahmanic ..	2,149,200	+ 23.4	360,648	+ 67.0
Jain	48,408	+ 12.0	24,324	+ 22.0
Tribal	44,890	— 72.5	773	— 72.7
Muslim	182,630	+ 12.5	39,665	+ 52.0
Zoroastrian ..	7,262	— 5.3	5,121	— 5.5
Christian	7,127	— 2.1	2,466	+ 53.0

marginal table has been prepared to show the comparative variation in the general strength as well as in literacy under each main religion. The minor groups like Aryas, Brahmos, Sikhs, etc., have been omitted. It is interesting to find amongst Parsis, who had already attained to high literacy in 1921, that there is so little scope for further advance that their total strength and the number of literates amongst them have declined at the same rate. At the other end of the scale in

educational advancement, the decline in literacy amongst the followers of Tribal religions has kept pace with their decline in numbers. The Jain rate of progress in literacy is almost double that of the increase in their numbers. Hindu Brahmanic records three times the rate of general increase in the ranks of its literates. Amongst Muslims for every individual added to their total ranks more than 4 have joined the ranks of their literates. But the most satisfactory progress is amongst the Christians. Although their numbers have actually declined, their literate total has increased by 53 per cent showing that there has been intensive improvement amongst the converts and only those who owned nominal adherence to Christianity have reverted back to their parent communities.

300. Disparity in Literacy by Sex—While we are on the study of absolute figures, we must refer to the disparity in the sexes in the matter of the literacy qualifications. There are 445 male literates to a hundred females

similarly qualified. Four out of five literate persons are men. This disparity continues through all age periods as seen in the marginal table. While the children are at school, the disparity is not so obvious, as both girls and boys have to attend under the Compulsory Education Act. As girls leave school earlier than boys, (compulsion for the former being only from 8 to 12 years as against 8 to 14 for boys), a smaller proportion of girls acquire literacy than boys. From the adolescent ages (10-15 and 15-20) the disparity tends to increase, until women lag behind hopelessly in the years after 30. In 1921, this disparity was even more noticeable than now, there being 4 boys to one girl literate in the age-group 15-20. 64 per cent of male literates are aged at least 20 years and over while only 42 per cent of female literates are of adult ages. Thus while the majority of literates among men are grown up, the majority amongst females are in the adolescent and school-going ages. In 1921, the conditions were similar, only the disparity being slightly more accentuated than now.

AGE PERIODS	Proportion of literate males to	
	100 literate persons	100 literate females
All Ages ..	82	445
5-10 ..	70	230
10-15 ..	72	250
15-20 ..	77	330
20-30 ..	81	440
30 and over..	91.5	1,090

§ 2. STUDY OF PROPORTIONATE FIGURES

301. Literacy by Religion, Sex and Age—Having studied the state of things as disclosed by absolute figures it is time now to turn to proportionate results. Let us first compare literacy ratios by religion, sex and age. The following Table gives the particulars of literacy results in the different religions distributed according to sex and age. A diagram plotting the proportionate figures of literacy for all ages 5 and over in each main religion is also given below the table :—

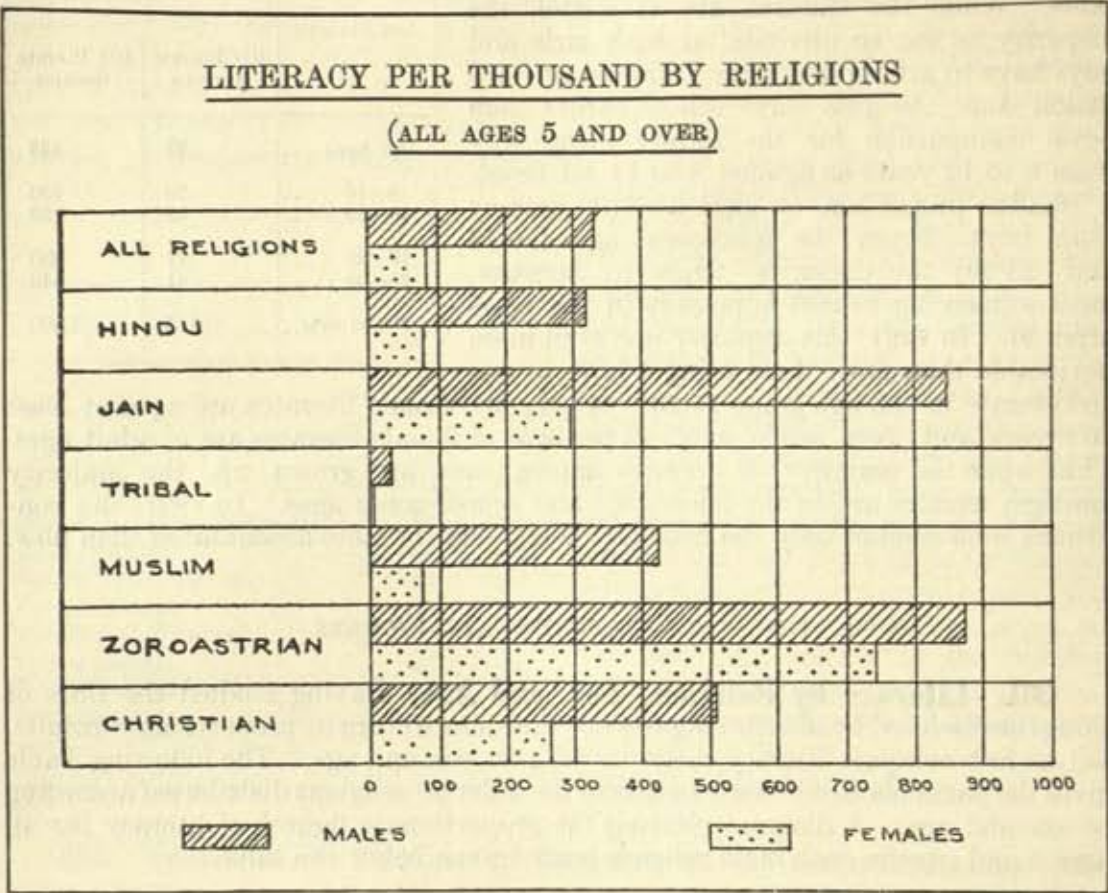
SUBSIDIARY TABLE I

LITERACY BY AGE, SEX AND RELIGION

RELIGION	LITERATE PER 1,000 AGED 5 AND OVER										
	All ages 5 and over			5-10		10-15		15-20		20 and over	
	Persons	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12
All Religions ..	209	331	79	157	75	301	132	470	147	354	55
Hindu	198	315	72	152	72	293	126	456	137	334	47
Jain	577	849	298	401	250	676	447	964	586	962	222
Tribal	21	37	4	13	2	26	3	55	10	48	4
Muslim	254	420	79	183	60	350	126	562	144	466	58
Zoroastrian ..	796	870	743	478	466	768	724	970	925	961	758
Christian ..	392	506	263	260	196	478	325	713	416	520	223

In the above table only the major religions are shown. Hindu Aryas show 58 per cent literacy (74 amongst males and 37 amongst females). With Brahmos not included in the above table, as their numbers are very small, 8 out of 10 are literate—9 out of 10 males and 8 out of 10 females being so qualified. Next to Zoroastrians and Jains, Christians come up with 39 per cent literacy—followed by Hindus and Tribals. If the Tribals are omitted, the State proportion of literacy rises to 223. The Tribal literacy is pitifully low, but it shows an improvement although very slight on the 1921 proportions which were 20, 37 and 3 for persons, males and females respectively of all ages 5 and over. In the next paragraph we shall analyse

the figures in the age-periods of 10-15 and 15-20; these ages are particularly important as they help to throw light on the efficacy of instructional agencies.



302. Variation in Literacy in Age-Periods 10-15 and 15-20—The marginal table compares the literacy proportions in the two age-periods 10-15 and 15-20 for the two censuses in the different religions.

RELIGION	NUMBER OF LITERATE PER MILLE							
	10-15				15-20			
	Male		Female		Male		Female	
	1931	1921	1931	1921	1931	1921	1931	1921
1	2	3	4	5	6	7	8	9
All Religions ..	301	280	132	99	470	354	147	105
Hindu	293	282	126	94	456	354	137	100
Muslim	350	315	126	100	562	424	144	109
Jain	677	831	447	477	964	935	586	454
Christian ..	478	428	325	320	713	526	416	328
Zoroastrian ..	768	956	724	782	970	991	925	888
Tribal	26	43	3	6	55	76	10	9

In the age-periods 10-15 the literate proportions are generally higher than in 1921, except amongst Jains and Parsis, who are credited with almost unbelievable proportions for that age in 1921. I suspect that in 1921, many of these ages, who should have been entered as able to read only, were shown as literate. Otherwise, it may be stated that the reopening of the Infant standard in primary schools in the State has helped to improve literacy conditions

amongst children aged 10-15. The age-period 15-20 indicates how far educational effort has succeeded with the different religions. The " Tribal " of these ages has gone even more remote from education influences in 1931 than before because of the withdrawal of " compulsion " provisions from the Raniparaj tribes. Much still remains to be done to bring the sexes more to an equality in literacy, in the bulk of the population, although amongst Parsis and Christians the sexes are more or less equal in this respect. The Jains show a considerable improvement ; so do

to a smaller extent the Muslims. The Hindus show the slowest progress, presumably because as already pointed out, the Hindu total in the present census is inflated with the bulk of the forest tribes.

303. Literacy by Religion, Sex and Locality—Now let us see how far the proportionate figures for the different religions differ by localities: Subsidiary Table II gives the requisite figures in the different divisions:—

SUBSIDIARY TABLE II

LITERACY BY RELIGION, SEX AND LOCALITY

NATURAL DIVISION	NUMBER OF LITERATES PER MILLE OF PERSONS AGED 5 AND OVER											
	HINDU		JAIN		TRIBAL		MUSLIM		ZOROASTRIAN		CHRISTIAN	
	Males	Fe-males	Males	Fe-males	Males	Fe-males	Males	Fe-males	Males	Fe-males	Males	Fe-males
1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State	315	72	849	298	37	4	420	79	870	743	506	263
Baroda City	572	215	871	392	..	..	448	131	940	859	705	374
Central Gujarat exclusive of City.	364	79	845	315	..	..	425	49	900	828	435	219
Kathiawad	348	120	824	322	..	..	408	100	1000	1000	881	286
North Gujarat	246	61	853	274	..	..	357	59	931	650	774	548
South Gujarat	309	71	846	377	37	4	540	136	859	733	434	275

Variations in literacy in the different religions by locality are governed largely by the caste composition of the religions in particular areas. Generally Hindus have a lower ratio than Muslims in literacy, because the backward elements form a much larger proportion of the Hindus than of the Muslims. In the City, where the commercial and other advanced sections of Hindus predominate, the Hindu shows a very high ratio of 57 per cent. Christians and Parsis are mostly confined to Central and South Gujarat, only scattered families of these are met with in the other divisions. The bulk of the Jains are in Central and North Gujarat. The proportions found for these religions in these areas are therefore representative. Muslims show a wider acquaintance with elementary education than Hindus do, but in the City they are far behind. In Kathiawad and South Gujarat, generally advanced Muslim castes are met with, and their literacy is very high being 54 per cent in South Gujarat.

304. Literacy by Localities—Coming to differentiation by areas, it is interesting to study the main contrasts in urban and rural areas. Just as we noticed in the Chapter on Occupation that a high ratio of non-agricultural workers is a test of townhood, even more so does the possession of a high literacy ratio stamp an area as urban. In the margin proportions are calculated for

CLASS OF AREA	NUMBER LITERATE PER MILLE OF EACH SEX											
	All ages 7 and over		Between 7 and 23		Between 7 and 33		Between 17 and 23		Between 24 and 33		34 and over	
	Male	Fe-male	Male	Fe-male	Male	Fe-male	Male	Fe-male	Male	Fe-male	Male	Fe-male
1	2	3	4	5	6	7	8	9	10	11	12	13
State	347	80	358	132	376	116	467	130	419	80	298	25
Urban Areas	541	175	540	255	554	235	658	265	586	190	518	77
Rural Areas	292	58	308	99	325	84	407	90	367	49	236	10

all ages 7 and over, 7 and 23, 7-33, 17-23, 24-33 and 34 and over. The reader may be cautioned at the outset that the returns of ages among literate persons were not smoothed for towns and talukas, but only for the administrative divisions. The proportionate figures of 7-33 are of great importance. The Compulsory Act was extended throughout the State in 1906, so that the first batch of pupils netted within compulsion are not more than 34 years old to-day. This fact explains why the contrast between rural and urban becomes suddenly sharpened in the age-period of 34 and over. Up to that limit the rural areas are not very far behind the towns in educational progress, at least in male literacy.

305. Literacy by Age, Sex and Locality—Turning to the different divisions the contrasts are somewhat less striking. The following Subsidiary Table gives the requisite ratios for literacy by age-periods, sex and divisions :—

SUBSIDIARY TABLE III

LITERACY BY AGE, SEX AND LOCALITY

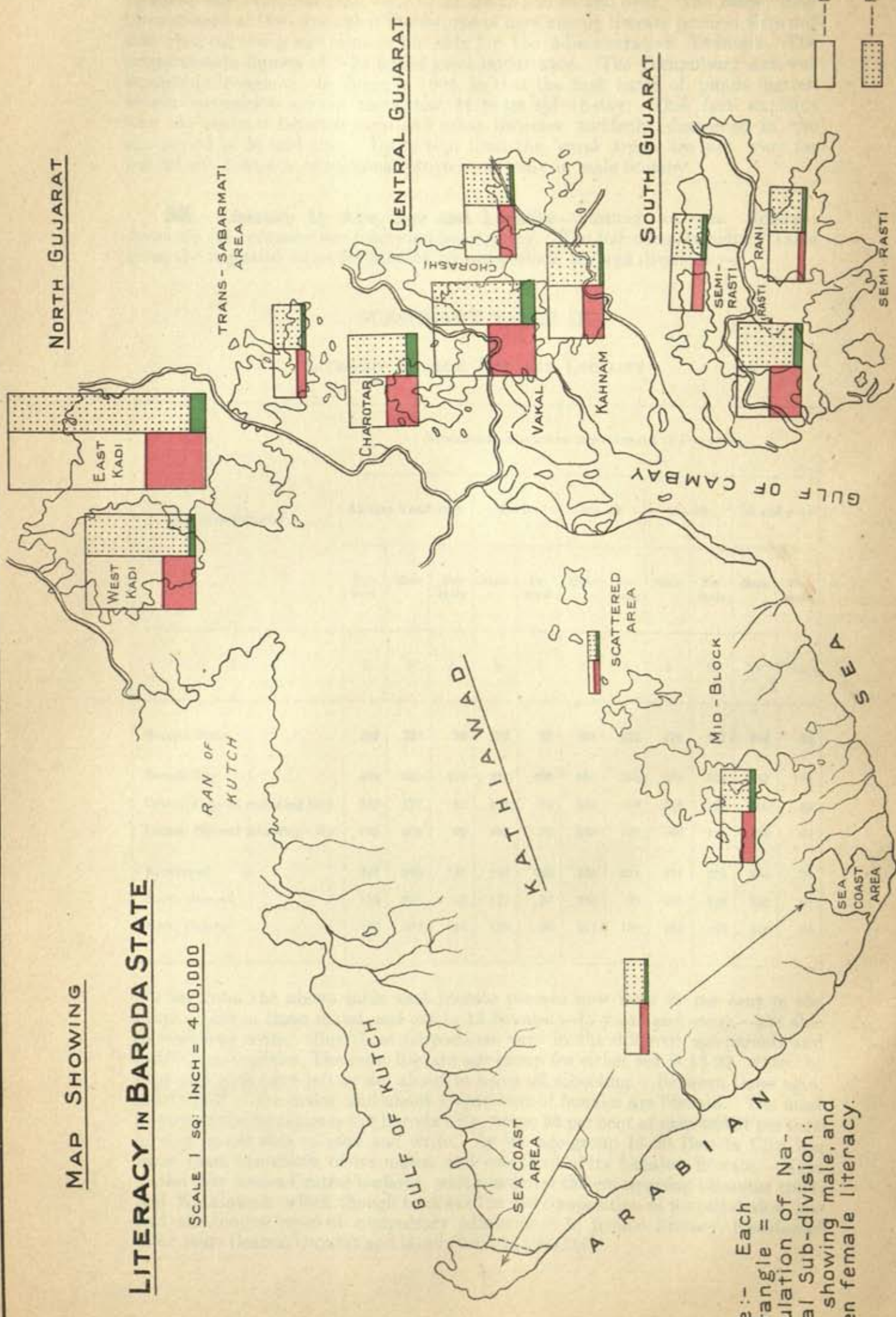
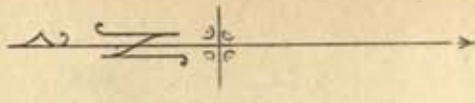
NATURAL DIVISION	NUMBER PER MILLE WHO ARE LITERATE (5 AND OVER)										
	All ages 5 and over			5—10		10—15		15—20		20 and over	
	Per- sons	Male	Fe- male	Male	Fe- male	Male	Fe- male	Male	Fe- male	Male	Fe- male
1	2	3	4	5	6	7	8	9	10	11	12
Baroda State	209	331	79	157	75	301	132	470	147	354	55
Baroda City	408	560	213	321	192	520	318	667	326	587	174
Central Gujarat excluding City.	238	377	82	174	84	343	149	542	160	400	52
Central Gujarat including City.	262	404	99	192	97	366	170	562	184	428	68
Kathiawad	246	364	122	187	126	351	221	521	223	388	79
North Gujarat	163	270	53	137	54	262	93	399	103	282	34
South Gujarat	196	307	84	128	65	251	120	428	148	346	68

We see from the above table that literate persons now form 21 per cent in the State. One in three males, and one in 13 females,—(5 years and over),—are able to read and write. But these proportions vary in the different age-periods and in different localities. The most literate age-group for either sex is 15-20, when the boys and girls have left or are about to leave off schooling. Between those ages, nearly half of the males, and about 15 per cent of females are literate. The most literate of the localities is the Baroda City, where 56 per cent of men and 21 per cent of women are able to read and write. In the age-group 15-20, Baroda City has more than two-thirds of its males, and one-third of its females, literate. Next to the City comes Central Gujarat, which includes the enterprising Charotar tract, and Kathiawad, which though backward in the composition of its population, has had the longest spell of compulsory education. In female literacy, Kathiawad even beats Central Gujarat and is only next to the City.

MAP SHOWING

LITERACY IN BARODA STATE

SCALE 1 SQ. INCH = 400,000



Note:- Each rectangle = population of Na-tural Sub-division: red showing male, and green female literacy.

306. Literacy in Natural Areas—From natural divisions, the analysis may be carried to natural areas. The thirteen natural sub-divisions are arranged according to order of literacy. Here again the age returns are not smoothed into quinary groups, as in the natural divisions, and the proportions are calculated on all persons aged 7 and over, children below that age being neglected for that purpose. State Table V—Part D gives the details of absolute figures from which the proportionate figures in the margin are calculated. First comes Vakal, which contains the City. Last, far behind the others, is Rani, where compulsion has been waived with the forest tribes, who form the bulk of the population there. In female literacy, the highest place goes to the Middle Block. A map has been prepared and is given here facing this paragraph, to show the proportion of literacy per sex in each of these sub-divisions. The proportions are also calculated by excluding the Rani tract showing that in the area of effective compulsion 39 per cent of males and 12 per cent of females are literate in the age-period 7-33. It appears that in the whole of North Gujarat and the greater part of South Gujarat there is yet considerable scope for improvement.

NATURAL SUB-DIVISION	Literates per 1,000 of each sex aged 7 and over			Literates per 1,000 of each sex aged 7-33	
	Per-sons.	Male	Fe-male	Male	Fe-male
1	2	3	4	5	6
(1) Vakal	317	474	135	507	187
(2) Rasti	309	486	142	503	187
(3) Charotar	308	456	135	518	203
(4) Mid-Block area	289	423	149	458	213
(5) Scattered areas	280	418	138	418	201
(6) Kahnām	253	420	70	436	101
(7) Sea-coast area	213	319	98	342	134
(8) East Kadi	180	299	60	352	88
(9) Chorashi	168	280	40	298	94
(10) Trans-Sabarmati area	162	258	56	274	82
(11) West Kadi	158	263	49	287	61
(12) Semi-Rasti	155	255	45	262	60
(13) Rani	82	128	36	135	39
The State	219	347	89	376	116
The State excluding Rani	258	358	85	387	120

307. Literacy in the Age-Period 7-33—The proportions for the ages 7-33 may be studied a little more in detail so that the special influence of compulsory education may be isolated. Amreli mahal forms part of the Middle Block and the literacy figures for this mahal are of special interest as compulsion here was first introduced. Schools were opened on the compulsory basis of attendance in ten villages in this mahal in November 1893: compulsion was extended to 10 more villages in May 1895, to ten others in December 1897 and to 20 more villages in 1899. By July 1904, two villages of this taluka were added, totalling 52 in all. The process was gradual and the experiment was closely watched in this tract. Finally the Government decided to extend it to the whole State in 1906. The progress in Amreli is seen by comparing the figures for ages 7-30 in 1921 with the corresponding proportions for the sexes aged 7-33 in 1931. Thus although in this taluka, the experiment has been tried for the longest period, rather a half of the male population and three-fourths of the females are as yet uneducated. The first thirteen years of the experiment were spent in habituating an agricultural people to the idea of sending their children to school. Even when compulsion became general, the first steps were devoted to the organisation of the machinery and the expansion of schools. It was only in the last 10 years, as we shall see presently that consolidation has been begun in earnest with the improvement in schools and the training of the teaching staff.

YEAR	Age Period	Literates per mille of each sex in age period	
		Male	Female
1	2	3	4
1921	7 — 30	410	140
1931	7 — 33	530	254

308. Literacy in Towns—State Table VI—Part E gives the figures of

NATURAL AREA	Proportion of literates of each sex per mille aged 7 and over	
	Male	Female
Vakal Towns	584	152
Middle Block towns	580	208
Baroda City	579	220
Charotar towns	572	204
Rasti towns	569	250
Scattered areas towns	536	190
Kahnani towns	529	122
Semi-Rasti towns	522	294
West Kadi towns	522	169
Sea coast towns	517	162
Chorashi towns	504	110
Trans-Sabarmati towns	493	156
Rani towns	486	192
East Kadi towns	482	116

literacy, in the different towns of the State. Literacy amongst males in the towns in the different natural areas is exhibited in the marginal table. Vakal even without the City ranks the highest, as Padra has progressed remarkably in this respect. Amreli town gives Middle Block a high place. The inclusion of Patan in West Kadi makes it rank higher than East Kadi, and the industrial population in Sidhpur and Kalol bring down the literacy ratio for the last named area. Rani towns (Vyara specially) rank high, because of their *ujaliat* (higher class) population, although the whole Rani area makes a very poor show. In female literacy, Semi-Rasti (with its one town, Mahuva) takes the highest

rank curiously enough, with 274 females per 1,000 (aged 7 and over),

NAME OF TOWN	Male literacy per 1,000 males aged 7 and over
Sojitra	668
Dharma]	623
Bhadran	619
Gandevi	607
Padra	605
Amreli	596
Dwarka	585
Navsari	583
Sankheda	581
The City	579

who are able to read and write. Rasti and the City follow in this respect, Chorashi, taking the lowest rank. Amongst individual towns Sojitra ranks the highest this time with 67 per cent of its male population (aged 7 and over) literate. The City ranks tenth in order of literacy, being beaten by such towns as Dwarka and Sankheda. It is remarkable that the first three places in this literacy competition are secured by Charotar towns. Subsidiary Table IX printed at the end of this chapter gives the proportional figures for each town.

309. Literacy in the City—The distribution of literates in the City is a

AGE-PERIODS	Literacy per 1,000 of each sex (5 and over)		Literacy per 1,000 of each sex (7 and over)			
	City as a whole		City Proper		Cantonment	
	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7
5 and over	560	213	Not available.			
15-20	667	326				
20 and over	587	174				
7 and over	579	220	579	219	561	259
7-33	573	283	583	283	564	280
17-23	665	301	670	302	546	253
24-33	582	225	583	222	551	321
34 and over	567	109	568	107	552	221

matter always of interest. In that connection the figures of the City proper and the Cantonment have been separately calculated by sex for the age-periods 7 and over, 7-33, 17-23, 24-33, and 34 and over. The figures by quinary groups are only worked out for the City as a whole: while the figures for the other age-groups are available for the two different parts separately. The immediate effect of schooling is seen in the age-period 15-20 or 17-23. The next age-groups (20 and over and 24 and over) show evidence of lapse into illiteracy, to which the industrial groups

are peculiarly liable. The highest proportion for males shown marginally is in the City proper in the age-group 17-23. It is natural that this should be the case, as it is there alone that compulsion is enforced. The Camp female ratios are higher because of Mission activity, and the Indian Christian group which forms a substantial portion of its inhabitants show a very general acquaintance with letters.

LITERACY AMONGST MALES IN SELECTED CASTES

ADVANCED



KOKANASTHA



DESHASTHA



KHADAYATA



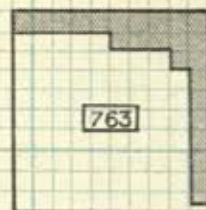
PRABHU



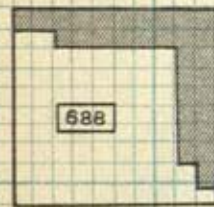
NAGAR



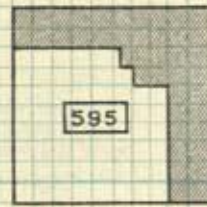
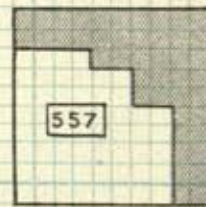
SONI

VOHRA
(TRADING)

KHOJA



GHANCHI

LEWA PATIDAR
(HINDU AND JAIN)

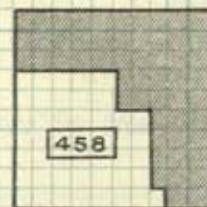
SAIYAD

MARATHA
(KSHATRIYA)

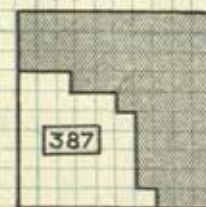
INTERMEDIATE



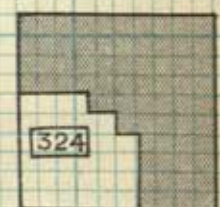
LUHAR



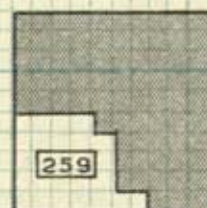
GARODA



KADWA PATIDAR

RAJPUT
(HINDU AND JAIN)

MALEK



ANJANA CHAUDHARI



VANKAR



CHAMAR

ILLITERATE



BHANGI



BHIL

THAKARDA
(HINDU AND JAIN)

VAGHRI

Note:- 1. Large Square = 1000 males

Small Square = 10 males

2. Number literate per 1000 males shewn in centre

310. Literacy by Wards in the City Municipal Area—The analysis by

wards is indicative of the particular areas, where the educational machinery will have to be speeded. State Table VI—Part F gives the absolute figures of literacy and ability to read only by wards in the City municipal area. The marginal table is prepared therefrom. It shows that while generally throughout the municipal area, 68 per cent of males, and 31 of females, are able to read and write in the age group of 17-23,

WARDS	Literates per mille (in Baroda City Municipal Area) aged					
	7 and over		17—23		7—33	
	Male	Female	Male	Female	Male	Female
<i>Municipal Area</i> ..	587	224	679	311	594	291
<i>Babajipura</i>	544	216	639	272	565	276
<i>City</i>	727	293	802	450	715	391
<i>Fatehpura</i>	434	89	462	105	434	124
<i>Raopura</i>	609	268	710	360	616	338
<i>Wadi</i>	548	157	649	219	559	209

the City ward in which the commercial castes usually reside, shows 80 per cent for males, and 45 for females, literate in those ages. Raopura shows the next highest ratios. In Wadi which is now a decaying suburb, two thirds of its males and over one fifth of its females, aged 7 and over, are literate. Fatehpura as can be well imagined has the least educational progress. Its principal inhabitants are lower-class Muslims and depressed classes.

The City compares favourably in educational progress with other cities in India. In 1921, it ranked only below Madras, Rangoon and Calcutta in literacy. In 1931 we have specially secured the figures of Bombay City by courtesy of the Superintendent of Census Operations there. While our City has a general literacy of 560 per mille amongst males, and 213 amongst females, aged 5 and over, the corresponding figures for the City of Bombay are 314 and 174 only.

311. Literacy by Caste—To show the state of things in the different castes,

Imperial Table XIV (Literacy by selected castes) has been compiled from which the proportionate figures have been calculated for Subsidiary Table X at the end of this chapter. The margin collects the principal ratios. Imperial Table XIV like its companion Tables VIII and XI has been prepared on the basis of a literacy percentage scale. The Advanced section consists of those castes and groups amongst which the literate males constitute at least half of their sex aged 7 and over. To this section belong all Brahmans and Vantias, the writer castes, Brahmabhats, Barots, Maratha Kshatriyas, Lewa Patidars, Bhavsars, Sutaras, Sonis and Ghanchis, and amongst Muslims, Saiyads, Memons, Vohras, Khojas and Pinjaras. The Intermediate section consists of those castes and tribes that have a male literacy ratio of between 10 to 50 per cent of males aged 7 and over. This large group

GROUP	Number per 1,000 literate aged 7 and over		
	Persons	Male	Female
Advanced	459	687	210
<i>Hindu and Jain</i>	467	634	215
Highest (Prabhu)	774	896	646
Lowest (Brahmabhat)	330	567	89
Marathas	385	537	191
<i>Muslim</i>	379	610	154
Highest (Vohra—trading)	505	763	262
Lowest (Pinjara)	298	522	81
Intermediate	180	308	47
<i>Hindu and Tribal</i>	174	298	45
<i>Muslim</i>	221	376	49
<i>Indian Christian</i>	382	499.6	251
Illiterate	36	62	7
<i>Primitive Tribes—</i>			
(i) Intermediate	78	137	15
(ii) Illiterate	39	69	8
<i>Depressed Classes—</i>			
(i) Intermediate	117	200	37
(ii) Illiterate	48	84	12
Lowest ratio of all (Vaghri) ..	23	38	7

forming 41 per cent of the total population comprises the bulk of the agriculturists, the main body of artisans, the majority of the depressed classes and the more advanced sections of the forest tribes. The Illiterate group ranks behind these two with their literate males forming less than 10 per cent of their sex aged 7 and over. They comprise the great labouring groups, the bulk of the aborigines and the remainder of the unclean castes.

The proportions for each of the classes are shown in the inset and under Advanced figures for "Hindu and Jain" and "Muslim", and under Intermediate, for "Hindu and Tribal," and "Muslim," have been given separately. Under "Hindu and Jain" and "Muslim" in the Advanced section, those castes that have the highest and lowest ratios in each group are also specified. As to primitive tribes and depressed classes the proportions for each of these classes are calculated for the Intermediate and Illiterate sections separately. Finally, the lowest ratio of all is given at the end of the table. The place for this unenviable honour goes to the Vaghri, who remain, as they did in 1921, the wooden-spoonists in the literacy race. The Intermediate section of the primitive tribes are the Hinduised aborigines like the Chodhras, Dhankas and Dhodias. The castes amongst depressed classes, who have come up to the Intermediate level are the Garoda (priests of these people) with a male literacy of 458 per mille, the Vankar (209) and the Chamar (132). These form nearly 80 per cent of the total strength of depressed classes selected for the purposes of this table. It remains to add that the Marathas, thanks to the encouragement of the Government of the State, enjoy a very high literacy while their brethren in the Deccan could show in 1921 only 6 per cent literacy amongst their males.

312. Female Literacy in Castes—

CASTES	Proportion of female literate per mille (aged 7 and over)
Prabhu	646
Konkanastha ..	523
Nagar Brahman ..	467
Deshastha	443
Kapol	398
Anavala	358
Porwad	332
Shrimali	320
Disawal	305

Coming to literacy amongst females, the Prabhu, Konkanastha, Nagar and Deshastha amongst the Advanced are the few castes in which the sexes approach parity to any extent in literacy. The margin notes castes showing a literacy ratio amongst their females higher than 300 per mille. Other castes which are actually more advanced (at least from the census point of view) than Prabhus and Brahmans, like Khadayata Vaniyas, show a peculiar indifference towards the education of their females. The groups like Brahmabhat, Bhavsar, Sutar, Ghanchi, Kachhia, Lewa Patidar and Soni, which owe their place in the Advanced because of the high literacy of their males are markedly backward in female education. The

Muslims show general backwardness in girls' education, the highest proportion of female literates being amongst the Khojas (268) and trading Vohras (262).

313. Variation in Degree of Literacy in the Population—

Proportion to total strength of selected castes of			
Group		1931	1921
Advanced		27.4	10.6
Intermediate		41.1	44.4
Illiterate		31.5	45.0

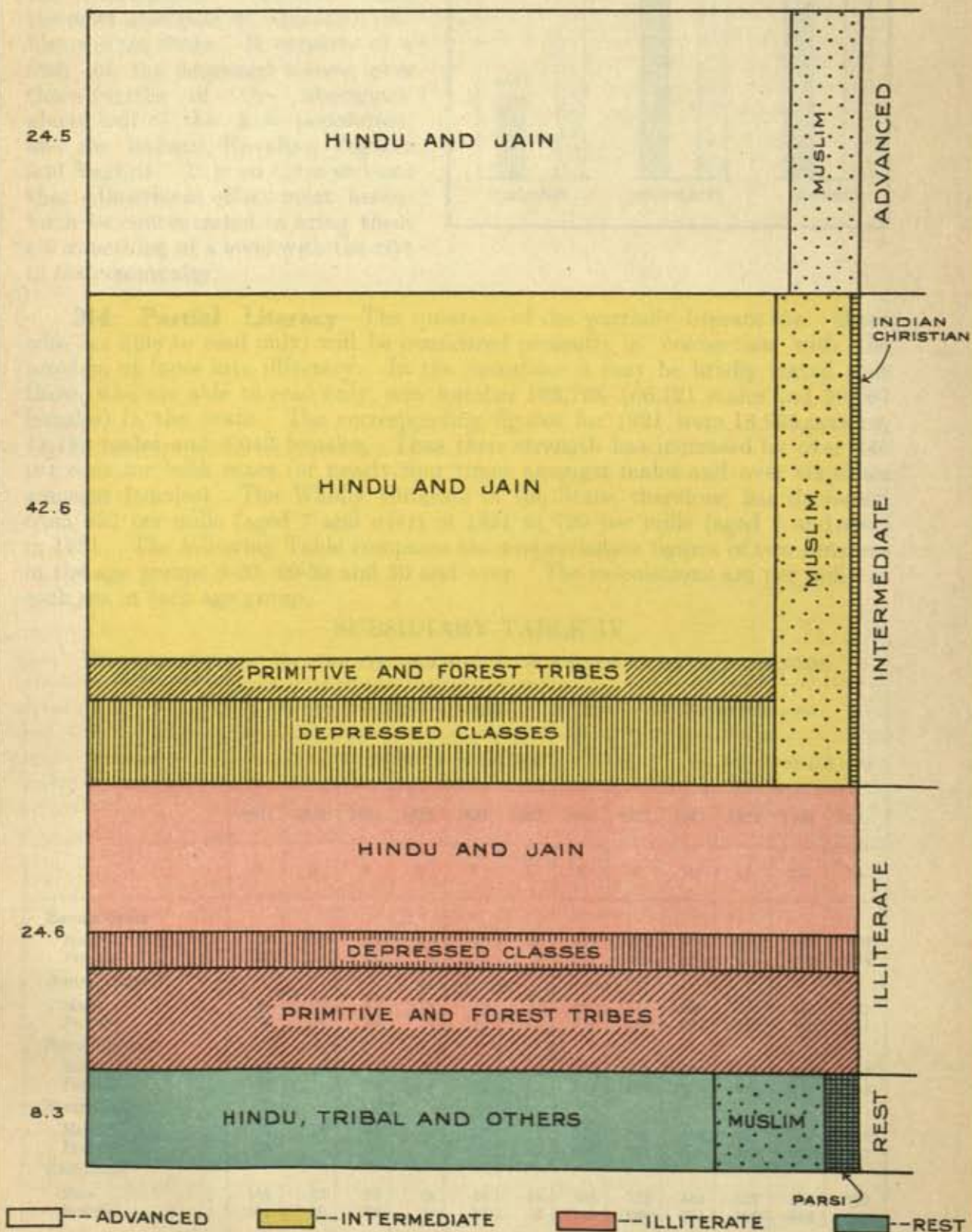
expressed in the Report of 1921, that the spread of education with its unequal results in the different strata of society had helped to "enforce and even widen the existing cleavage between the classes in the community." The selected castes in 1921 formed about 92 per cent, and those selected in 1931, about 93 per cent of the total population. Taking these selected castes as representative of the population in the two censuses, and the proportions subsisting between them as holding true for the whole State, and applying the same literacy percentage scale for both the occasions, we find the castes that satisfied the test for the first class have increased from 11 per cent to 27 per cent, showing that they have gained largely from the Intermediate section, which in its turn has increased at the expense of the lowest class.

POPULATION CLASSED ACCORDING TO SCALE OF LITERACY OF MALES

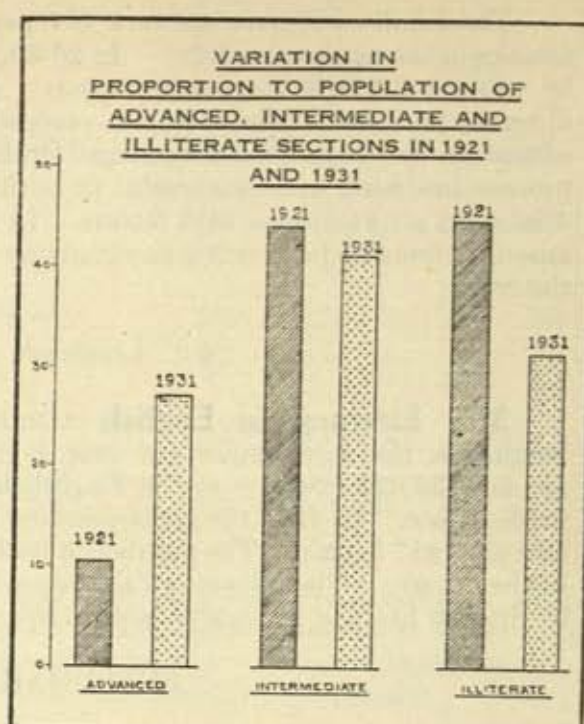
Advanced:- Male literacy 50 per cent and upwards

Intermediate:- Male literacy between 10 and 50 per cent

Illiterate:- Male literacy below 10 per cent



Other castes, which have similarly progressed, are the Sutar, who now rank well in the first class, the Baria who have shown wonderful progress and the Vankar, Chodhra, Talabda, Chamar and Dhodia, who have now come up from the last class to the Intermediate. Thus the different communities are approaching each other and the apprehended cleavage is receding in the distance. The Illiterate section really represents the "uneducable" element, being the most obstinate of education problems in the State. It consists of a fifth of the depressed classes, over three-fourths of the aborigines, about half of the Koli population, and the Rabaris, Ravalias, Vaghers and Vaghriis. It is on these sections that educational effort must henceforth be concentrated to bring them on something of a level with the rest of the community.



314. Partial Literacy—The question of the partially literate (*i.e.* those who are able to read only) will be considered presently in connection with the problem of lapse into illiteracy. In the meantime it may be briefly stated that those, who are able to read only, now number 102,728 (66,121 males and 36,607 females) in the State. The corresponding figures for 1921 were 18,836 persons, 13,793 males and 5,043 females. Thus their strength has increased by over 446 per cent for both sexes (or nearly four times amongst males and over six times amongst females). The Wholly Illiterate in the State, therefore, has decreased from 832 per mille (aged 7 and over) in 1921 to 729 per mille (aged 7 and over) in 1931. The following Table compares the proportionate figures of two censuses in the age groups 5-20, 20-30 and 30 and over. The calculations are per mille of each sex in each age group.

SUBSIDIARY TABLE IV

NUMBER WHOLLY ILLITERATE PER MILLE OF EACH SEX BY AGE-PERIODS

DIVISION	Able to read only per mille aged						Wholly illiterate per mille aged					
	5-20		20-30		30 and over		5-20		20-30		30 and over	
	1931	1921	1931	1921	1931	1921	1931	1921	1931	1921	1931	1921
1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State												
Male	87	19	57	16	38	10	617	779	506	671	648	747
Female	66	10	31	4	9	2	817	922	868	942	960	973
Central Gujarat												
Male	96	25	62	19	45	12	540	712	420	604	571	692
Female	75	14	33	6	11	3	776	886	842	919	949	961
North Gujarat												
Male	83	16	53	13	32	8	664	831	578	747	727	805
Female	57	7	26	3	7	2	862	953	904	966	976	985
South Gujarat												
Male	57	12	45	11	35	7	679	802	558	651	645	731
Female	56	8	25	4	9	2	836	921	868	938	945	963
Kathiawad												
Male	104	23	73	19	44	10	568	752	449	627	614	729
Female	104	20	56	8	14	2	710	880	794	922	864	973

The wholly illiterate are now 617 per mille amongst males and 817 amongst females in the age-period 5-20. In 20-30, the wholly illiterate males have declined by 165 per 1,000 in the last ten years. Amongst the females, the liquidation of illiteracy has been relatively less successful showing that wastage in vernacular education has been greater amongst females than males. In Central Gujarat the process has been most successful in both sexes, 58 per cent of males having the minimum acquaintance with letters. In Kathiawad, the extirpation of ignorance amongst females has been comparatively more successful than anywhere else in the State.

§ 3. LITERACY BY LANGUAGE

315. Literacy in English—Coming to particulars of qualifications by languages, the most important item is literacy in the English language. There are now 32,022 literates in the English language (30,218 male and 1,804 female) in the State. In 1921 the corresponding figures were 15,660 persons, 14,773 male and only 887 female. The number in both sexes has, therefore, more than doubled in the decade. The following Table gives the comparative figures showing progress in English literacy by locality since 1901 :—

SUBSIDIARY TABLE V

ENGLISH LITERACY BY AGE, SEX AND LOCALITY

NATURAL DIVISION	LITERATE IN ENGLISH PER 10,000																
	1931										1921		1911		1901		
	5—10		10—15		15—20		20 and over		All ages 5 and over		All ages 5 and over		All ages 5 and over		All ages 5 and over		
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Baroda State	33	8	169	23	578	42	313	14	281	18	153	10	104	5.3	59	2	
Baroda City	272	121	1087	374	2855	516	1757	167	1660	231	1184	125	796	65	476	23	
Central Gujarat exclusive of City	26	3	165	11	558	21	249	5	241	8	96	6	75	4	36	0.1	
Kathiawad	32	3	162	9	493	15	291	8	254	7	117	3	88	2	34	0.7	
North Gujarat	21	10	97	4	302	6	161	3	146	2	74	1	43	0.39	29	0.35	
South Gujarat	23	8	137	21	523	47	317	23	268	23	174	10	89	3.2	70	3.1	

The general average for males for the State is 28 per mille aged 5 and over who are literate in English. Their proportionate strength is now nearly five times as much as in 1901. English schools have now multiplied in the last thirty years, and 58 per thousand males, and 4 per 1,000 females, in the age-period 15-20 understand English as against only 11 and 0.3 respectively in 1901. The City where the English teaching is concentrated, naturally shows by far the greatest prevalence. In the age-period 15-20, 29 per cent of males, and 5 of females, know English in the City. North Gujarat which has few high schools for its population has shown the least progress. Female literacy in English in the State is still negligible. Of the 1,804 females possessing this qualification, 999 (or over 55 per cent) are in the City alone (914 in the municipal area). 587 others (or nearly 34 per cent) are found in towns, half being in Navsari town, most of whom are Parsis. The rural areas have only 218 women who know English: of these 111 are in Baroda mahal, in Sama and Nizampura villages where the Methodist Mission houses its converts and has a boarding school for girls. Thus English education amongst women is practically non-existent outside the City and its environs and Navsari town.

316. English Literacy by Religion—The Table below gives the comparative figures of progress in literacy in the English language by religion since 1921. Parsis and Christians dominate the figures. The number of English literates in these religions form 70 per mille of the English literate total in this State,

although the combined strength of these religions is not more than 6 per mille. The Jain comes a bad third. The Tribal progress is nil, there being only three literate males in English now, as against 7, ten years ago. Amongst female literates in English, those who are Parsis and Christians form over 37 per cent. The rest are mostly Hindus. There are only 52 Muslim females, who are literate in English.

As in the rest of India, Muslims are very backward in secondary education, particularly in regard to their females. The growth since 1921 is very marked, particularly amongst Jains whose English literates have more than doubled their proportionate strength. Parsi women have similarly progressed.

RELIGION	Number per 10,000 persons (aged 5 and over) who are literate in English					
	1931			1921		
	Per-sons	Male	Fe-male	Per-sons	Male	Fe-male
All Religions	154	281	18	85	153	10
Hindu	141	262	12	80	150	5
Jain	521	1,010	20	260	490	15
Tribal .. ..	.1	.2	..	.5	1	..
Muslim	102	192	7	50	100	5
Zoroastrian	2,419	4,189	1,135	1,670	3,300	460
Christian	1,153	1,422	846	750	770	730

317. English Literacy by Caste and Race—Literacy in English is mostly

confined to Parsis, Aryas and Jains, the Indian Christians and the Advanced section of Hindus. Few Muslims have taken to it and the Vohras (trading) who show the largest proportion of literacy in English affect only a smattering of it. Amongst Hindus, it is limited to certain Brahman groups (Nagar, Konkanastha, and to a smaller extent, Anavala and Audich), Prabhus and Lewa Patidars. In the Intermediate section, the most advanced group in this respect are the Indian Christians, who are placed here because of the rigour of the percentage scale. Their male literates

CLASS	Number per 10,000 (aged 5 and over) who are literate in English		
	Persons	Male	Female
Advanced	497	918	39
Advanced Hindu	530	972	41
Advanced Muslim	162	313	15
Indian Christian	933	1,175	662
Intermediate	38	70	5
Intermediate Hindu	25	49	1
Intermediate Muslim	93	176	2

just happen to be below 50 per cent; but in all other respects they should rank well in the Advanced section. Their general literacy (382) is high, being higher than the Advanced Muslim average. Their female literacy (251) is higher than even the average for Advanced females (210). In English literacy, Indian Christians as seen from the marginal table take a higher place than even the Advanced Hindu. Excepting Nagars, of whose males 38 per cent are literate in English, Anavalas (20 per cent), Deccani Brahmans (over 50 per cent), Prabhus (62), Vanias (21) and Maratha Kshatriya (14),—Indian Christians appear to be the most educated community in the English language.

318. English Literacy amongst Females—English literacy amongst females is still in its infancy, and it is limited only to certain communities which have definitely come under English influence. The majority of castes, however, whose males take to English education from utilitarian motives, show a very low English literacy ratio for its females *e.g.*, Audich (1,259 and 18), Lewa Patidar (457 and 8), Disawal Vania (2,096 and 17), Lad Vania (2,242 and 13). Only the marginally-noted castes and communities show English literacy ratios amongst their females higher than 100 per 10,000.

Parsi	1,135
Prabhu	1,132
Hindu Arya	705
Indian Christian	662
Konkanastha	475
Deshastha	392
Nagar	322
Maratha	179
Other Brahman	129

319. Literacy in Hindi and Urdu: (a) *By Age Periods*—Apart from qualification in the English language, we compiled also figures of literacy in the Hindi or Urdu script or in both. There is great public interest in the question whether educated Indians, whatever their mother tongue, are taking to any extent to Hindi or Urdu as a kind of *lingua franca*. State Table VI—in the first three parts—gives the main results. We shall first consider the figures by age-periods. The State has for some years tried the experiment of introducing Hindi as a compulsory second language in vernacular schools. How far this has succeeded will be judged from the following Table :—

SUBSIDIARY TABLE VI
LITERACY IN SCRIPTS BY AGE AND SEX

AGE	Proportion per mille of literates, who are able to read and write in					
	Hindi		Urdu		Both	
	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7
All Ages	65	21	26	23	5	1
7—33.. .. .	68	20	25	31	4	1
17—23.. .. .	76	19	26	35	5	1
34 and over	59	29	30	55	7	3

Only 6 per cent of male and 2 of female literates know Hindi. The proportions knowing Urdu or claiming both are even more infinitesimal. The age-period 17—23 would mean the group nearest to school influences, and yet even amongst these only 8 per cent of males are able to read and write Hindi. Generally it must be concluded that the policy of making Hindi compulsory has not succeeded. It has occupied a space in the primary school curriculum which is urgently needed for other and more practical courses such as vocational or manual training.

(b) *By Mother Tongue*—There is another way in which the figures can be studied by correlating them to the strength of each of the principal vernaculars spoken in the State. The following Subsidiary Table gives the proportion per mille of speakers of each vernacular, who are literate in Hindi, Urdu or both :—

SUBSIDIARY TABLE VII
LITERACY IN HINDI AND URDU AMONGST SPEAKERS OF DIFFERENT VERNACULARS

MOTHER TONGUE	Proportion per mille of speakers of each mother tongue, who are literate in					
	Hindi		Urdu		Both	
	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7
Gujarati (Standard)	16	1	3	1	0.6	0.05
Marathi	116	19	1	0.2	4	0.24
Hindustani	59	4	6	4	4	3
All Languages	18	1	7	2	1	0.1

The above figures are illuminating. Hardly 2 per cent of Gujarati males are literate in Hindi. The proportion of them knowing Urdu are less than one-fifth of those knowing Hindi: the proportions amongst females are negligible. Educated Deccanis in the State alone show an active inclination for Hindi. The Hindustani speakers who are able to read and write

Urdu are mostly Muslims; and even they are less than half of those Muslim literates who know English. Acquaintance with English is actually wider, because its practical utility as a world-medium is admitted on all hands. Some kind of speaking acquaintance with Hindi involving as it does in most cases the addition of *hai* and *tha* to Gujarati words may be said to be general in the State. The vocabulary of Gujarati and Western Hindi, it must be remembered, is largely common, and it is not difficult for the speakers of either, even if he be illiterate, to pick up in the course of his business or travel a nodding acquaintance with the other language. But the knowledge of the script is very limited, far more so without doubt than English. There is indeed much sentiment attached to the common script movement, about which my remarks in the Census Report of 1921 may be still worth quoting.

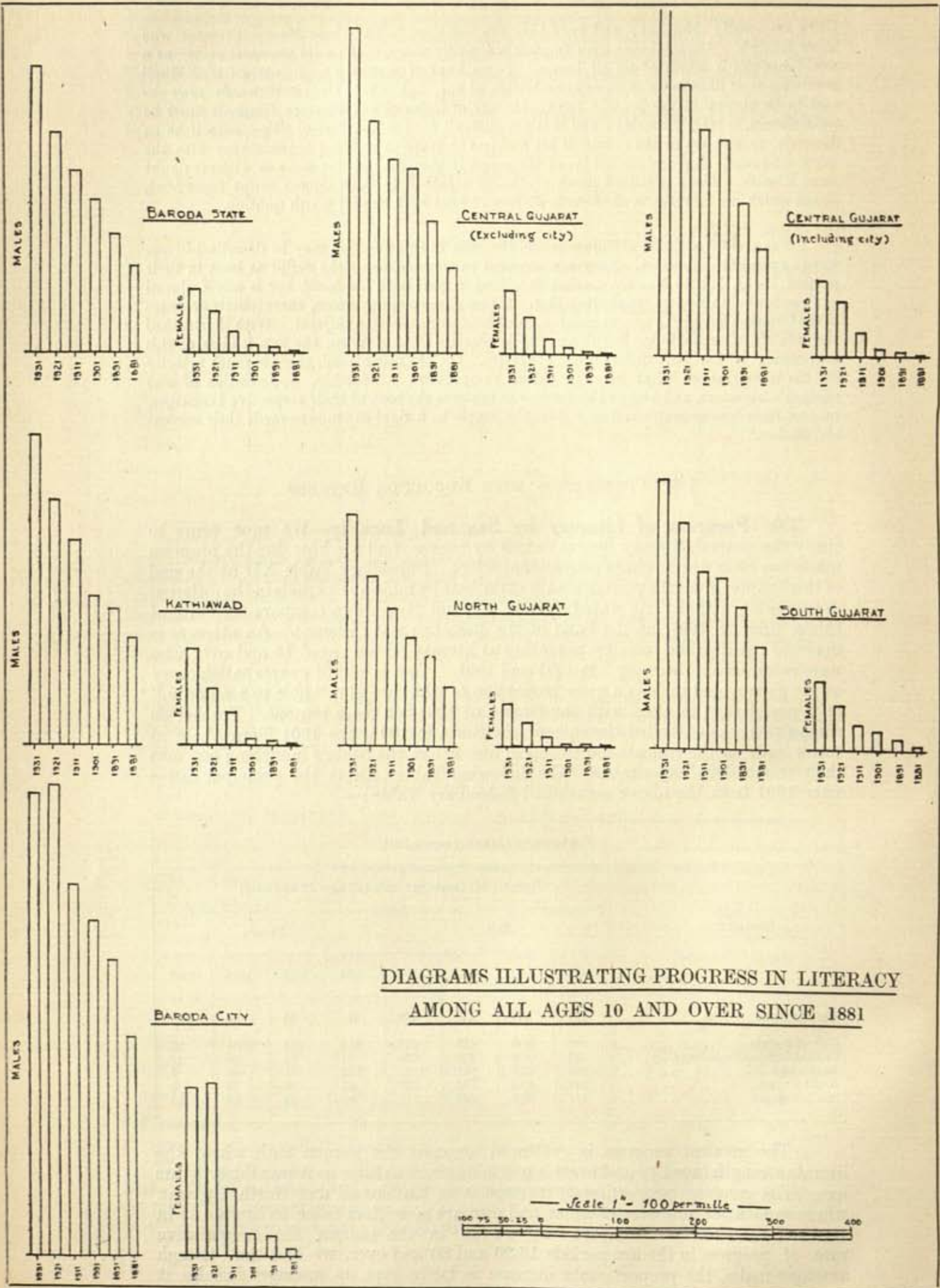
"The present attitude of Gujaratis and Deccanis to this question may be described in one word: *sympathetic inaction*. They are prepared to concede about the script at least in their printed books, but no Marathi speaker is willing to part with his *Modi*, nor is any Gujarati anxious to abolish his own script altogether. Under these circumstances, there is little evidence of the Common Script movement making much headway at least in Gujarat. With the death of Hon'ble Mr. Krishnaswamy Sastri, and Justice Sarada Charan Mitra, the two leaders of this movement, it has more or less become inactive. On the other hand, there is much activity in the direction of what may be called co-operative scholarship, appreciation of one another's literature, and a united endeavour to improve the tone of their respective languages, recover their lost treasures and to restore the people to a right attitude towards their ancient civilisation."

§ 4. CORRELATION WITH EDUCATION RETURNS

320. Progress of Literacy by Sex and Locality—We now come to study the general literacy figures census by census and see how far the progress made has been due to State educational effort. Subsidiary Table XII at the end of this chapter gives the proportionate variations by main age-periods in the different divisions since 1881. As stated already it is not possible to compare the state of things prior to 1901, as the basis of the statistics was different. An attempt is made to equalise the basis by regarding as literate persons aged 15 and over who were returned as "learning" in 1881 and 1891. This is not of course satisfactory as the class would include a good proportion of what are now "able to read only." It is useful then to start with the figures of 1901 for these reasons. Further as compulsion was extended throughout the State in 1906, the 1901 figures help to throw light on the educational situation just before the State's launching out into their tremendous experiment. The following Table collects the principal ratios since 1901 from the above mentioned Subsidiary Table:—

PROGRESS OF LITERACY SINCE 1901											
LOCALITY				Number of literate per mille (all ages 10 and over)							
				Male				Female			
1931	1921	1911	1901	1931	1921	1911	1901				
Baroda State	361	277	229	199	80	51	25	9
City of Baroda	590	600	472	427	214	218	84	27
Central Gujarat (including City)	..			437	338	284	270	91	71	30	10
Kathiawad	398	311	260	187	122	71	40	7
North Gujarat	294	215	173	137	53	30	12	3
South Gujarat	341	289	226	219	88	58	33	25

The greatest progress is evidenced amongst the women with whom the literate strength (aged 10 and over) is now nine times as large as it was thirty years ago. The greatest proportionate increase is in Kathiawad and North Gujarat, where women are now over 17 times, and men are more than twice, as literate as in 1901. But when we compare, as we do in the margin the comparative rate of progress in the age-periods 15-20 and 20 and over, we find that though amongst males, the proportionate increase is fairly kept up, amongst females it



slows down considerably in the higher age-group. In the age-period 15-20, the female literates are now proportionately more than 11 times while amongst females aged 20 and over, the literates now number proportionately only 8 times as much as in 1901. There is one reason for this different

rate of progress. Women, who had first come under education did not have the full benefits of it, partly because it was something of a pioneering attempt for them but chiefly because educational facilities in 1901 and even in 1911 had not yet become an effective instrument for dispelling ignorance; as a result, the first batch of literacy recruits amongst the women did not retain for long their new found accomplishment. A diagram facing this paragraph illustrates the progress of literacy in each sex by divisions and the City since 1881.

AGE-PERIOD	Literates per mille							
	MALE				FEMALE			
	1931	1921	1911	1901	1931	1921	1911	1901
15-20	470	354	258	206	147	105	40	13
20 and over ..	354	265	217	208	55	34	16	7

321. Decline of Literacy in the City—The proportionate figures of City literacy in the different censuses deserve a little closer attention and it is here that we find a slight relative decline in literacy. The figures of the City are affected by the fluctuating population of the Camp, the railway areas and the industrial population, which is largely immigrant and innocent of any knowledge of letters. A proper study of the figures would necessitate our limiting ourselves to the City only. The marginal calculations are prepared from the

literacy figures of two censuses of the City area only. It shows that although the literates have declined in proportion, the partially literate class are now more than double of their relative strength amongst males in 1921. Thus while literacy has declined a little, the process

Number per mille of each sex aged 7 and over				
WHO ARE	Male		Female	
	1931	1921	1931	1921
Literate	579	588	220	223
Able to read only ..	50	25	43	10
Wholly illiterate ..	371	387	737	767

of liquidation of illiteracy has gone on developing, there being now 16 illiterate males, and 30 illiterate females less, per 1,000 of each sex than in 1921. Turning to the industrial factory operatives, we see that the number of factory hands has nearly doubled, and the immigrants from United Provinces and Rajputana have also increased in the same proportion. As calculated in para 75 above (in Chapter III), the immigrant wave in the last decade was higher than at any other period of census history. Thus the immigrant factor may have lowered the literacy ratios in this census. That it has done so amongst males is apparent from the inset. State Table XVIII was specially compiled to show the comparative incidence of literacy in each sex in the immigrant as well as in the native-born population of the City. The female ratios are higher. That is because the majority of female immigrants do not belong to the industrial class. On a broad review of the data collected, the following general conclusions are put forward :—

SEX	Proportion per mille of each sex aged 10 and over who are literate	
	Native Born	Immigrant
Male	619	582
Female	217	250

- (i) The factor of immigrant males mostly industrial in character has helped in lowering the ratio of male literacy :

(ii) As to female literacy, the fact that females who are partially literate are now more than four times proportionately to their total strength explains why literates amongst them have declined, pointing to the ineffectiveness of some of the primary schools, where wastage may be more than it should be. This is evident from the figures of male literates in the age-period 15-20 who have declined by nearly 100 per thousand of their ages since 1921. The attention of the educational authorities is invited to a minute consideration of the data to which only scant justice can be given in a Report of this kind.

(iii) Lastly it must be remembered that literacy is most widely prevalent in the City. As we have seen by wards, the ratios are so high in some parts that further scope for progress under present social conditions is out of question.

322. State Educational Effort—We will now briefly attempt to correlate these results with the educational efforts of the State during the last ten years and see how far its pioneer attempt in compulsory primary education has succeeded. The chief events in the educational policy of the decade were—

- (1) the extension of facilities for training of teachers,
- (2) the consolidation of the machinery of primary education by reducing or otherwise improving inefficient schools, abolishing single-teacher schools, and concentrating trained teaching in selected areas,
- (3) the extension of the village library movement,
- (4) the undertaking of intensive studies in different areas with a view to detect flaws in the organisation of education and to check retardation and wastage amongst children,
- (5) the improvement in the pay and prospect of teachers,
- (6) the extension of facilities for secondary education and the like, to backward classes, and lastly
- (7) the restriction of the compulsion area, by releasing the Raniparaj of the 18 tribes (312,051 persons in all or about 13 per cent of the total population) from the provisions of the Compulsory Education Act.

This last measure has resulted, as we have seen, in an actual set-back in educational progress of these tribes, particularly in Vyara and Songadh talukas. The other measures, however, have helped materially in the fostering and retention of literacy in the State. Village and town libraries increased

YEAR PERIODS	Annual average of pupils admitted to 4th standard
1910—12	9,269
1913—16	14,052
1917—20	21,032
1921—23	19,112
1924—27	22,572
1928—30	18,015

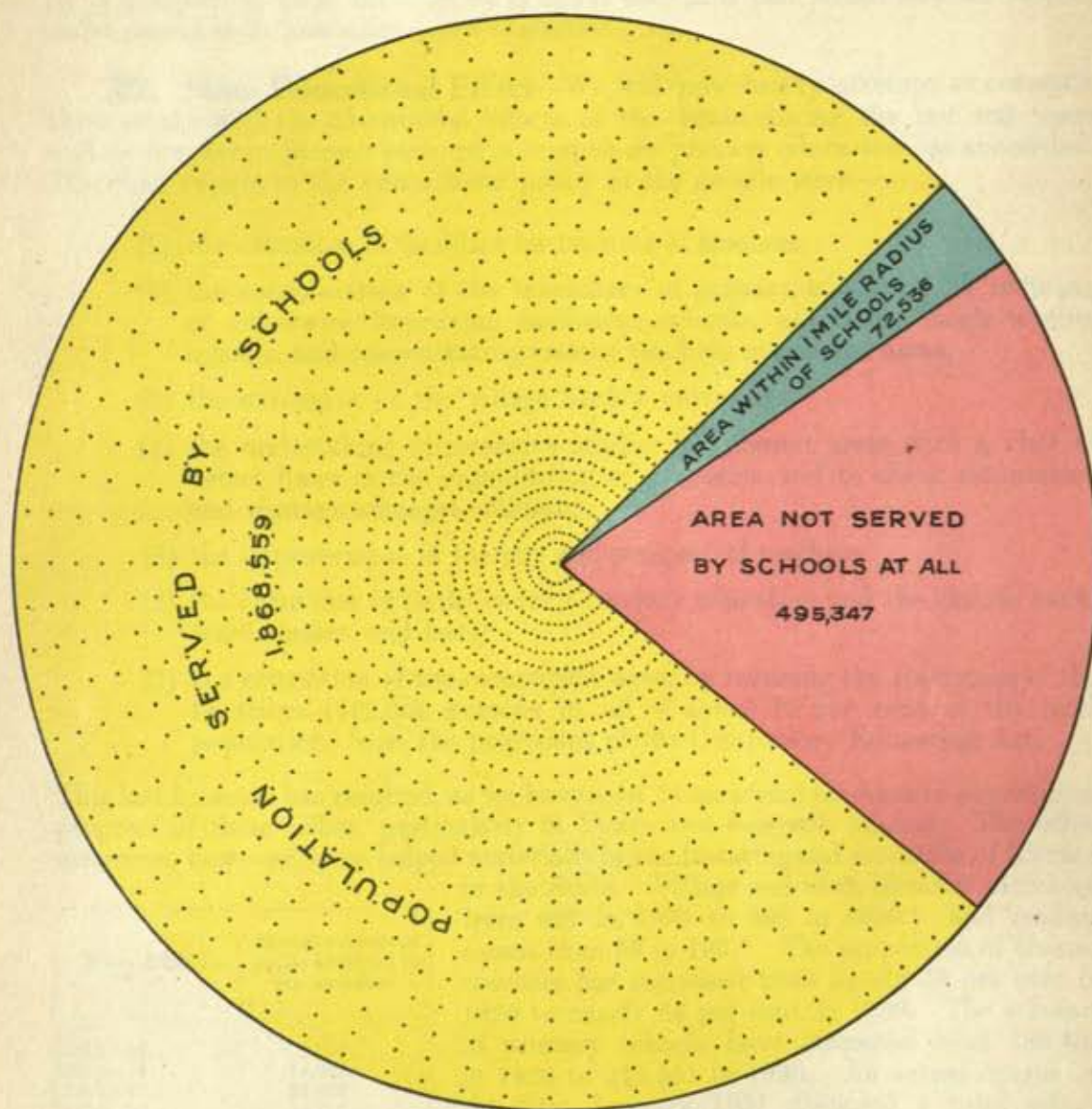
from 627 in 1920 to 698 in 1930; and reading rooms from 93 to 196.* The proportion of trained teachers has increased from nearly 59 per cent in 1920 to nearly 64 per cent in 1930. The scholars in primary schools have increased from 180,405 in 1920 to 215,541 in 1930. An actual census on the 31st January 1931 disclosed a total school strength of 216,667 children in all kinds of primary institutions (public, private and special). In the marginal table, the annual averages of students

admitted to the fourth standard for groups of years are compared. Up to 1927 July, the improvement in the average of admissions to the fourth standard class was well maintained but there was falling off in 1927-28 and although things have improved towards the close of the decade, the level of 1927 has not yet been reached. Presumably, the lowness of the number in 1928 was due largely to the fact that the children who were of age for the fourth standard were the survivors from the plague and influenza epidemics of 1917 and 1918 in which years the birth rate was low and the infant mortality was high.

323. Schools and Scholars—Out of the 2,969 towns and villages (excluding the Camp and the railway areas under foreign administrations) 1,433 with a

* Further details of the progress of the library movement are given in Appendix VI attached at the end of this chapter.

AREA AND POPULATION SERVED BY SCHOOLS



3000
2000
1000
0

VILLAGES WITHOUT SCHOOLS
1325
211
VILLAGES SERVED BY SCHOOLS
1433

VILLAGES WITHIN
1 MILE RADIUS

NOTE :-

Circle represents 2,436,442 persons out of the total population.

population of 1,868,559 had schools. 211 villages with a population of 72,536 were within a mile radius of schools and, therefore, could take advantage of them. 1,325 villages with a population of 495,347 had no school facilities at all provided for them. The number of children attending primary schools in the areas in which school facilities were available was 216,667 (136,521 boys and 80,146 girls). This works out at 11·2 per cent on the total population of 1,941,095 of the school-going area. By sex, the proportions are 13·7 for males and 8·5 for females. When we remember that 20 per cent of the population are without schools, and that compulsion is only limited to 80 per cent of the people, two-thirds of the area, and to over half the number of villages in the State, we realise the effectiveness of the compulsory experiment, wherever it has been possible to enforce it. A coloured diagram faces this page which shows the extent of population coming under compulsory education.

324. Progress in Educational Institutions—The following Table shows the variations in the number of institutions and their strength since 1911 :—

SUBSIDIARY TABLE VIII

NUMBER OF INSTITUTIONS WITH THEIR STRENGTH SINCE 1901

(FROM EDUCATION DEPARTMENT RETURNS)

YEAR	DETAILS	PUBLIC INSTITUTIONS					PRIVATE INSTITUTIONS			
		All kinds of Institutions	Arts College	Secondary Schools	Primary Schools	Training Schools	Other Special Institutions	Collegiate	Advanced	Elementary
1	2	3	4	5	6	7	8	9	10	11
1931..	Institutions	2,718	1	49	2,519	2	36	1	27	83
	Males	150,099	891	8,893	130,329	260	2,247	..	3,794	3,685
	Females	80,905	20	617	78,407	175	121	25	97	1,443
	Total Scholars	231,004	911	9,510	208,736	435	2,368	25	3,891	5,128
1921..	Institutions	2,797	1	41	2,639	5	25	..	27	59
	Males	136,951	559	7,947	119,997	382	2,220	..	3,235	2,611
	Females	61,865	13	258	60,408	96	41	..	..	1,049
	Total Scholars	198,816	572	8,205	180,405	478	2,261	..	3,235	3,660
1911..	Institutions	3,026	1	28	2,932	2	25	..	12	26
	Males	130,998	329	4,759	119,587	386	2,402	..	1,818	1,717
	Females	54,479	..	..	53,988	69	90	..	..	532
	Total Scholars	185,477	329	4,759	173,575	455	2,492	..	1,818	2,049
	Institutions	1,213	1	17	1,129	1	23	..	4	46
	Males	72,016	236	2,287	63,757	..	1,707	..	639	3,390
	Females	14,428	..	..	13,778	25	419	..	..	206
	Total Scholars	86,444	236	2,287	77,535	25	2,126	..	639	3,596

The above table shows all round progress in the number of scholars. Girl students have increased by about 48 per cent in the last 20 years. Male students are now 43·5 per cent more than in 1911. While there was no girl studying at the collegiate stage in 1911, there are now 45. In secondary education, the progress is also striking. The number of male students in the secondary stage has nearly doubled, while there are now 617 girls studying English against nil in 1911. In primary schools, however, the number of students has risen only from 173,575 to 208,736 in public schools, i.e., by 20 per cent—boys increasing by over 10 per cent and girls by over 45 per cent since 1911. The general increase in population since 1911 has been also 20 per cent, so that the increase in general school strength may be said to have just kept pace; taking the sexes separately, however, we find that while the compulsory provisions are being more rigorously and successfully

worked in respect of girls' attendance, similar efforts in regard to boys have been far from successful. This is due, in the first place, to the restriction of the area of compulsion since 1911, and in the second place to the operation of such extraordinary factors as plague, influenza and famine in 1917-19 and agricultural depression and the occurrence of calamities like the flood and the frost having a disturbing effect on attendance. Whenever these events happen, compulsion is relaxed, fines are no longer collected, schools remain closed and educational progress is therefore hindered.

325. Examination Results—An interesting indication is afforded of the

EXAMINATIONS	Average 1921-1930		1921	
	Candidates		Candidates	
	Sent up	Passed	Sent up	Passed
Matriculation and School Final.	740	366	514	312
First Year's Course (Including Preliminary Science).	323	185	204	131
Intermediate and Arts and Science	286	124	162	73
B. A. (Pass and Honours).	150	71	132	77

measure of advance in English education by the marginal table given here. The average number of scholars per secondary school has only increased from 182 in 1921 to 194 in the latest year of the decade and yet the average of matriculation candidates sent up for the examination has increased by 44 per cent, showing that the strength of the higher classes in the schools relatively to the total attendance has increased. The higher degree examinations are becoming more popular, but the percentage of

passes in the latter has declined.

§ 5. MISCELLANEOUS ITEMS

326. The Problem of Lapse—We will now conclude this chapter by noticing one or two miscellaneous items. The problem of lapse into illiteracy is always an ever present one in an agricultural population with low intellectual horizons. We can here deal with it only in so far as it affects the variations in the figures of literacy and helps to explain the proportionate changes from year to year. It is possible to treat the question in one of the three ways :—

- (i) first by estimating the number of literates expected in the census from literacy figures of the past census and the returns of scholars in the fourth vernacular standard in the decade,
- (ii) by comparison of absolute figures of literates by age-periods of two censuses, and lastly
- (iii) by a direct reference to the figures of the partially literate.

327. Expected and Actual Literacy—Now the number of literates expected in any one census can be estimated from the returns of schools and the literate population of the previous census ; and this estimate can be compared with the census figure. If it exceeds, then the difference represents the volume of lapse from literacy. If it falls short of the enumerated figure, then it becomes a measure of the latter's accuracy. The recruits to literacy during the decade come really from the children who passed the vernacular third standard examination into the fourth standard. Four years' schooling (including the infant standard) is enough for the purpose of giving the minimum qualification of literacy for census purposes. Very few recruits can come to literacy from other sources and beyond the school-going ages. The chances as well as the leisure for adult education are few indeed. We can take therefore the total of third standard passed children in yearly batches and subject them to the rate of mortality proper for the healthy school-going ages. The survivors of these should be added to the survivors of the literate population of 1921, who should be similarly subjected to a death rate proper to all ages 5 and over, and the result is the figure of expected literacy in 1931. In 1921, a death rate of 8 per mille was assumed for the literacy recruits aged 5-15. From the departmental returns, we find that from July 1921 to the end of 1930, 201,669 children passed into the vernacular fourth and thus qualified to be entered as literate in this census. Now to apply the

rate of 8 per mille per annum we must remember that each annual batch of 20,167 had on an average 5 years' risk of mortality at that rate. Thus there will be 193,602 survivors. The literate population of 1921 was 272,418. By the Hardy method we have found (in Chapter I, para 28) that 377,559 is the number of deaths on the 1921 population at an average age of 5 and over, which means a death rate of 17.75 per cent for ten years. The literate rate of mortality must be a little less than this. Assuming 15 per cent, the number of survivors in 1931 of the literate population of ten years ago would be $\frac{272,418 \times 85}{100} = 231,555$. So $193,602 + 231,555 = 425,157$, the actual figure of literates expected by normal growth through education. In addition, we have on this occasion to allow for the special factor of migration. The State gained, we have found, by 26,755 *hijratists* and 99,110 other migrants. As the former were largely literate farmers organised through political agitation, and also a portion of the migrants were returned emigrants who were born and presumably educated in the State, we may assume 25 per cent at least of this gain through migration as being literate. This gives a total of 450,330, as the figure of expected literacy. Instead, the census returned only 434,734. Thus the deficit of 15,596 may be put down to lapse from literacy, which works out at 3.5 per cent of the expected result.

328. Comparison by Age-Periods—We can come into closer grips with the problem by taking a particular area and find out by comparing age-periods and applying suitable rates of mortality, how far the enumerated figure of literates falls short of the expected result. For this purpose we shall take up Okhamandal, where the migration factor is negligible. Now the literates of 1931, aged 30 and over are composed of survivors from the literates in the age-group 20-30 and 30 and over in 1921. The mortality rate for the age-period 20-30 of general population is found from the rate of variation in the figure for the age-group 20-30 in 1921 and that for 30-40 in 1931. This is 5.7 per cent. As the literates suffer from a lower mortality rate, we apply 5 per cent rate to the literates aged 20-30 in 1921. Similarly we find 37.5 per cent as the general mortality rate for the age-group 30 and over. For literates, we must reduce it to 25 per cent. Thus for both the age-periods, the survivors among the literates number 2,488. The actual census total of literates for 30 and over in Okhamandal is 2,162, giving a lapse rate of 13.1 per cent of the expected figure. Coming to North Gujarat, we have another division where the variation is mainly due to natural causes, without any disturbing factors such as *hijratists* that vitiate the calculations in South and Central Gujarat. We apply the same rates of mortality as above, *viz.*, 5 per cent for ages 20-30 and 25 per cent for 30 and over. Here the expected result is 42,583 while the census figure is 44,099. But we have not allowed anything at all for migration. The gain, although it forms only a small portion of the census increase of 109,429 there, it is considerable enough to affect the above comparison. Assuming 10 per cent of the above increase to be due to migration of persons aged 30 and over and 25 per cent of the migrants to be literate, we have to add a further sum of 2,736 on account of these literate migrants. Our total of expected literates aged 30 and over in North Gujarat in 1931 is thus 45,319, giving a lapse rate of 2.7 per cent. But this is far from correct as the division is predominantly agricultural and the lapse from literacy is far more prevalent amongst persons engaged on the land than amongst other communities. This is indicated also by the increase of the partially literate from 6,399 in 1921 to 38,201 in this census in this division.

329. The Increase in the Partially Literate—Lastly, the study of absolute figures of persons able to read only helps to throw further light on the problem of lapse. We have estimated above a deficit of 15,596 persons (*vide* para 327) who should have retained literacy but who are not returned as such in this census. Now the partially literate have increased by over five times this census, but the greatest increase has happened in the ages 5-10 and 10-15, the figures for which show a jump of 557 per cent. This abnormal increase is entirely due to the reopening of the infant class in the vernacular schools in the last decade, which was closed for some years before the Census of 1921. The number of those who were able to read only aged 10 and over in 1921 was 16,758. The survivors of those who have failed to attain literacy are now aged 20 and over. The number of the partially literate who are aged 20 and over in 1931 is 38,411. The crude variation in the figures of two censuses is thus an increase of 21,663. But to this must be added the losses through death on one hand and promotion to literacy on the other. Allowing 10 per cent for these two factors, we get 23,829 as the figure representing the partial failures of educational effort during the decade. On an average, 35,000 children enter school every year; thus on a decade's attendance of 350,000 new children brought under educational influences, 201,669 (admitted to the fourth standard) may be said to have passed the literacy test, 23,829 are partial failures and the rest remain illiterate. These figures work out to 576, 68 and 356 per mille respectively.

330. Comparison with British Gujarat—Now it will be profitable to compare the literacy results of this State with the corresponding figures of British Gujarat. The results of the literacy race with its neighbour in the last four censuses are shown in the margin. It proves conclusively how this State

started with a heavy handicap in 1901 and rapidly improving its position in the intervening censuses, has now left British Gujarat far behind. It is possible that the non-co-operation movement had something to do with influencing the figures

YEAR	Proportion of literates per mille aged 5 and over			
	Baroda State		British Gujarat	
	Male	Female	Male	Female
1901	180	9	227	18
1911	206	24	234	31
1921	240	47	254	48
1931	331	79	254	46

for British Gujarat, but it only affected the results in Ahmedabad City, which being an industrial area has always a low literacy ratio. If it be suggested that *hijrat* helped a great deal in raising the State literacy ratio the reader may be assured that this is not the case. The *hijrat* consisted of 14,424 males and 12,331 females; they contained a larger number of children than the normal migrant family should have, but even if we exclude the whole lot from the general population and deduct from the literate totals the literate *hijrat* (calculated at 25 per cent and distributed by sex according to the ratio obtaining among the total literate population) the ratio for male literacy in the whole State is only reduced thereby from 331 to 329, while the female literacy remains at the same figure, i.e., 79. The above comparison illustrates effectively the success of the compulsory experiment in this State. We have not the figures by age-periods regarding British Gujarat

and it is not worth while delaying this Report for that detail, for in the 1921 Report, it was shown that even though for all ages British Gujarat had then the lead, in the adolescent groups 10-15 and 15-20, this State showed greater progress. There can be no doubt that in this respect also Baroda has improved upon its lead in this census.

PROVINCE OR STATE	Proportion of literates per 1,000 aged 5 and over		
	Persons	Male	Female
British India—			
Ajmer Merwara	103	203	35
Assam	91	152	23
Bengal	110	180	32
Bihar and Orissa	59	95	8
Bombay	108	174	32
Burma	367	560	164
Central Provinces	60	110	11
Madras	108	187	30
Punjab	59	95	15
Delhi	163	226	72
United Provinces	54	94	11
States—			
Central India Agency	52	92	9
Cochin	337	460	220
Gwalior	47	78	11
Hyderabad	47	83	10
Mysore	106	174	33
Rajputana	54	94	11
Travancore	288	408	168
Baroda	209	331	79

331. Comparison with other States and Provinces in India—In general literacy the position of this State as compared to the other principal provinces or states in India can be understood from the marginal figures. It will appear that Burma has retained its leadership in literacy. Travancore and Cochin have continued as expected to be in advance of this State.

But on the other hand progress achieved in this State is actually more rapid than in most other provinces

PROVINCE OR STATE	Literate per mille aged 5 and over			
	1931		1921	
	Male	Female	Male	Female
Burma	560	164	510	112
Cochin	460	220	317	115
Travancore	408	168	380	173
Baroda	331	79	240	47

and states. Burma for instance shows only an increase of 50 per mille in male literacy against our 91. In Travancore, female literacy has actually declined since 1921. The presence of large Christian populations in Travancore and Cochin helps to force up their literacy while the presence of a large Raniparaj element hampers progress here.

332. Comparison in English Literacy—The situation in respect of English education is not so favourable to this State by comparison with other provinces and states. The educational policy hitherto followed here has concentrated on primary education and it is only within the last ten years that English schools have multiplied. Here again we see the rate of progress in this State actually more fast than in many provinces and states.

333. Comparison of Baroda with other Countries in point of Literacy—In

concluding this chapter we set out for the reader the following details of literacy in other parts of the world :—

PROVINCE OR STATE	Number of literate in English per 1,000			
	Male		Female	
	1931	1921	1931	1921
Baroda State	28	15	2	1
(1) Cochin	58	35	16	8
(2) Bengal.. ..	43	34	5	2
(3) Bombay	32	23	7	4
(4) Travancore	31	25	7	6
(5) Madras	26	19	4	2
(6) British Gujarat	24	20	2	2
(7) Burma.. ..	21	16	5	4
Baroda City	166	118	23	13
Bombay City	153	118	78	49

- (1) In the United States of America, illiteracy amongst persons aged 10 and over decreased from 17 per cent in 1880 to only 6 per cent in 1920. The American Negro has a literacy ratio of 77 per cent (for ten years and over) which is higher than some of our most advanced castes.
- (2) In France in 1928, from the data regarding conscripts, it could be said that literacy amongst adults aged 20 and over amounted to 90 per cent.
- (3) In Hungary, 15·2 per cent of the population over six years of age were illiterate.
- (4) But we may be happy in the thought that in certain other countries, like Spain, where literacy is only 46·3 per cent (amongst persons aged six and over), Portugal, where in 1920, 54·7 per cent were still unable to read and write, and Turkey where according to the Census of 1927, only 8 per cent were found literate in Arabic characters, conditions of things are somewhat more comparable with Baroda, and India generally, than in the countries previously mentioned.

ADDITIONAL SUBSIDIARY TABLES

SUBSIDIARY TABLE IX

LITERACY IN TOWNS

TOWN	PROPORTION OF LITERATES TO TOTAL POPULATION (PER MILLE)									
	All Ages 7 and over		7—13		14—16		17—23		24 and over	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8	9	10	11
Baroda City	579	220	447	275	679	411	665	301	573	109
Amrell	506	207	461	308	758	431	717	272	594	119
Damnagar	537	191	321	282	738	449	649	248	562	100
Dhari	526	210	386	260	688	500	648	330	520	94
Kodinar	478	131	319	180	614	218	609	195	492	75
Bahadarpur	448	113	322	151	587	214	512	176	452	67
Bhadran	619	272	513	270	894	546	776	463	573	183
Dabhol	539	189	347	140	707	239	636	167	825	79
Dharma	623	297	482	342	829	618	818	562	586	170
Karjan	447	97	232	85	494	124	502	149	486	72
Makarpura	415	84	338	140	571	257	429	58	415	48
Mehlav	483	168	363	214	680	493	696	374	451	70
Nar	561	206	343	221	783	528	757	426	547	108
Padra	605	160	434	233	776	349	788	292	594	81
Petlad	522	138	324	132	653	242	636	200	532	106
Pij	572	196	461	245	737	503	711	386	545	94
Sankheda	581	102	433	135	698	231	672	156	592	60
Savli	466	108	309	168	593	267	613	178	464	47
Sinor	578	158	351	196	676	273	673	232	618	108
Sojitra	668	260	493	294	863	548	829	435	660	172
Vaghodia	525	125	396	153	712	286	707	215	495	62
Vaso	566	193	434	254	803	375	743	352	526	103
Atarsumba	561	192	315	216	637	384	618	361	631	113
Chanasma	509	106	389	160	707	279	698	181	464	44
Dehgam	470	141	364	153	558	319	536	260	474	85
Dhinoj	501	101	222	86	536	248	512	206	423	53
Kadi	511	115	360	154	617	244	608	176	518	68
Kalol	481	98	312	136	576	180	603	148	531	57
Kheralu	373	61	284	88	482	163	462	97	361	30
Ladol	421	71	214	100	656	216	612	192	403	30
Mehsana	503	140	369	170	635	230	582	211	579	92
Patan	550	182	435	207	707	359	673	279	535	123
Sidhpur	493	146	313	138	515	257	559	248	541	100
Unava	537	210	404	282	714	418	742	380	508	119
Unjha	468	111	350	134	780	295	737	203	409	49
Vadnagar	464	82	265	99	697	208	654	164	473	40
Vijapur	446	81	297	96	646	225	584	134	437	40
Visnagar	534	129	360	168	673	285	682	217	536	76
Billimora	536	193	312	206	733	437	688	260	544	135
Gandevi	607	238	394	291	830	547	751	312	624	163
Kathor	570	262	310	251	735	436	716	289	602	127
Mahuva	522	274	284	264	721	519	654	418	546	185
Navsari	583	297	391	265	712	429	689	372	611	269
Palsana	552	212	254	237	798	455	691	333	601	126
Songadh	446	189	311	221	483	289	519	295	470	120
Varlav	590	149	267	188	686	233	584	216	535	104
Vyara	501	192	331	171	648	271	583	282	517	160
Beyt	450	136	227	208	595	239	560	186	375	90
Dwarka	585	297	363	250	736	356	668	277	618	157

SUBSIDIARY TABLE X

LITERACY BY CASTE

CASTES SELECTED	NUMBER PER 1,000 WHO ARE LITERATE						NUMBER PER 10,000 WHO ARE LITERATE IN ENGLISH					
	1931			1921			1931			1921		
	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males
1	2	3	4	5	6	7	8	9	10	11	12	13
Advanced	459	687	210	..	..	..	497	918	39	..	..	..
<i>Hindu and Jain</i>	467	694	215	..	..	..	530	972	41	..	..	..
Bhavsar (Hindu and Jain)	449	722	171	376	674	95	229	443	12	98	198	9
Brahmabhatt and Barot (Hindu and Jain)	330	557	89	188	209	70	224	441	2	60	117	..
<i>Brahman</i>	542	780	284	429	669	178	998	1,835	89	537	1,014	36
Anavala	626	871	358	457	678	207	1,080	2,037	33	561	1,030	7
Audich	489	745	229	394	644	136	645	1,259	18	292	564	10
Deshaatha	706	927	443	587	838	312	2,652	4,560	392	1,562	2,869	128
Khedawal	576	844	296	491	747	209	1,124	2,196	..	668	1,261	13
Konkanstha	758	951	523	640	845	381	3,274	5,582	475	1,988	3,364	242
Mewada	484	751	175	359	604	93	527	977	5	224	431	..
Modh	508	780	244	429	684	175	672	1,333	31	357	704	11
Nagar	665	869	467	552	772	338	2,046	3,820	322	1,233	2,364	135
Tapodhan	354	565	143	229	391	68	304	600	..	104	195	14
Other Brahmans	553	758	294	374	634	103	918	1,545	129	341	595	73
Ghanchi	406	688	112	308	548	54	117	228	2	33	63	2
Kachhla (Khambhar)	402	668	115	257	442	54	160	299.8	9	32	61	..
Lewa Patkiar (Hindu and Jain)	395	595	163	259	414	79	249	457	8	104	192	2
Luhana	488	780	185	382	665	103	324	628	9	169	337	4
Maratha Kshatriya	385	537	191	368	545	157	874	1,422	179	499	823	110
Prabhu	774	896	646	665	842	460	3,714	6,184	1,132	2,491	4,125	602
Soni	517	811	203	412	671	136	136	260	4	78	146	1
Sutar	343	566	110	215	361	53	75	145	1	26	49	1
<i>Vania (Hindu and Jain)</i>	606	879	319	518	809	224	795	1,516	35	420	800	25
Disawal	605	897	305	504	769	241	1,070	2,096	17	484	933	32
Kapol	661	899	398	557	826	254	1,019	1,869	82	495	924	11
Khadayata	623	913	287	521	776	186	1,096	2,008	40	494	845	34
Lad	609	899	283	505	791	213	1,191	2,242	13	585	1,101	9
Porwad	610	866	332	..	..	..	763	1,425	44	..	..	..
Shrimall	591	865	320	522	814	227	889	1,048	34	295	558	29
Other Vanias	619	883	326	516	811	219	891	1,659	40	587	1,146	22
<i>Muslim</i>	379	610	154	238	401	75	162	313	15	73	102	3
Khoja	492	713	268	220	262	127	324	598	47	81	113	12
Memon	355	603	105	155	258	46	51	95	8	7	13	..
Pinjara	298	522	81	234	415	49	49	100	..	20	40	..
Salyad	348	557	124	227	390	57	277	510	26	107	204	5
Vohra (Agricultural)	328	550	126	277	468	95	82	163	9	101	202	3
Vohra (Trading)	505	763	262				278	551	20			
Intermediate	189	308	47	..	..	..	38	76	5	..	..	..
<i>Hindu, Jain and Tribal</i>	174	298	45	..	..	..	25	49	0.7	..	..	..
Anjana Chaudhari	144	259	22	74	138	9	20	39	..	6	11	1
Baria	130	221	27	12	20	3	0.7	1.3	..	2	2.3	1
Bava and Gosain	308	469	77	211	329	37	81	138	..	27	45	..
Chamar	71	132	14	27	50	3	4	8	..	1	2	..
Darji (Hindu and Jain)	289	481	119	184	317	64	38	79	1.4	21	43	0.1

SUBSIDIARY TABLE X—*concl'd.*

LITERACY BY CASTE

CASTES SELECTED	NUMBER PER 1,000 WHO ARE LITERATE						NUMBER PER 10,000 WHO ARE LITERATE IN ENGLISH					
	1931			1921			1931			1921		
	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males
1	2	3	4	5	6	7	8	9	10	11	12	13
Garoda	256	458	75	120	222	21	16	33	..	12	25	..
Gola (Rice-pounders)	264	481	55	190	369	22	66	130	3.9	27	55	..
Kadwa Patidar (Hindu and Jain) ..	217	387	46	122	219	18	36	71	1.2	21	41	..
Karadia	202	295	110	24	47	..	2.9	5.9	..	..	..	..
Kumbhar (Hindu and Jain) ..	163	276	48	88	148	24	20	40	0.5	6	12	.5
Luhar	275	474	85	169	302	40	44	85	3.4	21	42	..
Mochi (Hindu and Jain) ..	301	488	109	197	313	73	35	67	2.4	16	30	..
Patanwadia	110	190	24	..	..	..	4.2	8	..	..	..	..
<i>Primitive and Forest Tribes (Hindu and Tribal)</i>	73	137	15	38	71	2	2.1	4	..	9	18	..
Chodhra	69	120	13	37	72	.1	3.6	7	..	17	32	..
Dhanka	86	138	29.6	14	27	.3	..	..	..	..	..	..
Dhodia	92	162	17	47	86	7	..	..	..	1.1	2.2	..
Rajput (Hindu and Jain) ..	193	324	48	130	225	25	40	76	1.0	16	31	..
Sathwara	204	350	68	99	195	16	13	28	..	6	13	..
Talabda	181	315	50	..	..	..	35	70	0.4	..	..	..
Targala (Hindu and Jain) ..	300	485	148	186	336	73	61	130	4.2	43	101	..
Valand	227	382	77	133	228	33	55	112	..	18	35	1
Vankar	125	209	44	45	79	10	12	25	0.4	3	6	..
<i>Muslim</i>	221	376	49	166	286	33	93	176	2	42	75	5
Fakir	183	307	41	117	199	20	47	88	..	..	..	..
Ghanchi	307	498	98	177	303	40	126	242	..	61	113	6
Malek	174	324	22	125	226	15	62	123	..	19	36	..
Molesalam	221	395	30.5	140	258	9	56	105	2.3	4	7	..
Momna	134	249	22	180	328	36	22	44	..	6	13	..
Pathan	258	419	56	178	296	32	145	258	3.4	71	117	13
Shalkh	256	417	68	186	310	47	134	246	4	75	134	8
Sindhi	146	258	19	93	156	13	29	55	..	9	16	..
Tal	254	447	75	257	484	49	128	261	5.6	22	46	..
<i>Indian Christian</i>	382	499.6	251	232	294	159	933	1,175	662	543	564	518
<i>Illiterate</i>	36	62	7	..	..	..	2	3	..	..	..	..
Bhangi	56	96	15	29	50	8	2.4	4.7	..	1	2	..
Bharwad (Babari)	27	45	8	24	36	11	2.4	4.8	..	..	..	..
Chunvalia	62	93	23	..	..	..	6.2	12	..	..	..	..
<i>Primitive and Forest Tribes (Hindu and Tribal)</i>	39	69	8	15	27	3	1	3	..	.7	1.4	..
Bhil	46	82	7	13	22	2	0.7	1.3	..	..	..	..
Dubla	55	95	16	18	31	5	3	6	..	1	2	..
Gamit	32	55	7	14	26	1	1.7	3.3	..	1	2	..
Nayakia	44	78	7	22	37	6	1.1	2.1	..	1	2	..
Tadvi	45	82	5	..	..	..	1.2	2.3	..	..	..	..
Talavia	33	64	11	..	..	..	1.7	3.4	..	..	..	..
Vasawa	25	47	2	..	..	..	.7	1.4	..	..	..	..
Ravalia	51	90	10	23	38	6	2.3	4.4	..	..	1	..
Shenva	25	45	2	11	20	2	..	..	..	2	4	..
Thakarda (Hindu and Jain) ..	32	56	3	..	..	..	1.6	3.1	..	..	..	..
Vagher	25	45	2	29	30	27	4.8	9.2	..	9	11	7
Vaghri	23	33	7	16	26	3	1.4	2.7	..	2	4	..

SUBSIDIARY TABLE XI

PROPORTION OF LITERACY AT CERTAIN AGES

AGE-GROUP	TOTAL POPULATION			PROPORTION OF LITERATE PER MILLE			PROPORTION OF ENGLISH LITERATE PER TEN MILLE		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8	9	10
7—13	410,148	216,678	193,470	174	231	111	30	48	10
14—16	167,596	87,336	80,260	335	476	182	269	467	52
17—23	315,786	158,328	157,458	299	467	130	338	639	36
24 and over	1,087,262	560,262	527,000	195	338	44	143	267	12

SUBSIDIARY TABLE XII

PROGRESS OF LITERACY SINCE 1881

NATURAL DIVISION	NUMBER OF LITERATE PER MILLE											
	All Ages 10 and over											
	Males						Females					
	1931	1921	1911	1901	1891	1881	1931	1921	1911	1901	1891	1881
1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State	361	277	229	199	155	107	80	51	25	9	6	2
Baroda City	590	600	472	427	377	289	214	218	84	27	25	7
Central Gujarat excluding City	409	293	250	238	165	108	81	48	20	7	3	1
Central Gujarat including City	437	338	284	270	198	135	99	71	30	10	6	2
Kathiawad	398	311	260	187	173	135	122	71	40	7	5	1
North Gujarat	294	215	173	137	111	73	53	30	12	3	3	1
South Gujarat	341	289	226	219	179	130	88	58	33	25	13	5

NATURAL DIVISION	NUMBER OF LITERATE PER MILLE															
	15—20								20 and over							
	Males				Females				Males				Females			
	1931	1921	1911	1901	1931	1921	1911	1901	1931	1921	1911	1901	1931	1921	1911	1901
1	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Baroda State	470	354	258	206	147	105	40	13	354	265	217	208	55	34	16	7
Baroda City	667	766	541	449	326	370	151	49	587	562	460	430	174	172	63	21
Central Gujarat excluding City	542	389	305	216	160	105	42	10	400	278	230	245	52	28	11	5
Central Gujarat including City	562	443	343	285	184	143	60	17	428	320	266	278	68	48	19	8
Kathiawad	521	425	294	215	223	169	71	11	388	290	237	194	79	39	21	5
North Gujarat	399	275	176	142	103	66	16	3	282	202	165	143	34	18	7	2
South Gujarat	428	350	270	240	148	103	45	38	346	285	219	224	68	44	26	22

NOTE.—Proportional figures for the year 1881 have been calculated for all ages, 6 and over. Persons aged 15 and over who were returned as "learning" in 1891 and 1891 have been reckoned as "literate" in the calculation of the above proportions.

APPENDIX VI

THE BARODA LIBRARY SYSTEM*

1. Introductory—The remarkable advance of literacy which has already been recorded in the body of the Report is due in no small measure to the development of a library system which the State inaugurated in 1910. His Highness the Maharaja Gaekwad is the pioneer in India of free and compulsory education; while watching the results of this bold and statesmanlike experiment, His Highness soon found that a large proportion of the students who passed through the elementary school tended to relapse into illiteracy in after life. The solution to this problem of retention in later years of literacy acquired in childhood, occurred to His Highness when he observed the value of free public libraries to mass education, during his tours in the U. S. A. in 1906 and 1910. He made a beginning in 1907-8 by giving liberal grants to the public libraries of his State. Three years later he brought out to Baroda Mr. W. A. Borden, an American library expert, to organise a State Library department. Mr. Borden during his three years' tenure of office conducted a library training class, organised the Central Library and a travelling library system, and planned a network of free public libraries throughout the State. His successor, Mr. J. S. Kudalkar, who was sent abroad to make a survey of the library systems of the world died prematurely in 1921 and since then Mr. N.M. Dutt, F.L.A., who has been associated with the Baroda Central Library since 1913, is the Curator of Libraries and head of the organisation.

2. The Library Organisation—The Library department under the general supervision of the Commissioner of Education is entirely supported by the State, which spent over a lac of rupees over it in the 1930-31 budget, nearly half this sum being distributed in grants to free libraries. The staff consists of the Curator, an Assistant Curator, 11 librarians and senior assistants (including 2 ladies) besides subordinates and menials. There are two main parts of the organisation: The Central Library under the direct supervision of the Curator and the country libraries which are looked after by the Assistant Curator.

3. The Central Library—The Central library situated in the heart of the capital is a free, public and open access library comprising of the following sections: newspaper reading room, lending, reference, ladies' and children's libraries, children's play room, bindery and general office. The total stock of books in the Central library alone is 99,586 volumes. The circulation in 1930-31 was 119,858 books of which 25 per cent were English books. The daily average issue was 437.44 books which is a remarkable record in a City containing 44,817 literates and people able to read only. No other library in India could boast of such a circulation. The Reference library which contains the largest collection of books in India on bibliography and library economy, helps not only local scholars and research workers but answers enquiries from outside the State and even from foreign countries. The Ladies' library is highly popular and 22,356 books were lent out of it last year. The children's play room and library which has become one of the show places of Baroda is visited by nearly 28,000 children every year who are free to read or amuse themselves in the gaily decorated halls with practically every variety of indoor game and juvenile literature at their disposal. Other activities of the Central library include the foundation of the Gaekwad's Oriental Series now set up independently as the Oriental Institute under the direction of an eminent Sanskrit research scholar. The institute possesses 21,362 books and manuscripts and has hitherto published over 70 volumes of critical editions of rare unpublished Sanskrit manuscripts. Further the Central library extends its activities beyond the State in library propaganda, the following to enumerate but a few of them, being the more important: it conducted an illustrated quarterly in three languages entitled "The Library Miscellany" (1911-19) to preach the 'library gospel'; its editor and the then curator Mr. Kudalkar presided over the All-India Library Conference in Madras in 1919: the cult of library exhibitions was started by the Baroda Central Library which sent exhibits as far away as Wembley and Rome, besides exhibiting in India at Benares, Madras,

*Prepared from notes furnished by the Central Library department.

Calcutta, Bombay, Ahmedabad and Gwalior. The present curator presided over Library Service Section of the All-Asia Educational Conference at Benares in 1930. The Library also trains students from institutions of other provinces and states in this kind of work.

4. The District Libraries—While the Central library caters to the epicurean tastes of the cultivated metropolitan palate, the humble district libraries' branch without any such patrician pretensions, is doing greater good to the greater number by giving the everyday bread of learning to the masses. The chief function of this branch is the organisation, control and subsidising of State-aided libraries. The minor functions are managing the travelling libraries and the visual instruction section. The travelling library section has a stock of 20,228 books, and circulated 15,262 volumes last year through 147 centres. The system consists in lending to responsible institutions or persons boxes of 15-30 books for circulation in different localities. The Department pays freight both ways. There are 'fixed' and 'elastic' sets of books, the former being on particular subjects or authors and the latter answering to the varying demands of particular localities. The visual instruction section started in 1912 is now temporarily transferred to the Sanitation department for helping in the scheme of village uplift. The section has an equipment of magic lantern and cinema apparatus for peripatetic demonstrations among rural areas for the edification of the illiterate masses.

5. The Modus Operandi of Country Libraries—Reverting to the chief function of this branch, its procedure can be summarised as follows: when a village, town or district-town community collects amounts upto Rs. 100, 300 or 700 respectively, the department grants an equal sum and the Prant Panchayat or District Board does likewise—sometimes also the local municipality. For a library building, if one-third of the estimated expense is collected by the local library committee the Department and the Panchayat find the other two-thirds. Finally for a nucleus for a new library the department gives a subsidy of Rs. 75 if the quarter share of the hundred is found by the local committee. The committees are elected by the contributors and are practically autonomous so long as they conform to the simple rules of accounts, etc. laid down by the department. Further they are not left entirely to their own devices but are encouraged to keep in touch with the assistant curator who tours the districts from time to time and holds discussions with library workers. In autumn, secretaries and librarians are invited from rural areas to undergo a short period of training at Baroda. A Gujarati monthly, '*Pustakalaya*,' devoted to the library cause is maintained by the department and this along with a classified catalogue already published, helps the various libraries in the selection of Gujarati books. A co-operative supply society is established by the associated libraries for wholesale economical purchase of books and periodicals. Since 1925 the Baroda District Libraries Conference has met five times. The people of the State have responded satisfactorily to these efforts. 773 free public libraries have been hitherto established with an aggregate stock of 573,170 volumes independent of the Central and Travelling libraries stocks and with a circulation of 402,286 among 75,535 readers. 111 libraries have their own buildings. There are 216 reading rooms. The vogue of ladies' and children's libraries has hitherto brought into existence 10 such enterprises. Apart from all these there are a few independent subscription libraries which are doing well.

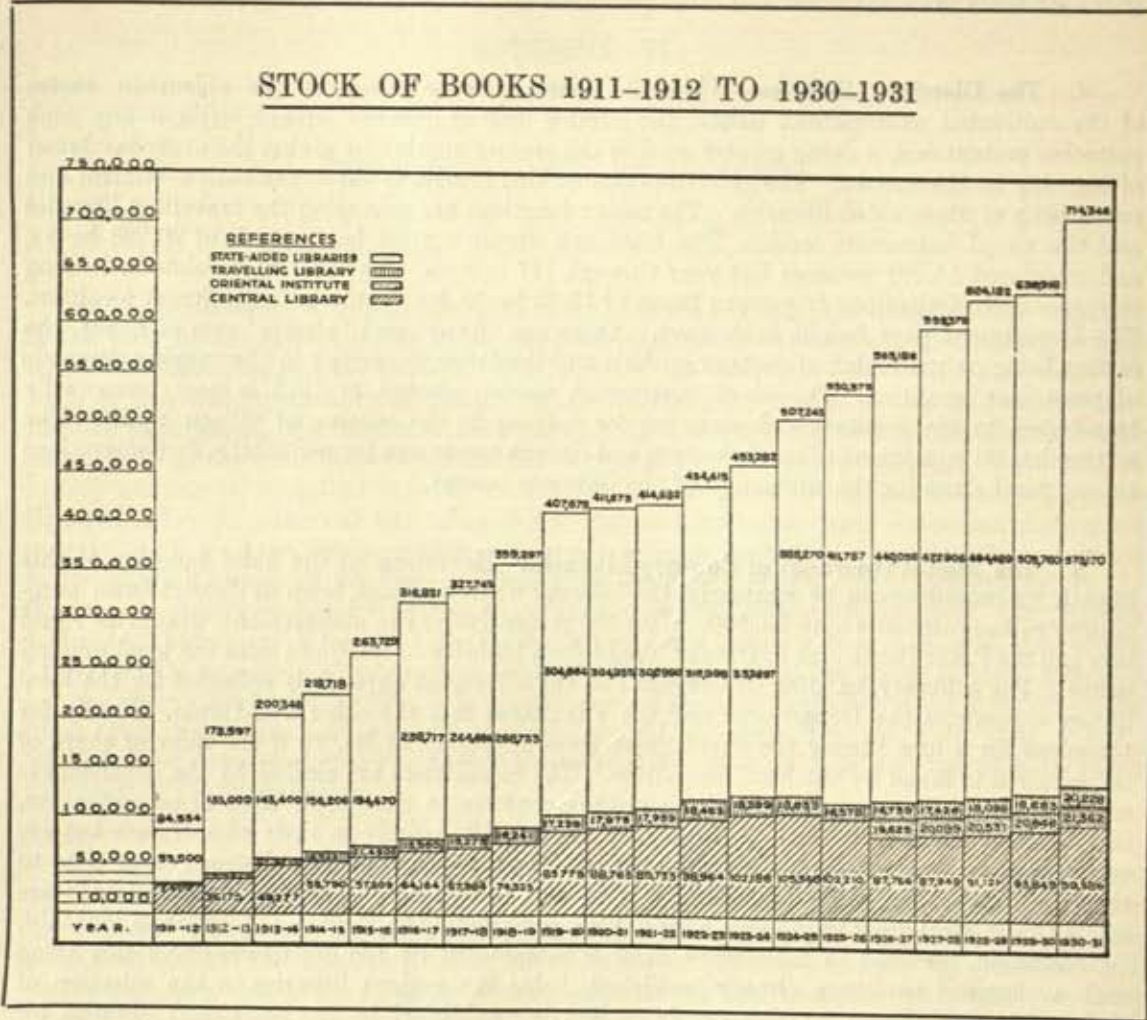
6. Progress of the Library Movement—The marginal table shows the progress since the last two censuses.

The average number of books per library is now 920 which was 655 in 1920-21, and 309 in 1911-12. The number of institutions have increased by 23 per cent, stock of books by 73, circulation by 60, and number of readers by 39 per cent in the last ten years. The growth since 1911 is nothing less than phenomenal. The four diagrams given below illustrate respectively:—

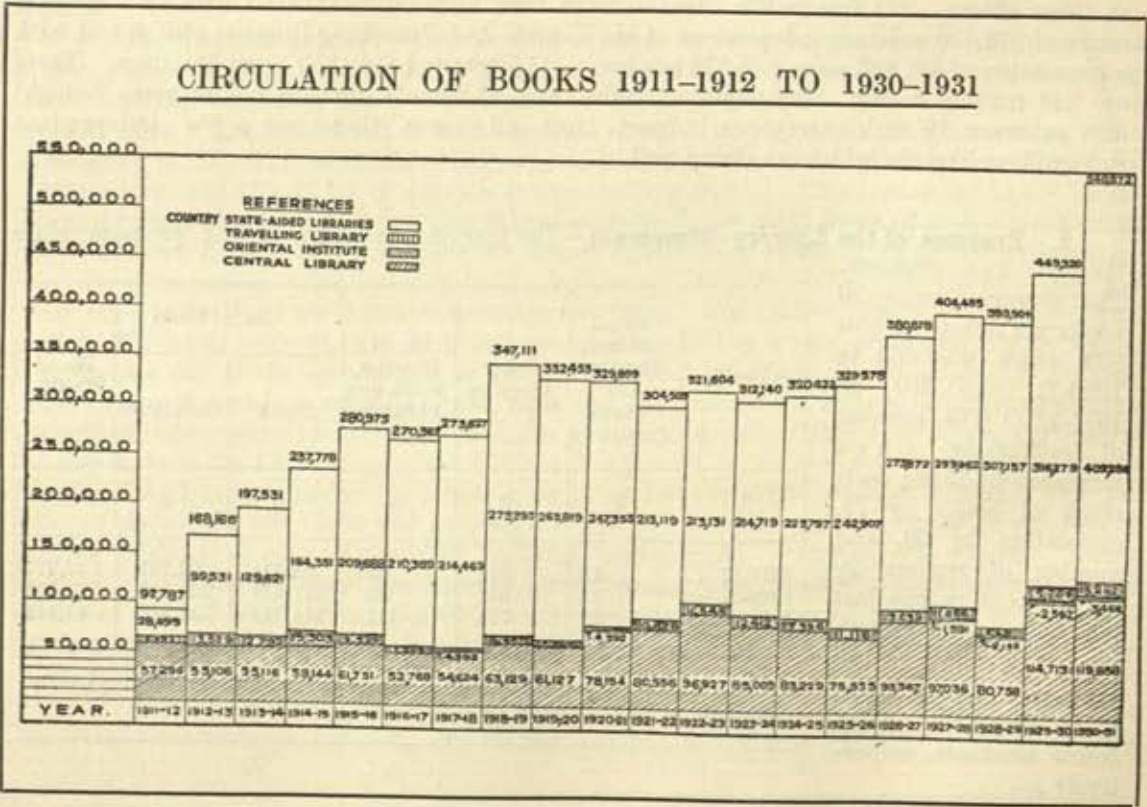
YEAR	Central Library, Baroda and Oriental Institute	Other Libraries	No. of libraries which own buildings	No. of books		No. of Readers
				Stock	Circulation	
1	2	3	4	5	6	7
1911-12 ..	1	274	20	84,554	92,787	36,277
1920-21 ..	1	627	82	411,673	329,899	62,732
1930-31 ..	2*	773	111	714,346	540,872	87,442

* In 1926-27 the Sanskrit section of the Central Library was separately established as "The Oriental Institute."

(i) the actual increase in the stock of books in the State-aided country libraries year by year since 1911-12 ;



(ii) the increase in the circulation of books during the same period,



CHAPTER X

LANGUAGE

§ 1. GENERAL DISTRIBUTION OF LANGUAGES

334. Introductory—We now come to the language returns. Statistics regarding the distribution of languages and the prevalence of bilingualism have been compiled from the responses to columns 14 and 15 of the census questionnaire. Column 14 required the language ordinarily used in the home to be entered. For this purpose, the instructions emphasised that only "the mother tongue," i.e., the language as first spoken from the cradle was to be entered. It was further laid down in respect of the infant or the deaf-mute that the language of the mother was to be entered in that column. In spite of these express instructions, the perverse humourist could not be gainsaid. I remember, at one of the census meetings, to have been confronted with the poser "What if the mother herself was a deaf-mute?" No set of instructions however could ever hope to be fool-proof. The intention has all along been to record the person's own natural home vernacular. Instructions to carry this out have been progressively improved from census to census: in 1891, the person's "parent tongue" was required to be entered. But this often led to mistakes, where, as occasionally happened, a person changed his domicile or took to his home a wife speaking a different language. In 1901, it was directed that "the language ordinarily used" was to be entered. This also did not serve the purpose, as immigrants often entered the language of their domicile, instead of their own mother tongue. In 1911 and 1921, the instructions were made more definite in that only the language used in the home, or the mother tongue was to be entered. This materially helped in the accuracy of the returns, as "*matri bhasha*" (mother tongue) is well understood in the Indian languages, and the ordinary Indian villager readily distinguishes the language he speaks from other tongues. In 1931, these instructions were carefully elaborated, and in addition, column 15 was devised for the record of subsidiary languages in order to measure the extent of the interaction of different languages on one another. For column 15, the instructions were to "enter the language or languages habitually spoken by a person *in addition to his mother-tongue*, in his or her daily avocations." This was a special feature of the language census of this year, and it will be well to premise our consideration of the language figures by stating the consequences that resulted from this change.

335. Results of the above change—As was pointed out in the 1921 Report, one of the real difficulties that usually militate against the accuracy of the language return is the factor of bilingualism. There are large classes in the State,—the bulk of the foreign element Muslims, the Deccani castes, the speakers of Kachchhi and a large section of the Raniparaj—all these speak one other language besides their home vernacular. There used to be only one column for language in the census schedule, and in such cases of bilingualism, it was left to the enumerator or to the compilation staff to re-edit the returns with a view to have one language compiled per individual. In spite of specific instructions that only the language used by the womenkind—the home vernacular—was to be entered, the return was not an accurate one of the language distribution, nor was it a true index of the extent to which certain dominant languages were displacing other less developed tongues. The addition of a new column for subsidiary languages had an important bearing on these circumstances. Mainly there have been two kinds of consequences. On the one hand, it has led to a correcter estimate of languages like the Bhili which were supposed to be gradually giving way to the influence of Gujarati and other tongues of civilisation. As the schedule now made room for both the languages

of the home and the language for outside consumption (so to speak), it was natural that both should be returned: previously where there was only a choice between say Gujarati and Bhili, the latter was very often discarded, and the enumerator, more often than not through personal predilection or some other similar motive, chose the former. The additional column, therefore, in these cases has been helpful in getting a more accurate record. But on the other hand in respect of Muslims in particular, there is reason to believe that the census was used in many cases for returning Hindustani rather than Gujarati, even though the latter language happened to be the natural home language. There was some little agitation amongst them when the census instructions were first issued, as they thought their mother tongue was being slighted by their not being allowed to return Urdu as their vernacular; but it subsided when it was explained to them that Urdu and Hindi were terms signifying scripts and that "Hindustani" was the proper term for the medium of speech. After this, a tendency was noticed particularly amongst Muslim enumerators and other census staff, to return Hindustani even for classes like Pinjara and the like as their home tongue, instead of Gujarati which is their real vernacular. Secondly, amongst those sections, which did return Gujarati as vernacular, there was a tendency noticeable to show Hindustani also as subsidiary. Where the latter contingency happened, it may be taken at once to be evidence of a genuine movement. Sections of Muslims who are local converts and are known as Neo-Muslims are being gradually subjected through communal considerations to an intensive *Muslimisation*, one most characteristic feature of which is the enthusiasm shown for learning Urdu, instead of the local vernacular. But the cases of the first category, doubtless, would fall into the class of deliberate falsification of returns, from which no census however carefully conducted is free. Other cases, of wilful, or rather playful, falsification were the eagerness of many educated Hindus to return English, in spite of express instructions to the contrary, as their subsidiary language. Mere capacity to understand English or any other language besides the vernacular was not enough: he must habitually use it for his business and other purposes, before he can return it as a subsidiary. Occasionally the claim went to laughable lengths—sixth standard students of English schools claiming English as a subsidiary language. We, therefore, decided not to compile English at all as a subsidiary language.

336. Reference to Statistics—The results are compiled in the three parts of Imperial Table XV. Part A gives the general distribution of languages spoken as mother tongues and classified according to the scheme devised by the Linguistic Survey. Part B indicates the area and extent of Bilingualism. The five principal languages of the State have been selected for this Part, as also for Part C, where Polylingualism in so far as it relates to these tongues has been compiled. State Table VI—Part B correlates the figures of the principal languages with literacy in Hindi and Urdu separately and in these two scripts combined.

337. General Language Distribution—Altogether 56 languages and dialects have been separately compiled in the Language Table XV—A. Of these 37 are languages and 19 dialects (counting Kachchhi as a dialect of Sindhi and the Bhil group as separate dialects). 24 of these are languages or dialects of India and 13 belonged to outside India. Of these 13, no less than six languages were from Europe. No dialects were recorded as in 1911, except Kachchhi, Konkani, Banjari and the Bhil dialects. Banjari which was wrongly included in previous censuses under the Bhil group is now shown under Rajasthani. Two gypsy languages appear for the first time—Odkhi and Pendhari with 115 and 6 speakers respectively. So do Sinhalese with one speaker, Russian (one female), Ugandi and Hebrew. The last named must be the result of a fanciful claim on the part of a Jewish family. Japanese (like Buddhism in the Religion Table) owes its place in the returns to the accident of a Japanese ship touching Port Okha on the census date. The comparative strength for the two censuses of the main languages spoken in the State and their proportional variations for three censuses are given in the following Subsidiary Table:—

SUBSIDIARY TABLE I

DISTRIBUTION OF THE TOTAL POPULATION BY LANGUAGE

LANGUAGE	TOTAL NUMBER OF SPEAKERS		Variation since 1921	PROPORTIONATE STRENGTH PER MILLE			Where chiefly spoken
	1931	1921		1931	1921	1911	
1	2	3	4	5	6	7	8
Gujarati	2,119,551	1,867,343	+ 13.5	868	878	864	Everywhere
Bhil dialects	180,384	145,856	+ 23.6	74	68	72	Rani Mahals and Sankheda and Tilakwada Mahals
Western Hindi	78,188	62,367	+ 25.4	32	30	36	City, Central and North Gujarat
Rajasthani	7,246	4,453	+ 62.8	3	2	2	City, Central and North Gujarat
Marathi with dialects ..	35,841	33,165	+ 8.1	15	16	17	City and South Gujarat
Kachchhi	17,679	11,439	+ 54.5	7	5	8	Kathiawad
Lahnda and Sindhi ..	952	661	+ 44.0	..	..	..	Central and North Gujarat
Other Languages	3,166	1,238	+155.7	1	1	1	
Total Population ..	2,443,007	2,126,522	+ 14.9	1,000	1,000	1,000	

338. Subsidiary Table I considered—It must be understood that the strength shown against each language in the above table represents the number of speakers who have returned that language as their mother tongue. The question of their use as subsidiary languages will be presently considered. Gujarati as mother tongue has increased by 13.5 per cent and Bhil dialects have increased by 23.6 per cent; while the general increase in population is only 14.9 per cent and that amongst primitive tribes is 20.7 per cent. The increase in the Bhil dialects is proportionately larger than the growth of the tribes that speak them proving that many speakers who were shown as speaking Gujarati in 1921 are (more correctly) shown under their own native vernacular, as there is now room for showing Gujarati, where necessary, as the subsidiary language. This explains the slower rate of increase amongst Gujarati speakers. Similar reasons explain the large increase under Kachchhi. The increase in Rajasthani is wholly due to immigration. As the birthplace returns show, immigrants from Rajputana Agency, Ajmer Marwara and Idar State now number 12,254 against only 9,031 in 1921. Western Hindi shows a larger increase than the average recorded in the general population, and this is probably due in part to immigration. Immigrants from the United Provinces have nearly doubled their strength within the last ten years. But Western Hindi has also gained at the expense of Gujarati, as will be shown later through Muslim predilections in favour of Urdu. These causes have combined to reduce slightly the proportionate strength of Gujarati among the population. It still remains by far the most dominant tongue in the State. It is the language of the administration and, through the network of schools and the encouragement given by the State to the production of books in it, has firmly established itself as the ordinary language of intercourse and civilisation. Marathi has not grown so much as the other languages, partly because some of the typical Deccani castes that speak it have actually declined in numbers. In the last column of the Table, an indication is given of the area or areas where the speakers of each language are to be most found. Of the speakers of the Bhil dialects, the bulk, *i.e.*, nearly 82 per cent are in South Gujarat and the remainder in Central Gujarat. The speakers of Western Hindi are distributed in almost equal strength in Baroda and Mehsana *prants*. In the City alone, their number is almost as large as in Mehsana *prant*. It remains to add in this connection that out of the total population, no less than 2,442,610 or 999.8 per mille speak some

BILINGUALISM

BHIL DIALECTS ... 36% in S.G. and 4% in C.G. Of these speakers, 30% in S.G. and 83% in C.G. speak Gujarati also.

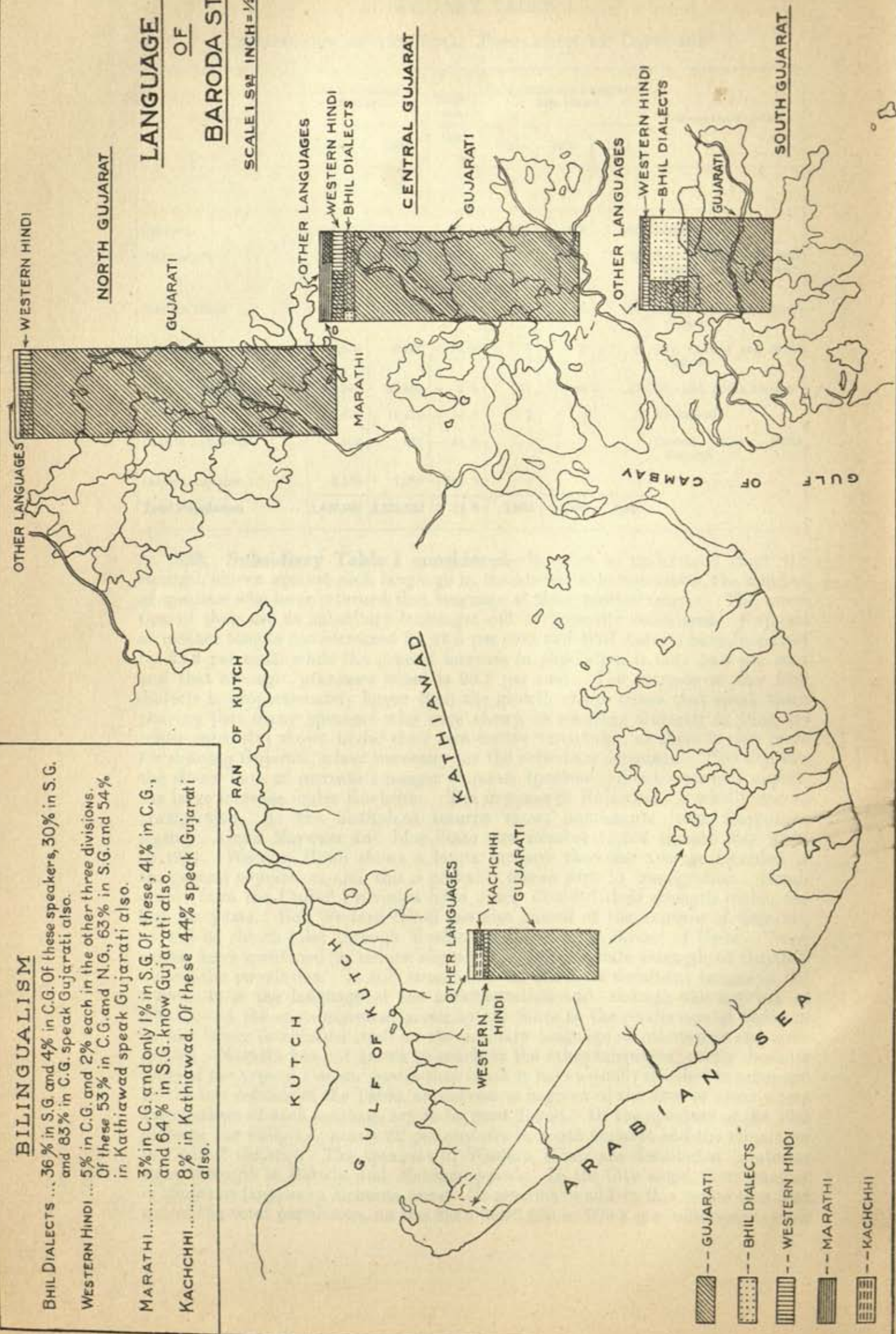
WESTERN HINDI ... 5% in C.G. and 2% each in the other three divisions. Of these 53% in C.G. and N.G., 63% in S.G. and 54% in Kathiawad speak Gujarati also.

MARATHI..... 3% in C.G. and only 1% in S.G. Of these, 41% in C.G., and 64% in S.G. know Gujarati also.

KACHCHHI..... 8% in Kathiawad. Of these 44% speak Gujarati also.

**LANGUAGE MAP
OF
BARODA STATE**

SCALE 1 $\frac{1}{4}$ INCH = $\frac{1}{2}$ MILLION



- GUJARATI
- BHIL DIALECTS
- WESTERN HINDI
- MARATHI
- KACHCHHI

language of India. Only 397 persons speak dialects or languages that are not Indian. The six European languages returned are spoken by 250 persons.

339. Local Distribution of Languages—Distributing the languages by natural division, we find the greatest prevalence of Gujarati in North Gujarat where 97 per cent speak it, and the lowest proportion of Gujarati speakers in South Gujarat with only 60 per cent. Bhil dialects claim 37 per cent in South Gujarat and only 4 per cent in Central Gujarat. They hardly occur elsewhere. Western Hindi is most prevalent in Central Gujarat, particularly in the City. Kachchhi is almost entirely localised in Kathiawad, where 8 per cent speak it. Marathi (with 3 per cent) is mostly concentrated in the City. Hardly one in a hundred speaks it in South Gujarat and Kathiawad. The City shows the greatest linguistic variety; Gujarati is less in evidence there than in any other administrative unit, forming only 57 per cent. Of the other languages, Marathi is the most important there with 23 per cent of the City's population speaking it. Western Hindi (Hindustani) comes next with 17.5 per cent. The following Table gives the proportionate distribution of languages in each natural division reckoned on 10,000 of the population:—

SUBSIDIARY TABLE II

DISTRIBUTION BY LANGUAGE OF THE POPULATION IN EACH DIVISION

NATURAL DIVISION	NUMBER PER 10,000 WHO SPEAK AS MOTHER TONGUE					
	Gujarati	Bhil dialects	Marathi	Western Hindi	Kachchhi	Other Languages
1	2	3	4	5	6	7
Baroda State	8,676	738	146	320	72	48
Central Gujarat including City	8,654	397	344	519	9	77
City	5,656	46	2,260	1,767	22	249
North Gujarat	9,713	0.1	19	226	5	36.9
South Gujarat	6,013	3,651	94	211	8	23
Kathiawad	8,910	2	73	198	787	30

340. Bilingualism: General Results—The general results regarding the return of subsidiary languages will now be set out. Bilingualism is very little evident with Gujarati as mother tongue. Of 10,000 speakers of Gujarati, 9,939 do not profess to use any subsidiary language, 51 profess to know Hindustani, only 6 know Marathi and 4 Kachchhi. But amongst speakers of the Bhil group, 40 per cent speak Gujarati also. Amongst Marathi speakers, 46 per cent claim mastery over Gujarati. Speakers of Bhili and Marathi show varying degrees of proficiency in Gujarati in the different divisions: for instance, while only 30 per cent of Bhili speakers in South Gujarat know Gujarati, as many as 83 per cent or more than four-fifths of such speakers combine Gujarati as well in Central Gujarat. 64 per cent of Marathi speakers in South Gujarat and only 41 per cent in Central Gujarat know Gujarati. As to Western Hindi, while 54 per cent generally of speakers of this language know Gujarati, this ratio rises to 63 per cent in South Gujarat and falls to 53 in Central and North Gujarat. Kachchhi speakers in Kathiawad show only 44 per cent of bilingualism. The accompanying map shows by suitable rectangles the linguistic distribution and the proportion of bilingualism in each division. Subsidiary Table VIII printed at the end of the chapter gives the detailed proportions with regard to the five principal languages, combined with one another, to which reference may be made. A summary table is given below. The five principal languages selected are Gujarati, Marathi, Bhil dialects, Western Hindi and Kachchhi. The speakers of each language (as mother tongue) are proportioned to the total population (*i.e.*, for columns 2, 4, 6 and 8) while those

that combine their mother tongue with a subsidiary tongue are proportioned to the total speakers under each language. The ratios are calculated on a percentage basis :—

SUBSIDIARY TABLE III

PROPORTION OF SPEAKERS UNDER EACH LANGUAGE, WHO COMBINE A SUBSIDIARY

NATURAL DIVISION	GUJARATI		MARATHI		BHIL DIALECTS		WESTERN HINDI		KACHCHHI	
	Number who speak it as mother tongue per cent of total population	Proportion of Gujarati speakers who combine with Western Hindi	Number who speak it as mother tongue per cent of total population	Proportion of Marathi speakers who combine with Gujarati	Number who speak them as vernacular per cent of total population	Proportion of speakers of these, who combine with Gujarati	Number who speak it as mother tongue per cent of total population	Proportion of Western Hindi speakers who combine with Gujarati	Number who speak it as mother tongue per cent of total population	Proportion of Kachchhi speakers who combine with Gujarati
1	2	3	4	5	6	7	8	9	10	11
Baroda State ..	87	0.5	1	46	7	40	3	53	7	46
Central Gujarat .	87	0.6	3	41	4	83	5	51	1	68
Kathiawad ..	89	0.3	0.7	47	..	..	2	54	79	44
North Gujarat ..	97	0.4	0.2	76	..	..	2	53	0.5	47
South Gujarat ..	60	1	1	64	37	30	2	63	1	61

NOTE :—The subsidiary language selected for each mother tongue is the principal one with which it has been found most in combination.

341. Are the Bhil dialects being displaced—The question of the influence of Aryan tongues on the primitive tribes of this country is always of interest. But it is becoming more and more difficult to find out how far the dialects of these tribes are giving way under the influence of schools and Hindu teachers to Gujarati. The case of these tribes in Baroda, however, stands on a different footing from other cognate non-Aryan tribes such as we meet with in Assam or Chhota Nagpur. As regards these latter, it is a question of non-Aryan dialects giving way before the advance of Aryan civilisation. Here in this State, the process represents a much later stage. We do not know what dialects these tribes spoke before the advent of Hindu civilisation. What we do see now is the presence of dialects which are in themselves Aryan in form and even in the bulk of their vocabulary. But these Bhil dialects are a corrupt form of the neighbouring Aryan language influencing them, *e.g.*, Marathi in Khandesh and West and South Songadh, and Gujarati in remaining areas. As in the case of other lower class Hindus, the spread of education tends to approximate their speech to the standard dialect of the upper class, so also will these dialects in time be absorbed by Gujarati and the question how long they will take to do so will depend very much on the progress of education amongst these tribes. In previous censuses, the results as then tabulated gave rise to the belief that Gujarati was fast supplanting these dialects. The number of the primitive tribes returning Gujarati as their mother tongue was estimated at 100,379 in 1911, 112,591 in 1921 and 130,894 in 1931. In 1911, the proportion of tribes speaking Gujarati was 40.6 per cent. In 1921, this rose to 43.6. In the latest census year, the percentage has fallen to 42 which would make it appear that in spite of a genuine Hinduising movement amongst them, the hold of their languages still continues at least as strong on them as before. One other minor reason for the decline in the proportion of Gujarati amongst Bhil tribes is as we have seen in the previous chapter, the falling off in literacy in the age-periods 10-20 amongst the Tribal. But the spread of Gujarati amongst them can be seen from Imperial Table XV—Part B which shows the extent to which languages are combined as principal and subsidiary in the State. In that Table, we find that in addition to those of the tribes who have returned Gujarati as their home language, 71,819 speakers of Bhil dialects (38,552 males and 33,267 females) have claimed Gujarati also as a subsidiary language. It must be observed here that the speakers of Gujarati from amongst primitive tribes can only be estimated, as the language returns are not compiled directly by tribes or races. It is assumed that all speakers of Bhil dialects belong to one or other of these tribes, and the total of speakers of Gujarati amongst them is obtained by deducting the speakers of these dialects and the estimated number of Bhil speakers of Marathi from the total strength of these tribes. There is very little error involved in this method of calculation, as very few of these tribes speak any other tongue of civilisation than Gujarati or Marathi. A proportion of the Bavchas and a few Vasawas and Bhils on the border of Khandesh district

have been absorbed by Marathi, but it is remarkable how some of these tribes—even so completely Hinduised as Chodhras or Bavchas—have clung tenaciously to their dialects. The following Table gives the comparative figures from the Tribe and Language returns which are instructive. Side by side along with the total strength of each tribe, the number professing Hinduism is also indicated to show how far religion has helped Gujarati in establishing itself among these people :—

SUBSIDIARY TABLE IV
COMPARISON OF TRIBE AND LANGUAGE TABLES

NAME OF TRIBE	Name of corresponding tribal dialect	STRENGTH OF TRIBE			Number professing Hinduism	NUMBER SPEAKING TRIBAL DIALECT			Number speaking other languages
		Total	Males	Females		Total	Males	Females	
1	2	3	4	5	6	7	8	9	10
Bavcha ..	Bavchi ..	1,186	573	613	1,186	558	286	272	628
Bhil ..	Bhili ..	54,542	27,789	26,753	53,235	32,827	16,187	16,640	21,715
Chodhra ..	Chodhri ..	38,786	19,952	18,834	29,736	37,746	19,319	18,427	1,040
Dhodia ..	Dhodia ..	26,132	13,268	12,864	25,414	22,210	11,246	10,964	3,922
Gamit ..	Gamtadi ..	59,213	30,239	28,974	33,210	59,209	30,179	29,030	4
Kathodia ..	Kathodi ..	551	279	272	333	428	216	212	123
Kokna ..	Kokni ..	7,952	4,137	3,815	6,449	7,930	4,134	3,796	22
Kolgha ..	Kolghi ..	991	472	519	798	820	411	409	171
Kotwalia ..	Kotwali ..	2,207	1,140	1,067	1,156	2,065	1,091	974	142
Mavchi ..	Mavchi ..	919	510	409	905	924	503	421	..
Nayakda ..	Nayakdi ..	11,802	6,053	5,749	11,662	4,130	2,011	2,119	7,672
Valvi ..	Valvi ..	132	74	58	101	29	12	17	103
Varli ..	Varli ..	368	203	165	187	483	262	221	..
Vasawa ..	Vasawi ..	17,527	8,886	8,641	13,290	11,025	5,570	5,455	6,502

342. Consideration of Subsidiary Table IV—The first point that strikes at once as one studies the above table is that the list does not contain certain tribal names for the reason that these do not possess any tribal dialects at all. Nearly thirty per cent of the total tribal strength do not have any dialect of their own. These tribes are set out in the inset Table, and as it will appear from it, they are the most completely *Hinduised* sections of the Raniparaj, (to use the term now applied to them). They live amongst the upper class Hindus and Parsis and are powerfully influenced by their contact. Next in point of *Hinduisation* are Bavchas, Chodhras, Bhils, Nayakdas, Dhodias, Vasawas, and Koknas. In the margin a table is given comparing the proportion of Hindus amongst each of these tribes with that of persons who have forsaken their tribal dialect. The figures of Hindus are taken from Imperial Table XVIII and are accepted as correct. In the Chapter on Religion the figures of Hindus in this census have been accepted as reliable. If any thing, they rather *underrate* the extent of *Hinduisation* amongst the Raniparaj. The tribes are arranged according to their order of *Hinduisation*. But the proportions of those who have forsaken the tribal dialect do not by any means correspond. Only Nayakdas and to a smaller extent Bavchas and Bhils show that Hinduism does have an effect on their language. The Dhodia figures as to language, as noted in the next paragraph are open to doubt. Their correctness will be discussed there. But in the meanwhile even if we make allowance for the fact that at least 6,000 Dhodias who should have been entered under Gujarati are wrongly included under their tribal

NAME OF TRIBE	Strength in 1931	No. of Hindus
Dhanka ..	3,457	3,457
Dubla ..	12,894	12,811
Tadvi ..	20,817	20,817
Talavia ..	52,565	52,407
Total ..	89,733	89,492

NAME OF TRIBE	Per cent forsaking tribal dialect	Per cent following Hinduism
Bavchas ..	53	100
Bhil ..	40	98
Dhodia ..	15	97
Nayakda ..	65	90
Chodhra ..	3	77
Kokna ..	0.3	81
Vasawa ..	17	76

dialect, the proportion of Gujarati speakers amongst these is only raised from 15 to 38. Thus Hinduism is not such a potent factor in this respect with the bulk of Raniparaj as one would imagine. We find on the other hand the true explanation seems to be this: Hinduism does help, but only where it is reinforced by other circumstances such as status and economic dependence. Dublas and Talavias are generally in the position of great economic dependence—almost reduced to the status of serfs—on their Hindu and Parsi neighbours. Amongst these tribes Gujarati operates with success in weaning away these people from their parent tongues. The same may be said of Nayakdas and Tadvis. Koknas retain their dialect because of their almost entire want of education. On the other hand, the socially conscious sections like the Chodhras, Gamits, Vasawas and Dhodias have in spite of their Hinduism continued their hold on their dialects. Particularly the Chodhras are keenest on retaining their individuality in this respect. Lastly before this table is dismissed from consideration, the discrepancy about Mavchi and Varli has to be mentioned: the speakers of these dialects as returned by the Census are actually found to be larger than the number of Mavchis and Varlis. Obviously there is a mistake somewhere. Some Bavchi figures may have been wrongly returned under Mavchi and Varli may have been similarly confused with Valvi.

343. Variation in Bhil dialects—

DIALECT	1931	1921	1911
Bhili	32,827	26,228	35,111
Chodhri	37,746	30,656	26,852
Dhodia	22,210	19,051	18,051
Gamtadi	59,209	51,587	47,177
Vasawi	11,025	5,358	Included under Bhili

We will now consider the variations in the last three censuses in the five principal dialects. The margin gives the absolute figures for the last three census years. Vasawi is closely related to the Rani Bhili of Songadh and other forest areas in Navsari *prant*. It was not separately compiled in 1911. In 1921, the figures were separately sorted and shown in the Caste and Language Subsidiary Table (p. 298 of 1921 Report)

Dubli has disappeared and the language of Dublas in the Rasti parts of Navsari is undistinguishable from the Gujarati of Koli and such like classes. Gamtadi is closely allied to Chodhri, differing from it however in a few characteristics, namely that the hardening of soft aspirates does not seem to recur and that *l* is not regularly changed to *n*. Dhodia is influenced by the neighbouring Marathi, although its case-suffixes are generally the same as in Gujarati. The relation of Mavchi with Bavchi will form the subject of a separate appendix. In the meantime it will be sufficient to suggest that the figures above given do not indicate any "wild inaccuracy" in the results, such as the late Mr. Sedgwick complained about in the last Bombay Report. He said that "our census figures were a matter of the wildest chance." On the contrary the Baroda Census figures are fairly accurate and dependable. The variations do not show any abnormal jumps and correspond closely enough to the increases recorded from census to census in the strength of each of these tribes. On the whole therefore the strength of these dialects as given above may be taken as fairly correct with the exception of Dhodia. The Dhodia dialect shows an increase of 16.5 per cent, while the Dhodia tribe has grown by 22.4 in the last ten years. But the dialect figures should not show any increase at all. The stronghold of the Dhodias is in Mahuva taluka, which was also the storm-centre of the *Mata* movement, which meant not only the displacement of aboriginal deities but also the supplanting of their dialect by Gujarati which established itself through *bhajans*, religious services and constant propaganda. It is estimated by a careful local authority that a third of the Mahuva Dhodias (who number 18,000) have given up their dialect for Gujarati which means that the above total of 22,210 shown against Dhodia should be reduced by about 6,000. This estimate I am prepared to accept as Dhodias are the most advanced educationally of these tribes. Large numbers have emigrated to Gandevi, Kamrej and Navsari where they only speak Gujarati. Thus the final estimate of the Gujarati speaking Raniparaj comes to 137,000, or nearly 44 per cent.

344. Languages spoken by Muslims—

We will now see how far the new arrangements in the census schedule have affected the language returns for Musalmans. By a special compilation the marginal table has been prepared. A similar table less detailed was prepared in 1921 also, and comparative figures are given side by side. It will be seen therefrom that Muslim speakers of some

form of Western Hindi (Hindustani, Urdu or "Musalmāni") have increased since 1921 by 21.2 per cent; the Kachchhi speakers have increased by nearly 51 per cent, and Muslims acknowledging Gujarati as their mother tongue have increased by hardly 4 per cent. The general Muslim increase being 12.5 per cent, the true figure for 1931 (assuming that the 1921 return was correct) should have been 113,500 for Gujarati, 62,550 for Western Hindi and 7,763 for Kachchhi. But Kachchhi figures for 1921 are open to suspicion that many speakers of it (Hindu and Mahomedan) were returned under Gujarati. In 1931, with a separate column for subsidiary languages, a truer return for Kachchhi has been obtained.

In 1911, the number of Kachchhi speakers was 15,268. In 1921, the figures fell by 25 per cent to 11,439, and the decline was explained by "progressive Gujaraticisation" of Luhanas and Bhatias, but the figures for 1931 do not bear this out. Memons and Khojas together number 11,138. The bulk of these especially those residing in Amreli and Okha *prants*, speak Kachchhi and the number of Muslim speakers returning Kachchhi, which is 10,413, may be therefore accepted as correct. Our above estimate of 7,762 in respect of Kachchhi falls short of the truth by 2,650; and the above estimate of Gujarati (113,500) should be diminished by 2,650 to arrive at the truth. The margin gives the corrected figures for Muslims in the three languages as compared with the census return. As to the figure of 62,550 (being the estimated number of Muslim speakers of Western Hindi), it is to be remembered that only the Musalmāns with foreign strain and such other sections amongst the converts who have long been assimilated with these elements speak Hindustani in their homes. The Afghans, Balochis, Makranis and Arabs after a time adopt Hindustani and only a small proportion of these retain acquaintance with their original vernaculars. The foreign strain element was estimated to number 56,993 in 1921 (*vide* paras 381-2 of the 1921 Report). These elements now number 60,391; there are besides local converts assimilated to them, so that, taking both together, the above estimate of 62,550 is nearer the truth than the census figure; so nearly 5,000 Musalmāns have been wrongly entered under Hindustani while their proper language is Gujarati. The *Muslimising* tendency is active enough, but it cannot be said to have succeeded in obliterating Gujarati from its place in the average Muslim home in the State as its natural and normal vernacular. The non-Hindustani speaking foreign elements amongst Muslims number nearly two thousand, of whom less than a third speak their mother tongue.

LANGUAGE	Number of Muslim speakers	
	1931	1921
Gujarati	102,638	98,709
Bhil dialects	6	..
Western Hindi	67,383	55,588
Kachchhi	10,413	6,900
Marathi	100	80
Rajasthani	277	143
Bengali	95	..
Burmese	12	..
Punjabi, Lahnda, Sindhi, etc. ..	1,079	..
Dravidian languages	28	..
Gypsy	6	..
Kashmiri	3	..
Naipali	1	..
European languages	17	..
Arabic	64	..
Balochi, Pashto and Persian ..	495	..
Turkish	6	..
African languages	7	..

Corrected estimate of Muslim speakers in				Census Figures	Variation
Gujarati	..	..	110,850	102,638	8,212
Western Hindi	..	..	62,550	67,383	4,833
Kachchhi	..	..	10,413	10,413	..

§ 2. CORRELATION OF LANGUAGE AND CASTE RETURNS

345. Caste and Language Tables Correlated—A fairly effective measure with which to gauge the accuracy of the language returns is to correlate them with the Caste Table. Under each language, the census figure can be compared and tested with the estimate of speakers from castes and tribes that are known or expected to speak it. The following Table has been prepared on the basis of actual facts. Of course certain assumptions have to be provisionally made, as for instance all forest tribes are assumed to speak their own dialects, all Cutchi Memons and Khojas and all Kathiawadi Kharwas, Bhatias and Luhanas are taken to speak Kachchhi, and all known Deccani groups are believed to be Marathi speaking. Similarly all non-Muslim speaking Rajasthani are assumed to be Hindus. Such of the Bavchas, Koknas and Varlis as do not speak the tribal dialects are assumed to speak Marathi.

SUBSIDIARY TABLE V

LANGUAGE RETURNS CORRELATED WITH THE CASTE FIGURES

LANGUAGE	Actual number returned in Census as speaking the language	Castes, Tribes, and Races supposed to speak the language	Total of estimated speakers	Excess of Census figures over estimated	Excess of estimated figures over the Census
1	2	3	4	5	6
Gujarati	2,119,551	A—Brahmanic Hindus (2,149,200) —Less (i) Deccani Hindu Castes (34,942), (ii) Raniparaj Hindus (267,161), (iii) Hindus speaking Western Hindi estimated (10,600), (iv) Hindu speakers of Rajasthani (6,969), (v) Castes speaking Kachchhi (9,907); B—Indian Christian less Goans and Feringhis (7,064–196=6,868); C—Parsis (7,127); D—Gujarati speaking Musalmans—corrected figure as above (110,850); E—Jains (48,408)	1,992,874	126,677	..
Marathi with dialects ..	35,841	Deccani castes as above estimated (34,942); Goans and Feringhis (196); Such of Bavchas, Kohnas and Varlis as speak Marathi (773)	35,911	..	70
Western Hindi ..	78,188	Hindustani speaking Hindus (10,600), Muslims with foreign strain and other allied Muslims (62,550)	73,150	5,038	..
Bhil dialects	180,384	Forest Tribes (312,051) (Hindu 267,161, Tribal 44,890) less Marathi speakers (773)	311,278	..	130,894
Kachchhi	17,679	Khoja and Memon residing in Kathiawad (7,766), Bhadela (1,908); Okha Bharwad, Sathwana and Luhana and Kathiawadi Kharwa, Bhatia and Khatri (7,208)	16,882	797	..
Sindhi	934	Sindhi (4,160)	4,160	..	3,226
Pashto, Balochi, Persian, Arabic	621	Baloch, (1,011), Makranis (639), Afghan (15), Arab (274)	1,939	..	1,318
English	201	Europeans and Anglo-Indians	198	3	..
Remaining languages ..	9,608	Remaining population	6,615	2,993	..
Total Population	2,443,007	Total Speakers	2,443,007	135,508	135,508

346. **Consideration of Subsidiary Table V**—The above table is as pointed out already based on assumptions some of which are no longer true. Thus it is no longer true that forest tribes stick to their dialects. Nearly 44 per cent of these tribes now have given up their tongue for Gujarati. Subsidiary Table V can only therefore be accepted as provisional. We shall take each principal language in turn and see how far the estimate falls short of the truth and how far the census return can be accepted as correct.

(a) **Gujarati**—Taking Gujarati, we must at the outset increase the estimate for Gujarati by the number of those of the Raniparaj (forest tribes) who speak it as their home tongue. Our final estimate of these is 137,000. Our estimate of Gujarati speakers is therefore raised to 2,129,874 or 2.13 millions in round numbers. To these Musalmans contribute 110,850. In the Census Report of 1921, an elaborate estimate was made of Muslim castes that usually speak Gujarati. Some are wholly Gujarati speaking, others are in part so. In the margin are collected certain chief castes and races amongst the Muslims who speak Gujarati and the extent to which that language prevails is also indicated. Shaikhs and Pathans, though properly foreign elements, are apt to have their strength diluted by *parvenu* accretions from Neo-Muslims. That is why a certain proportion of these elements amongst Pathans and Shaikhs has still retained Gujarati.

Again long domicile in Gujarat has resulted in imposing Gujarati even on those who are of purer extraction. Maleks who among indigenous Musalmans are the most assimilated to the foreign elements are divided about Gujarati—those in North Gujarat speak it, while in South Gujarat they prefer Urdu, and in other places the two languages have an equal strength. Certain other Muslim sections like Behlims, Kasais, Poladis, etc., have always spoken Hindustani; while the trading communities like Vohra, Memon and Khoja have always preferred Gujarati or Kachchhi. Pinjaras and Tais have similarly preferred Gujarati; so also have typically agriculturist communities who have come in contact with the Patidar, like the Momna, Molesalam and Vohra (peasant section). The influence of education has however developed a communal sense, quickening the religious needs of all sections of Gujarat Muslims and they have taken to learning Urdu of a fashion, particularly because it is the storehouse of their religious literature and partly also because it is good form to learn it.

NAME OF CASTE	Percentage of those understood to speak		
	Western Hindi	Gujarati	Kachchhi
Shaikh	70	30	..
Pathan	70	30	..
Malek	45	55	..
Memon .. ..	..	64	36
Vohra	2	98	..
Pinjara .. ..	..	100	..
Momna .. ..	..	100	..
Molesalam .. ..	..	100	..
Khoja .. ..	..	9	91
Ghanchi .. ..	..	100	..

(b) *Western Hindi and Eastern Hindi*—Turning to other languages, we find that the estimate regarding Western Hindi falls short of the census total by over 5,000. We have estimated already while dealing with the figures of language amongst the Muslims, that nearly 5,000 Muslim speakers of Gujarati were wrongly (and perhaps wilfully) entered under Hindustani. Even after this deduction, the estimate as given in the Table has to be further reduced owing to the following consideration. Eastern Hindi has only 3 representatives and Bihari none, although immigrants from the eastern districts of the United Provinces and the Bihar districts number no less than 2,689, showing that many true speakers of Bihari and Awadhi were wrongly returned under Hindustani. It was made clear in the instructions that Hindustani was a dialect of Western Hindi, and that Awadhi was the representative dialect of Eastern Hindi. The terms “Western” and “Eastern Hindi” were purposely avoided, as they conveyed very little meaning to the average enumerator and emphasis was laid on Hindustani and Awadhi as representing their respective groups. Māgahi was the representative dialect of Bihar. The estimate of Western Hindi should be therefore reduced by at least 1,500.

(c) *Kachchhi and Sindhi*—The Kachchhi estimate is about 800 less than the census figure, but the census total is right, as the estimate does not include many Sindhis of Okha, who speak Kachchhi. Under Sindhi, there is a comparatively large discrepancy but this is explained by the fact that about a quarter speak Kachchhi and the bulk of those that do not speak either Sindhi or Kachchhi have been returned under Hindustani. Sindhi Musalmans, except in Okha, generally take to Hindustani, after some stay in Gujarat.

(d) *Marathi*—In this case, the estimate almost exactly tallies with the census total. The slight excess is due to the fact that Goans of good families returned Portuguese as their language. For preparing their estimate the following Deccani castes and tribes were selected—

Bhandari	Yajurvedi	Komti
Brahman :—	Dhimar	Mahar
Deshastha	Dhangar	Maratha Kshatriya and
Gaud Saraswat (Shen-	Ghadsi	Kunbi
vi)	Gurav	Prabhu
Karhada	Holar	Shimpi
Konkanstha	Kasar	Sonar
Devrukha	Kokni Kunbi	Vidur

(e) *Other Languages*—The figures of English alone of the remaining languages have been correlated with the race returns. But some of the other languages may be briefly dealt with. Speakers of Bengali numbered 193 of whom 95 were Muslims. Immigrants from Bengal number 393, but as these include 133 with Calcutta as birthplace, it is probable that the figure of Bengali speakers is right. English speakers include three Indians (two Muslim females). The Dutch speakers were all Muslims being immigrants from South Africa.

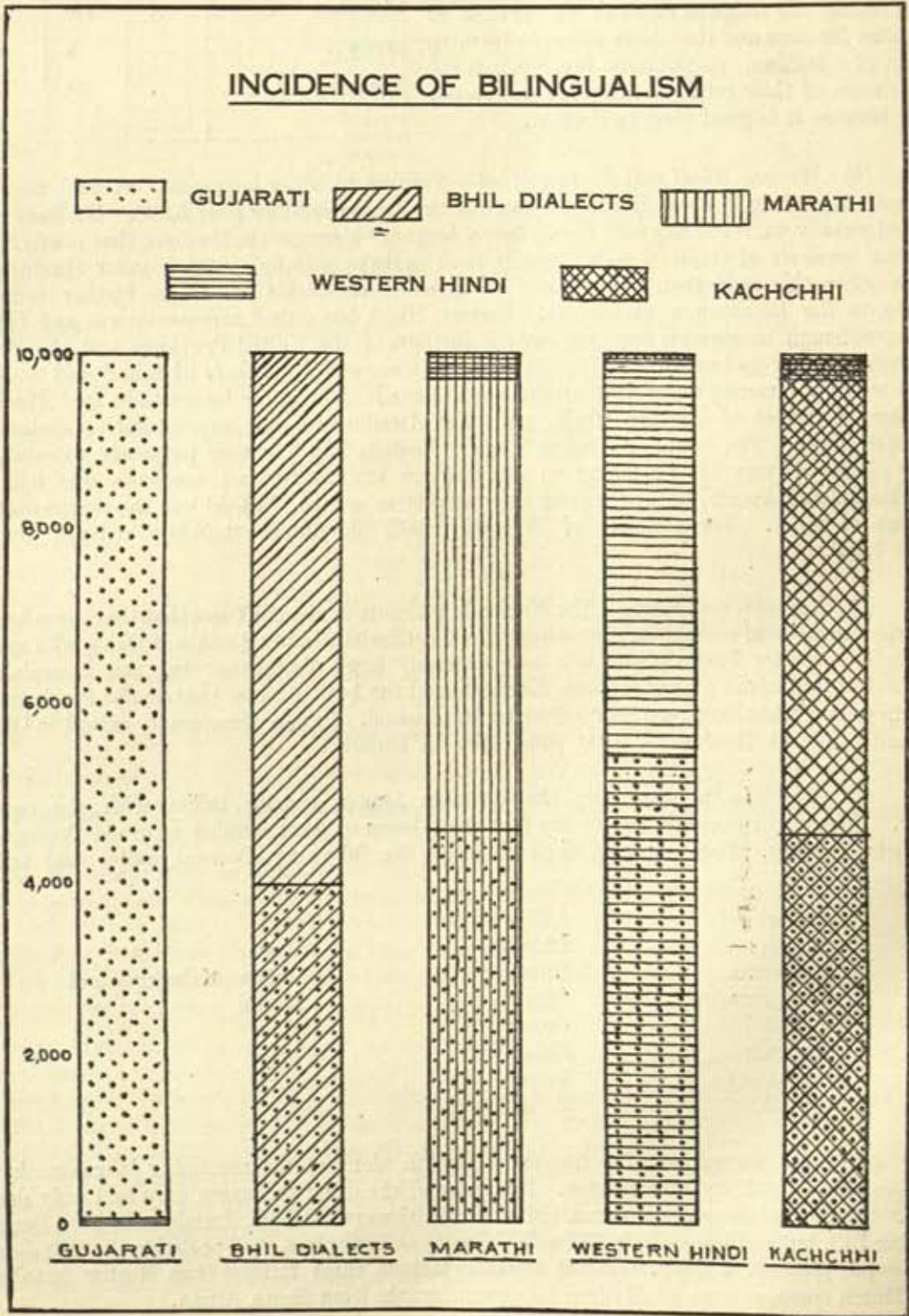
LANGUAGE	Corrected estimate	Census return
Gujarati	2,129,900	2,119,551
Western Hindi ..	71,650	78,188
Marathi	35,841	35,841
Bhil dialects ..	175,000	180,384
Kachchhi	17,679	17,679
Eastern Hindi and Bihari	1,500	3
Remaining Languages	11,437	11,361
Total	2,443,007	2,443,007

(f) *Finally adjusted figures*—We now arrive at the corrected return of the principal languages. These figures are compared with the census return and shown in the margin. - The largest adjustments are required as will be seen in Western and Eastern Hindi, the distinction between which, in spite of injunctions solemnly conveyed by the Linguistic Survey, is lightly ignored by the census authorities in the United Provinces and Bihar. But this distinction has to be insisted on to get at the true

prevalence of Hindustani the figures of which are unduly inflated in the census returns.

§ 3. PREVALENCE OF BILINGUALISM

347. Bilingualism—The question of bilingualism has been already touched upon in para 340 above and also while discussing the languages returned by the Forest Tribes. In the Census Schedule, all sorts of claims were allowed to be made but while compiling for Imperial Table XV—Parts B and C—only five languages.



Gujarati, the Bhil dialects, Western Hindi (Hindustani), Kachchhi (a dialect of Sindhi, which for its local importance was tabulated separately) and Marathi,—were taken into account, and as they together are spoken by 99.5 per cent of the State, these combinations present as adequate a view of bilingualism as can be wished for. It is necessary to point out however that while Bhil dialects were shown as the vernacular of 180,384 persons, not a single instance was found of these dialects being returned as subsidiary. But this is not the case. There are not infrequent instances of Gujarati speakers—timber contractors, teachers, mission workers and the like—who use the Bhil tongues in the course of their business in the forest tracts but perhaps they thought it beneath their dignity to disclose this fact. What is more curious still that not one of the 131,000* of these tribes who have returned Gujarati as their home tongue has cared to state any of these dialects as their subsidiary medium. With this exception, these other four languages were found in combination as subsidiary, as the following Table will show. A diagram to illustrate the main combinations is also given to facilitate the study of figures :—

SUBSIDIARY TABLE VI
INCIDENCE OF BILINGUALISM

GROUP OF LANGUAGES	Persons	Males	Females	Incidence of bilingualism per 10,000 speakers of each mother tongue	Number of female subsidiary speakers per 1,000 male
1	2	3	4	5	6
<i>A—Gujarati as mother tongue with following as subsidiary</i>	<i>2,119,551</i>	<i>1,088,238</i>	<i>1,031,313</i>	<i>10,000</i>	<i>....</i>
i. Marathi	1,169	893	276	5.5	391
ii. Western Hindi	10,758	7,916	2,842	51	351
iii. Kachchhi	911	496	415	4	837
Total Subsidiary	12,838	9,305	3,533	60.5	380
<i>B—Bhil dialects as mother tongue with following as subsidiary</i>	<i>180,384</i>	<i>91,427</i>	<i>88,957</i>	<i>10,000</i>	<i>....</i>
i. Gujarati	71,819	38,552	33,267	3,981	863
ii. Marathi	88	56	32	5	571
iii. Western Hindi	3	2	1	....	500
Total Subsidiary	71,910	38,610	33,300	3,986	862
<i>C—Marathi as mother tongue with following as subsidiary</i>	<i>35,532</i>	<i>19,086</i>	<i>16,446</i>	<i>10,000</i>	<i>....</i>
i. Gujarati	16,139	9,867	6,272	4,565	636
ii. Western Hindi	920	654	266	260	407
iii. Kachchhi	3	2	1	1	500
Total Subsidiary	17,062	10,523	6,539	4,826	621
<i>D—Western Hindi as mother tongue with following as subsidiary</i>	<i>78,188</i>	<i>42,684</i>	<i>35,504</i>	<i>10,000</i>	<i>....</i>
i. Gujarati	41,751	23,999	17,752	5,340	740
ii. Marathi	217	152	65	28	428
iii. Kachchhi	60	3	57	8	19,000
Total Subsidiary	42,028	24,154	17,874	5,376	740
<i>E—Kachchhi as mother tongue with following as subsidiary</i>	<i>17,679</i>	<i>8,907</i>	<i>8,772</i>	<i>10,000</i>	<i>....</i>
i. Gujarati	8,052	4,417	3,635	4,555	823
ii. Marathi	3	2	1	2	500
iii. Western Hindi	463	313	150	262	479
Total Subsidiary	8,518	4,732	3,786	4,819	800

* Nearly 90,000 of these however have no dialects of their own, it must be remembered, e.g. Dublas, Talavias and Tadvis.

348. Basis of Subsidiary Table VI—The reader will notice that the total of subsidiary speakers given under each mother tongue in columns 2, 3, and 4 of the above Table differs by 1,235 from the totals given in corresponding columns of Imperial Table XV-B. That Table was prepared on the following basis:—Where a person returned only one subsidiary language there was of course no difficulty. But where a person returned more than one subsidiary language, it happened that a language was returned by some as a first choice, and by other as a second subsidiary. Some Gujarati speakers may have for instance returned Marathi as their first choice and Western Hindi as their second. These cases of Western Hindi as second choice were added in the Imperial Table to the figures of that language returned as first choice, in order to show the total incidence of that language. This was done with other languages also. These cases of tri-or-polylingualism have however been omitted from the above subsidiary table as otherwise the true incidence of bilingualism cannot be found. Again, figures of second subsidiaries are no test whether such secondary preferences are really an indication of the true extent of the vogue of these languages. Besides Subsidiary Table VIII on which the above is based is prepared on the basis of 10,000 speakers of a mother tongue, to which figure, the numbers of those who speak it only and no other language, and of those others who combine it with each of the subsidiaries are to be separately proportioned. This cannot be done if the reduplicated figures are not omitted. The total number of polylinguists in the State, *out of those that speak these five principal languages*, is 1,235 (900 males and 335 females). A small table is given below in which the polylinguists' second preferences in respect of subsidiary languages are compiled per mother tongue. A revised Table showing only first preferences per administrative division is prepared and subjoined at the end of this chapter as Subsidiary Table IX:—

SUBSIDIARY TABLE VI-A
FIGURES OF SECOND PREFERENCES

MOTHER TONGUE	PERSONS RETURNING FOLLOWING AS SECOND SUBSIDIARY LANGUAGES							
	Gujarati		Marathi		Western Hindi		Kachchhi	
	Males	Females	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8	9
Gujarati .. .. .	..	..	79	7	80	11	9	1
Marathi	92	3	..	..	127	33	..	..
Western Hindi	452	229	48	..	..	..	2	..
Kachchhi	5	6	6	..	..	45	..	..

In the above Table, the figures given are in *addition* to the numbers shown in Subsidiary Table VI. With Gujarati speakers, Hindustani and Marathi appear to supplement each other as second preferences, just as with Hindustani speakers, Gujarati and Marathi alternate in this respect. With Kachchhi as mother tongue, Hindustani and Gujarati are the rival subsidiaries that vie for the first place. Kachchhi as a second preference is hardly returned at all. These second preferences are mostly confined to the City of Baroda whose cosmopolitan population favours such polyglot combinations.

349. Consideration of Subsidiary Table VI—As might be expected, the Gujaratis living in their own home do not need to use any other language but their own. They show, therefore, the lowest incidence of bilingualism. Only one in about 165 Gujarati speakers owns to using other languages as subsidiary. But in all other languages, the proportion of bilingualism is at least as high as 40 per cent: the greatest incidence occurring in Western Hindi (54 per cent), then Marathi (48.3 per cent) followed by Kachchhi (48.2 per cent) and the Bhil group (39.9 per cent). Gujarati seems to be the hottest favourite amongst subsidiary languages—forming 39.8 per cent of Bhili speakers, 45.6 with Marathi speakers; 53 per cent with Hindustani speakers and 45.6 per cent with Kachchhi as mother tongue.

Western Hindi (Hindustani) forms a bad second, being only 5 per mille with Gujaratis, 26 per mille with Deccanis (speakers of Marathi) and 26 per mille with Kachchhi speakers. It is hardly known amongst the Raniparaj. The sex ratios are also instructive. In their own home, the women of Gujarat hardly need to know any other language,—as only one woman out of about 300 claims bilingualism; but amongst people speaking Bhil dialects or Kachchhi, there are nearly as many women as men, who claim knowledge of other languages; as regards Western Hindi and Marathi, the sex proportion is nearly 7 to 10, as the social needs make it inevitable that immigrants of both sexes speaking these languages should have a familiarity with Gujarati, the language of the State. Over half of the speakers of Western Hindi (of either sex) know Gujarati. More than half of the men, and well over a third of the women, speaking Marathi, boast of Gujarati as their subsidiary.

350. Area of Bilingualism—The following Table has been also prepared from Imperial Table XV—Part B. It shows the particular division where bilingualism in each group of languages is most evident. The proportions are calculated per 1,000 speakers of subsidiary languages under each mother tongue :—

SUBSIDIARY TABLE VII
AREA OF BILINGUALISM

GROUP OF LANGUAGES	AREA OF BILINGUALISM					
	State	City	Baroda	Kathiawad	Mehsana	Navsari
1	2	3	4	5	6	7
A. Gujarati with other subsidiaries ..	1,000	211	194	118	304	173
B. Bhil group with other subsidiaries ..	1,000	4	374	..	..	622
C. Marathi with other subsidiaries ..	1,000	632	92	45	86	145
D. Hindustani with other subsidiaries ..	1,000	155	373	53	289	130
E. Kachchhi with other subsidiaries ..	1,000	22	44	875	33	26

351. Consideration of Subsidiary Table VII—The above variations are largely conditioned by the prevalence of the main language which forms each group. Where the mother tongue has the widest prevalence, it shows the largest proportion of bilingualism. Thus, the Bhil group is confined to South Gujarat (Semi-Rasti and Rani areas) and to Central Gujarat (parts of Kahnām and Chorashi). Kachchhi is mostly to be found in Kathiawad. That is why bilingualism in regard to these languages is almost entirely confined to these areas. Similarly as 72 per cent of Marathi speakers are concentrated in the City, the largest incidence of bilingualism in respect of that language occurs there. Gujarati is the most predominant in North Gujarat, where also, we find the extent of its combination with other languages to be relatively the largest. In regard to Hindustani however, other considerations have to be taken into account. The margin compares the distribution of Hindustani with the extent of bilingualism in respect of that language in the different divisions. In the City it is widely prevalent having 26 per cent of the total number of speakers. But the bilingual ratio is small, showing that in the City there is not the same need of using Gujarati for Hindustani speakers as in rural areas where Muslims and Hindus live side by side and come into greater intercourse with one another.

HINDUSTANI		
DIVISION	Proportion according to distribution	Proportion according to bilingualism
City	26	16
Central Gujarat ..	29	37
Kathiawad	5	5
North Gujarat ..	30	29
South Gujarat ..	10	13
State	100	100

Another reason for the lowness of the ratio of bilingualism in respect of Hindustani is that amongst educated sections, English takes the place of other languages as a subsidiary medium. Possibly a third reason may be found in propaganda. The vocal sections amongst the City Muslims rather worked in the direction of not acknowledging that Gujarati had an influence, even as a subsidiary, in their homes.

352. Spread of Languages—There is another way in which the figures relating to bilingualism may be studied and which may be of interest. There are

2.12 million speakers who own to Gujarati as their mother tongue. But 137,761 others or 44 per cent of the remainder (of those who speak the five chief languages) profess to use it habitually in addition to their mother tongue in the course of their ordinary avocations. Thus, the proportion of Gujarati rises from 868 per mille to 924. In the margin a small table is given showing the total spread of each language spoken both as a mother tongue and as a subsidiary.

LANGUAGE	Speakers in nearest thousands	Percentage of remainder who use it as subsidiary to total of remainder
Gujarati— as Principal	2,120	
as Subsidiary	138	44.3
Marathi— as Principal	35	
as Subsidiary	1.5	.09
Western Hindi— as Principal	78	
as Subsidiary	12	.5
Kachchhi— as Principal	18	
as Subsidiary	1	.04
Bhil— as Principal	180	
as Subsidiary .. .. .	.....	....
Total	2,431	....

It is interesting to observe that those, whose mother tongue is not Hindustani, but who understand and use it as a subsidiary medium, are only a little more than a third of the number of literates in English in the State. But this question of the vogue of Hindustani (at least through its scripts Hindi and Urdu) has been already dealt with in the previous chapter.

353. Polylingualism—

In connection with subsidiary languages, a reference must now be made to the collection of data regarding polylingualism, contained in Imperial Table XV—Part C. The main details of that table

may be here summarised. Out of the total population, 2,431,334 speak the five main languages of the State. Of these 2,277,743 or over 93 per cent speak only one language (*i.e.* their mother tongue), 152,356 or 6 per cent speak two languages (their mother tongue and one subsidiary), and only 1,235 persons speak three or more languages. In linguistic proficiency one would have imagined that the City should have taken the lead with nearly 19 per cent of its inhabitants speaking two or more languages. But Okhamandal with its almost general combination of Kachchhi with Gujarati and *vice versa*, just beats it with a little over 20 per cent of linguists. Navsari (13.6 per cent) comes third, with Gujarati and the Bhil group interacting on one another. Taking by languages polylingualism is least evident with Gujarati as mother tongue—there being only 187 out of 2.1 million Gujarati speakers who profess to know two or more languages in addition. But 731 speakers out of 78 thousand odd who claim Hindustani as their vernacular are polylinguists: and 255 Deccanis have this proficiency. Bhili does not show any trace of polylingualism whatsoever. As mentioned above, there are only 1,235 polylinguists and

FAMILY OF LANGUAGES	Strength in 1931	Proportion per ten mille of total population
I—Indo-European	2,441,943	9,996
A—Indian	2,441,154	9,992
i. Central	2,386,327	9,768
ii. Pahari	54,827	224
iii. Mediate		
iv. Southern		
v. Eastern		
vi. North-West		
B—Southern Asiatic (Sinhalese)	1	4
C—Eranian	535	
D—Dardic	3	
E—European	250	
II—Dravidian	784	3
III—Tibeto Burman	13	1
IV—Mongolian	46	
V—Gypsy	121	
VI—Semitic	91	
VII—African	9	

917 of these or nearly three-fourths are found in the City. The census instructions were careful to point out that only proficiency in three, and not more languages, need be shown. The object was to prevent humourists, pedants or such like from making fanciful claims to an encyclopædic acquaintance with dialects.

§ 4. SOME OBSERVATIONS ON GRIERSON CLASSIFICATION

354. Classification of Languages—In Imperial Table XV, the classification adopted follows the main figures. The

closely the Grierson model. The margin gives

Indo-Aryan family has absolute predominance over other languages. Only 4 persons out of 10,000 in the population speak tongues not belonging to the Indo-European family. The Indian branch of that family of languages claims 9,992 out of ten mille; and the Central Group in which Gujarati is classed is the largest of the Indian languages. But if Gujarati, Bhil dialects and Rajasthani are separated from the Central Group and classed with the Mediate (Eastern Hindi), as recommended in the following paragraphs, then a different set of proportions is arrived at. The Central Group falls from 9,768 to only 324. The Mediate group rises from nil to 9,444.

355. Gipsy Languages: Pendhari and Odki—These two languages occur for the first time in the Baroda Census. A brief account of each is here given. Pendhari, as the Linguistic Survey states, is "the language of a tribe of no common race, and of no common language, represented by the 'Pindarees' of Indian history. These were plundering bands of freebooters, who welcomed to their ranks outlaws and broken men of all parts of India—Afghans, Marathas, Jats and so forth, and who were finally broken up by the Marquis of Hastings in 1817. At the present day they are represented by groups of people scattered over Central India, the Bombay Presidency and elsewhere. They have generally adopted the languages of their respective surroundings, but in parts of Bombay, they still have a home-language, which is called by the name of the tribe. As may be expected from the people's origin, this is a jargon—a mixture of rough Dakhini Hindustani, Marathi and Rajasthani." Pendhari is derived from "pendha," a sheaf, and the tribe originally must have derived its name from grass cutting. Odki is the dialect returned by Ods, a wandering tribe found all over India (*Vide* Appendix entitled "A Caste Glossary" at the end of the Chapter on Race, Tribe or Caste). The strength of the tribe is 2,028, while the number of Odki speakers is only 115. The name is derived probably from Telugu, and the majority of the Ods are found in South India. These speak a *patois* of Telugu, but those found in Gujarat and Cutch speak a form of dialect in which Gujarati and Marathi are the strongest Aryan influences. As a mixed form of speech the alien elements found in it are an indication of the wanderings of the tribe. "The Marathi element is particularly strong"—to quote from the Survey. "Thus the neuter of strong bases ends in \bar{e} or $\bar{ē}$ as in Marāthī; compare *talē*, tank; *kēle*, it was said. Strong masculine bases end in \bar{a} , plural $\bar{ē}$; thus, *ghōrā*, horse; *ghōrē*, horses. Note also the oblique bases in \bar{a} of weak and \bar{e} of strong masculine bases, and in \bar{i} of feminine bases; thus, *dēsā-mā*, in a, country; *lerkē-chē*, of a man; *malkatī-chā*, of the property. The termination *chā*, *chī*, *chē* of the genitive is important. The same is the case with the termination $\bar{lā}$ of the past tense of verbs; thus, *gēlā*, went; *mārlā*, struck. Compare further the imperative plural in \bar{a} ; thus, *āvā*, come; the infinitives in $\bar{ū}$ and $\bar{nā}$; thus, *kehū*, to say; *mārne*, to strike, and so forth. Such forms are found in all the specimens, and they gain in importance when we remember that they all hail from districts where Marathi is not a home tongue of the population. Several of the usual terminations in Odki do not agree with Marathi but with Gujarati and Rajasthani. Such are the suffixes \bar{e} of the agent and $\bar{nē}$ of the dative, both of which are also found in Malvi; the ablative in $\bar{tī}$; the locative in $\bar{mā}$; forms such as *hē*, I (compare Gujarātī, Mālvi and Mārwarī *hū*); *chhī*, *sē* and *hē*, is; the conjunctive participle is *tīnē* (Gujarātī *īnē*) and so forth. The Gujarati element is strongest in Gujarati districts such as the Panch Mahals and Ahmedabad, but is also apparent in other districts. Features borrowed from languages other than Marathi and Gujarati have more of a local character. The locative termination *māy*, which is prevalent in Mārwarī is, however, common in the Ahmedabad district, where Gujarati is the chief language. Of such local borrowings I may mention the common cerebralisation of a *d* in Cutch and in the districts of Hyderabad, Thar and Parkar, Shikarpur and Muzaffargarh; the Panjabi dative termination $\bar{nū}$ in the same districts with the exception of Cutch, and other sporadic instances of borrowings from the local dialects."

356. Some Notes on Classification—A few observations may here be permitted on the Grierson classification. The Indian Census, ever since the great work of Risley and Sir George Grierson appeared, has been dominated in its considerations of Race and Language by the weight of these formidable names. Occasionally a flippant Provincial Census Superintendent has dared to set aside the fine distinctions between Eastern and Western Hindi, and Bihari, and lump all speakers of these dialects under the general name of Hindustani, but generally the standard classification has been followed faithfully. In the Census Report of 1921, I suggested a departure from the classification scheme, by separating Gujarati and Rajasthani from the Central group and classing them in the Mediate group with Eastern Hindi. I ventured to do this because I thought that the orthodox classification was based on a view of Indian history and of Aryan linguistic developments which was not supported by facts. Briefly, it was suggested that the Grierson scheme was based on the idea that it was the language of the Midland "with its armies and its settlers" which pressed on the languages

of the Outer Band, drove them further outward and produced a group of intermediate languages and that this idea had little support of historical evidence behind it. In his Introductory Volume (page 175 footnote) he refers to my contentions and while disagreeing with them suggests that the matter of history is not of much importance "as a question of pure philology." I submit that it is. In fact Dr. Grierson is himself so strongly influenced by his reading of Indo-Aryan race movements that his interpretation of Eastern Hindi and its relations with Western Hindi on one side and the Eastern group on the other is governed almost entirely by it. For instance his explanation of the conjugation of the verb may be mentioned. In Bengali and Bihari, he says the past tense of transitive verbs in the active voice is merely a reminiscence of an old passive construction with an enclitic suffix which has now lost its pronominal character and that in the Eastern Hindi, it is, to quote his picturesque phrase, "caught in the act of forgetting it," while in the Western Hindi, the full form of agential construction is in existence. Now such a process can only be based on his theory of the eastward pressure of the midland dialect, while the reality seems to be quite the reverse. If the passive construction was the original form of the Bengali past tense, surely its memory must have been preserved somehow in the Eastern Prakrit and in the later Magadhi or the Gaudi Apabhramsa. Nowhere is there the least evidence, to my knowledge of such a form. The Bengali past tense, in its present active form with the subject in the nominative case, is as old as it can be; so is the case with Bihari. In Awadhi, as Dr. Grierson himself shows, there is an Eastern as well as a Western form, the former using the nominative, e.g., *Umaris*, and the latter the agential, e.g., *Ui maris*. Thus the actual facts of linguistic development show rather an outlandic system of languages pressing on the midland and being influenced by it. In Gujarati, it is true that the agential construction is in general use with transitive verbs, but the nominative construction with *lavavun* (to bring), *japvun* (to worship), *jamvun* (to eat), *tavvun* (to swim), *shikhvun* (to learn), etc., is not infrequently used, and it is the older form of the two. In Bhalan's *Kadambari* (circa xv century) an intermediate form is found, with the subject in the agential, the object in the nominative and the verbal participle in neuter, e.g., "*tene hun dithu nahi*"—an approach to a true passive construction. The evolution seems therefore to be rather from the normal active construction, which is characteristic of the Outlandic group, through an intermediate passive stage with the object in the nominative case to a gradual return to the active construction, with the object in the accusative, although the agential is still retained. In Marathi on the other hand, both the alternatives of agential and nominative constructions are found where pronouns are subjects—the former older in time and the latter being the modern usage. Here is an instance of an older Midland influence, perhaps not unconnected with the tradition of Rama's stay in Panchavati, gradually giving way to the Outer band. The historical evidence is therefore important. Sir George Grierson in order to prove the strength of the Midland drive towards the Outlandic band is forced to have recourse to tradition about Panchalas and Kurus, but within historical times he can only mention isolated traditions about Kachhwahas and Rathahurs. On the other hand, ever since Indian tradition had become hardened into reliable history, i.e., from about the ninth century B.C.—the era of the sixteen *janapadas*—, the main facts of race movements are all in support of the contrary view. The eruption of the Yadavas from the Himalayas through Mathura which he quotes in support cannot be held to be part of the movements of the Midland; while the remarkable influence of the Gurjaras on these languages is wholly ignored.

357. Gujarati and Eastern Hindi—At any rate I can see no objection to Gujarati and Rajasthani being classed with the Eastern Hindi group. They are all mixed forms of speech. All serve as links connecting the Midland dialect with the Outer Band. Gujarati and Rajasthani—the latter through its dialects—Marvadi, Jaipuri and Malvi—form an unbroken chain, with Bagheli and Awadhi, of Intermediate languages. I see no insuperable objection in conjoining these into one class, even though in the matter of the conjugation of the transitive verb in the past tense, Gujarati and Rajasthani make somewhat of a closer approach to Western Hindi than does Eastern Hindi. But this detail is not so vital as to necessitate the inclusion of Gujarati and Rajasthani with Western Hindi in the Central group. If the conjugation of the transitive verb is of importance, why is Marathi not similarly brought to the Central group? On the other hand, Gujarati and its closely allied sister, Rajasthani,—are so different from Western Hindi that they deserve to be separated. In its phonetics, in its retention of the neuter gender, in its *l*-past participial form, in its *s*-future system, in its oblique form for case terminations, and other particulars, it retains still certain essential characteristics of its old *Vrachad* base and extends one hand towards the West to Sindhi and Lahnda, and another towards the East through Malvi to the Magadhan system. For details of this argument, the reader is referred to my Census Report of 1921. Relevant extracts have been reproduced on this occasion in the form of an Appendix.

358. Why Change in Classification is insisted on?—These criticisms in support of a departure from the standard classification are not offered with a view to belittle the greatness of the work of Sir George Grierson in his Linguistic Survey, which will always remain

an achievement of enduring value. But I feel a change is necessary, as otherwise the point about the essential character of Gujarati as a mixed language is missed if it is classed as an Inner language. It is, as has been pointed out already, a composite language with a network of connections with the whole band of Outlandic languages. Unlike most other Indian vernaculars, it bears on its body many tell-tale evidences of the various race elements that have gone to the formation of the composite Gujarati people. It is this richness and variety of community life that has given a distinctive colour to the language, as well as to its literature through the nine centuries of its striking progress.

§ 5. LITERARY ACTIVITIES IN THE STATE

359. Details re: Publication of Books and News—From these considerations, we may now conclude our general review of the language returns by detailing a few figures showing the literary activity of the State. In the margin a small table is given showing the

number of books published in the different languages in the three decades since 1901. The number in all languages seems to have doubled in the last 20 years, although in the latest decade, it has slightly declined, since 1921 particularly in Urdu and English. Taking the figures year by year since 1921, it appears that the number of books published rose from 279 to 459 in 1924-25, after which it fell gradually to only 126 in the latest year for which figures are available. Presumably literary progress was arrested after 1925, when financial and agrarian depression for a series of years reacted on the printing press enterprise in the State. Newspapers and magazines number 35 in 1931 as against the same number in 1921. The marginal table gives the kind of periodicals with the total of estimated circulation. The circulation of weeklies has alone increased, showing that in spite of increased literacy, there is comparatively little demand as yet of locally produced periodicals except weeklies. One reason is the competition of the vernacular newspapers from Bombay, Surat, Ahmedabad and Kathiawad. Two vernacular dailies of Bombay have a circulation of over 500 in the State. Weeklies from outside also enjoy at least as large a circulation as some of the more popular of the local papers.

LANGUAGE	Number of books published in		
	1921-31	1911-21	1901-11
Gujarati	1,709	1,801	1,023
Sanskrit-Gujarati ..	48		
English-Gujarati ..	37	51	..
English	100	206	99
Hindi	99	47	..
Urdu	28	82	..
Marathi	103	103	19
Other languages ..	154	186	7
Total ..	2,278	2,476	1,148

KIND OF PERIODICAL	1931		1921	
	No.	Circulation	No.	Circulation
Weekly ..	6	12,000	7	9,130
Monthly ..	24	17,135	26	19,125
Bimonthly ..	2	700	..	..
Quarterly ..	3	3,200	2	803

360. State Encouragement to Literature—The above indications of literary activity show that in spite of economic depression much has been done in spite of the fact that private effort has suffered a decided setback in the last half of the decade. The main reason for this continuous activity is that State-aid to literary enterprise has continued undeterred by these circumstances. In the 1921 Report details were given of how State initiative was able to prop up private effort in the production of literature. The idea of translating standard books into Gujarati, Marathi and Hindi was started in 1912. Later the encouragement of individual scholars in the production of original works was taken in hand by the State. From 1917, the work has progressed at a very satisfactory rate. Two series were planned, the *Sayaji Sahitya Mala* meant for adults and *Sayaji Bala Gnana Mala* for the use of children. From 1912 to 1921, 87 books were published under the auspices of the State—66 in the *Sahitya* series and 21 in the children's series. During the last ten years 205 new books were planned, and altogether 128 were published in the *Sayaji Sahitya Mala* series and 69 in the children's series. These books became very popular, e.g., 7,000 copies of Mr. Kashishankar's life of Dalpatram were sold. Among other noteworthy publications were Mr. Daji Nagesh Apte's remarkable Marathi essays on Progress and a competent translation of Kautilya's Arthashastra by Mr. J. P. Joshipura. Histories of Indian Music, Indian Medicine and modern Marathi literature were other undertakings successfully accomplished. A very laborious work was the production of *Shri Sayaji Shasan Shabda Kalpataru*, by a committee of local men under the *Nyaya Mantri* (Legal Remembrancer) as President. This work is a compendium of synonyms in eight languages including English and the principal Indian vernaculars for words commonly used for the purpose of legislation and administration. It is conceived in an eminently practical spirit and while aiming at purity in the Indian languages has striven for simplicity and clearness. The Gaekwad's Oriental Series, being published under the auspices of the State Oriental Institute, is another valuable contribution to scholarship in general and Indology in

particular. The high standard of these publications has evoked praise from scholars like M. Sylvain Levi of Paris. During the decade 37 works were published; and the range of their interest includes Persian history, poetics, dramaturgy, iconography and even *tantrik* rituals. Altogether 55 works have been so far published and 20 are still in the press. The late Pandit C. D. Dalal set a splendid tradition of scholarship which has been kept up under Dr. Bhattacharya, the present Director of the Institute, whose edition of *Sadhana Mala*—a Buddhist *tantric* text of rituals, *circa* 1165 A.D.—is an interesting excursion into an obscure byway of Indology. Other noteworthy publications of the decade are (i) *Tattva Sangraha* of Śāntarakṣita (*circa* 750 A.D.), a voluminous production from the standpoint of Mahayana Buddhism, edited by Pandit Krishnamacharya, and (ii) *Nyaya Pravasha* of Dinnag, the Sanskrit text of which has been edited by that veteran scholar, Principal Dhruva of Benares University.

ADDITIONAL SUBSIDIARY TABLES

SUBSIDIARY TABLE VIII

DISTRIBUTION BY LANGUAGE OF THE POPULATION BY NATURAL DIVISION

NATURAL DIVISION	NUMBER PER 10,000 OF THE POPULATION SPEAKING												
	GUJARATI AS MOTHER TONGUE—A					BHIL DIALECTS AS MOTHER TONGUES—B					MARATHI AS MOTHER TONGUE—C		
	A only	With B as subsidiary	With C as subsidiary	With D as subsidiary	With E as subsidiary	B only	With A as subsidiary	With C as subsidiary	With D as subsidiary	With E as subsidiary	C only	With A as subsidiary	With B as subsidiary
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Baroda State	9,939	..	6	51	4	6,014	3,981	5	..	..	5,174	4,565	..
Central Gujarat including Baroda City	9,926	..	9	64	1	1,701	8,272	26	1	..	5,651	4,087	..
North Gujarat	9,959	..	3	38	..	2,500	7,500	..	..	..	2,146	7,587	..
South Gujarat	9,909	..	9	82	..	6,969	3,031	..	..	..	3,471	6,384	..
Kathiawad	9,916	..	5	32	47	3,333	6,667	..	..	..	4,795	4,702	..
NATURAL DIVISION	NUMBER PER 10,000 OF THE POPULATION SPEAKING												
	MARATHI AS MOTHER TONGUE—C		WESTERN HINDI AS MOTHER TONGUE—D					KACHCHHI AS MOTHER TONGUE—E					
	With D as subsidiary	With E as subsidiary	D only	With A as subsidiary	With B as subsidiary	With C as subsidiary	With E as subsidiary	E only	With A as subsidiary	With B as subsidiary	With C as subsidiary	With D as subsidiary	
1	15	16	17	18	19	20	21	22	23	24	25	26	
Baroda State	269	1	4,624	5,340	..	28	8	5,181	4,555	..	2	262	
Central Gujarat including Baroda City	262	..	4,804	5,146	..	38	12	2,292	6,849	..	..	859	
North Gujarat	267	..	4,682	5,311	..	7	..	4,580	4,695	..	19	706	
South Gujarat	142	3	3,630	6,344	..	26	..	3,540	6,136	..	..	324	
Kathiawad	490	13	4,503	5,435	..	37	25	5,430	4,419	..	1	150	

SUBSIDIARY TABLE IX-A

GROUP OF LANGUAGE	BARODA STATE			BARODA CITY			ANKELI		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8	9	10
A—Mother Tongue Gujarati with the following as Subsidiary	2,119,551	1,088,238	1,031,313	63,842	34,922	28,920	165,812	84,617	81,195
i. Marathi	1,169	893	276	424	348	76	55	48	7
ii. Western Hindi	10,758	7,916	2,842	2,275	1,855	420	422	370	52
iii. Kachchhi	911	496	415	10	7	3	97	78	19
B—Mother Tongue Bhl Dialects with the following as Subsidiary	180,384	91,427	88,957	530	279	251	45	22	23
i. Gujarati	71,819	38,552	33,267	179	90	89	30	14	16
ii. Marathi	88	56	32	84	52	32	..	..	..
iii. Western Hindi	3	2	1	3	2	1	..	..	..
C—Mother Tongue Marathi with the following as Subsidiary.	35,532	19,086	16,446	25,514	13,515	11,999	1,035	580	455
i. Gujarati	16,130	9,867	6,272	10,186	6,422	3,764	532	294	238
ii. Western Hindi	920	654	266	591	362	229	28	24	4
iii. Kachchhi	3	2	1	..	..	..	..	..	..
D—Mother Tongue Western Hindi with the following as Subsidiary	78,188	42,684	35,504	19,752	11,856	7,896	3,436	1,884	1,552
i. Gujarati	41,751	23,999	17,752	6,341	4,315	2,026	2,092	1,217	875
ii. Marathi	217	152	65	142	93	49	8	7	1
iii. Kachchhi	60	3	57	52	..	52	..	..	..
E—Mother Tongue Kachchhi with the following as Subsidiary.	17,679	8,907	8,772	255	143	112	3,417	1,590	1,827
i. Gujarati	8,052	4,417	3,635	166	110	56	3,335	1,072	1,263
ii. Marathi	3	2	1	..	..	..	..	..	..
iii. Western Hindi	463	313	150	22	14	8	298	181	117

SUBSIDIARY TABLE IX-B

NATURAL DIVISION	NUMBER PER 10,000 OF THE TOTAL POPULATION WHO SPEAK Gujarati AS MOTHER TONGUE					NUMBER PER 10,000 OF THE TOTAL POPULATION WHO SPEAK Bhl DIALECTS AS MOTHER TONGUE				
	As mother tongue only	With Marathi as subsidiary	With Western Hindi as subsidiary	With Kachchhi as subsidiary	Total speakers of Gujarati as mother tongue	As mother tongue only	With Gujarati as subsidiary	With Marathi as subsidiary	With Western Hindi as subsidiary	Total speakers of Bhl dialects as mother tongue
1	2	3	4	5	6	7	8	9	10	11
Baroda State	8,623	5	44	4	8,676	444	294	..	..	738
Central Gujarat	8,591	7	56	..	8,654	69	328	..	..	397
Kathlawad	8,837	4	28	41	8,910	0·7	1·3	..	..	2
North Gujarat	9,674	3	36	..	9,713	0·02	0·06	..	..	0·08
South Gujarat	5,920	5	88†	..	6,013	2,544	1,107	..	..	3,651

—INCIDENCE OF BILINGUALISM

BARODA			MEHANA			NAVSARI			OKHAMANDAL		
Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
11	12	13	14	15	16	17	18	19	20	21	22
649,576	343,212	306,364	980,985	497,001	483,984	243,147	120,130	123,017	16,169	8,356	7,833
147	114	33	295	226	69	213	129	84	35	28	7
2,321	1,503	728	3,376	2,725	851	2,006	1,227	779	158	146	12
29	19	10	26	18	8	2	2	..	747	372	375
32,149	15,644	16,505	8	3	5	147,652	75,479	72,173	..	..	..
26,854	13,271	13,583	6	3	3	44,750	25,174	19,576	..	..	..
..	..	..	..	..	..	4	4	..	..	..	..
..
2,868	1,611	1,257	1,873	1,021	852	3,786	2,044	1,742	456	316	141
1,414	925	489	1,421	792	629	2,417	1,311	1,106	169	123	46
152	142	10	50	43	7	54	41	13	45	42	3
..	..	..	..	..	..	1	..	1	2	2	..
23,030	12,059	10,971	22,815	11,828	10,987	8,545	4,633	3,912	610	424	186
15,673	9,118	6,555	12,117	6,405	5,712	5,421	2,866	2,555	107	78	29
21	18	3	17	12	5	22	15	7	7	7	..
..	..	..	..	..	..	..	..	..	8	3	5
478	283	195	524	289	235	339	241	98	12,666	6,361	6,305
336	229	107	246	145	101	208	127	81	4,761	2,734	2,027
1	..	1	1	1	..	..	..	..	1	1	..
41	28	13	37	80	7	11	11	..	55	49	5

—DISTRIBUTION BY LANGUAGE PER 10,000 OF THE TOTAL POPULATION

NUMBER PER 10,000 OF THE TOTAL POPULATION WHO SPEAK Marathi AS MOTHER TONGUE					NUMBER PER 10,000 OF THE TOTAL POPULATION WHO SPEAK Western Hindi AS MOTHER TONGUE					NUMBER PER 10,000 OF THE TOTAL POPULATION WHO SPEAK Kachchhi AS MOTHER TONGUE				
As mother tongue only	With Gujarati as subsidiary	With Western Hindi as subsidiary	With Kachchhi as subsidiary	Total speakers of Marathi as mother tongue	As mother tongue only	With Gujarati as subsidiary	With Marathi as subsidiary	With Kachchhi as subsidiary	Total speakers of Western Hindi as mother tongue	As mother tongue only	With Gujarati as subsidiary	With Marathi as subsidiary	With Western Hindi as subsidiary	Total speakers of Kachchhi as mother tongue
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
76	66	4	..	146	148	171	1	..	320	37	33	..	2	72
194	141	9	..	344	249	267	2	1	519	2	6	..	1	9
35	34	4	..	73	89	108	1	..	198	423	347	..	17	787
5	14	..	..	19	106	120	..	..	226	3	2	..	..	5
34	60	..	..	94	77	134	..	..	211	3	5	..	..	8

APPENDIX VII

SOME CONSIDERATIONS ON CLASSIFICATION *

1. Some Considerations on Classification—In the body of the Report the classification laid down by Sir George Grierson has been strictly followed. In regard to this classification, certain considerations will have now to be mentioned, for which purpose we shall have to leave aside figures for a bit and plunge into past history and comparative grammar and philology. In the scheme adopted in the Linguistic Survey, as also in the latest pamphlet issued by Sir George Grierson, Gujarati is included with Western Hindi in the Central group of the Inner Sub-Branch of the Indo-Aryan Branch of Languages: Urdu, Hindustani and Hindi are therein classed as dialects of Western Hindi. Bhil dialects and Khandeshi are included along with Gujarati in the Central Group; Kachchhi is put in the North-Western group of the Outer Sub-Branch as a dialect of Sindhi and Marathi is treated along with Sinhalese as members of the Southern Group of the Outer Sub-Branch. These are the main languages with which this State is concerned.

2. Consequences of the Classification—This classification involves certain consequences the importance of which must be realised. In the first place, it brings Gujarati into far more intimate nearness to the Midland language than Awadhi, for instance, with whose vocabulary that of the other dialects of Hindustani is very largely identical, and whose contribution to the common literature of Hindustani has been as great, if not greater than, that of its Western partner. In the second place, it has resulted in snapping the ancient ties that bind Gujarati with Kachchhi and through it, with that group of North-Western languages, from the speakers of which a great portion of the Gujarati population trace their descent. In the third place, the classification loses sight of the numerous strands of affinity that exist between Gujarati and Maharashtri on the one hand especially through the cultural influences of Jainism, and Magadhi on the other through their common Vaishnavism for one thing and their phonetic and grammatical resemblances. Lastly it must be said that Sir George Grierson was influenced in his classification as much by his preconceived notions of Indo-Aryan origins, as by the somewhat artificial classification of Prakrits and Apabhramsas favoured by the Indian Grammarians.

3. Grierson Classification based on his Theory of Indo-Aryan Movements—First as to history. It was Dr. Hoernle, I think, who was the first to suppose that there were two waves of Indo-Aryan immigration into India. The first wave came probably by sea, it was assumed, in the pre-historic period, and the second came later from the North-West through land and driving itself through the Punjab to the *Madhyadesa*, it thrust itself as a wedge into this other prehistoric Aryan group and drove them to what is called the Outer Band. That there were two ethnic strains amongst the Aryas is supported by the evidence of the Vedas themselves. There were the Rishi or the priest-poet clans such as the Angirasas and Vashishthas and the others were the warrior tribes such as the Yadus, Turvasas and Purus. This racial differentiation, it may be also admitted, stamped itself on the language of the Indo-Aryans. But the point of dispute is the inter action of the one on the other. Sir George Grierson is of opinion that the language of the Midlands "received a constant literary culture." It was the direct ancestor of the Sauraseni Prakrit and Apabhramsa from which the dialects of Western Hindi are descended.

"Round the Midland and on three sides—west, south and east—lay a country inhabited, even in Vedic times, by other Indo-Aryan tribes. This tract included the modern Punjab, Sind, Gujarat, Rajputana with the country to its east, Oudh and Bihar. The various Indo-Aryan dialects spoken over this band were all more closely related to each other than was any of them to the language of the Midland. . . . In fact at an early period of the linguistic history of India there must have been two sets of Indo-Aryan dialects, one the language of the Midland and the other that of the Outer Band. . . . As time went on, the population of the Midland expanded and forced the Outer Band into a still wider circuit. The Midland conquered the eastern Punjab, Rajputana (with Gujarat, where it reached the sea) and Oudh. With its armies and its settlers it carried its language, and hence in all these territories we now find mixed forms of speech. The basis of each is that of the Outer Band, but the body is that of the Midland."†

* Abridged from paras 322-27 of the Baroda Census Report of 1921.

† Art. "Indo-Aryan languages" by Sir George Grierson, p. 488, Vol. XIV, Encyc. Britt, 11th Edition.

In this statement, Sir George Grierson attempts to fit in his sense of linguistic differences to an elaborate reconstruction of Indo-Aryan movements which has little historical evidence for its support. As Professor Ramaprasad Chanda rightly points out in his monograph on *The Indo-Aryan Races*, Eastern Punjab (or the ancient Usinara) was not in the Outer Band at all but formed an integral part of Vedic Aryandom. He quotes an ethnographical list from the *Aitareya Brahmana* in which the Vasas, Kurus and Panchalas are included with the Usinaras as part of the "firmly fixed middle country (*asyam dhruvayam madhyamayam disi*)."^{*} There was no question therefore of the conquest of the Punjab by the Midland. As to the other countries, there is little historical evidence to support the statement that "with its armies and its settlers it carried its language." Whether the Midland Aryans came later than the other group of Aryans, or whether they preceded them, is one of those problems that have not yet emerged into shape from the cloudland of speculative ethnology. But at the same time, there is no reason to suppose the Vedic Indo-Aryans to be a conquering band of colonisers, before whose might the nations of the Outer Band rapidly gave way. On the other hand, such traditions as we have, point to the other direction. Gujarat or the ancient Anartta was under the rule, if the Puranic lists are to be believed, of a scion of the Yadavas even down to Buddhistic times. Kathiawad or Saurashtra continued under the rule of the so-called Rakshasas in the Epic period. We have historical evidence of the swooping down of the Gurjaras from the Western Punjab, across the Aravallis, through Malwa to Gujarat. The Scythian period of domination also left its impress no doubt on the heterogeneous Gujarat population. The Chalukyas, it is known, did overrun the country from the south; but there is no evidence of any conquering horde coming from the Madhyadesa and imposing its language on Gujarat. The short-lived imperialism of Harsha, "the only native of Madhyadesa who ever succeeded in subduing" the countries of the Outer Band did indeed result in the over-running of Gujarat for a little while; but after his death his empire crumbled into small kingdoms. There is little doubt that the nations of the Outer Band belonged to the dominant groups amongst the Indo-Aryans. The same passage as above quoted from the *Aitareya Brahmana* also points out that the nations of the Middle country were consecrated to "kingdoms," i.e., small states, and that the other nations (mostly of the east, *prachyam disi*) were given to *samrajya* or Empire states. This points to the greater power of the Outer Band. Again one of the most significant events in Indian history is the rise to power of the Nandas. As Professor Chanda says, "the subjugation of Vedic Aryandom by a low-born conqueror from the semi-barbarous Magadha probably contributed much more towards the overthrow of the Vedic culture than the teachings of Buddha and Mahavira." Then followed the Mauryas, the historical Naga and Gupta dynasties with the Scythian interlude in between. All these powers belonged ethnically to the Outer Band. "It was not therefore the conquering armies of the Midland but the armies and settlers from Magadha and other Outer countries that carried their languages to Oudh and other places where the mixed languages are now spoken."

4. Affinities of Gujarati with the Outer Band Group—Later researches therefore enable us to conclude that the present position of the languages like Gujarati is not so much the result of the superior impact of the Madhyadesa on the Outer Band, as of the reverse. Whatever super-imposition from the Midland has happened is of a much later date. In the Linguistic Survey, Sir George Grierson accepts the authority of the grammarian Hemachandra and traces the modern Gujarati to the Nagara Apabhramsa, a language closely akin to the Saurasena. Hemachandra was a great Jaina Acharya who flourished in the 12th century A.D. The Nagara Apabhramsa takes its name from the Nagar Brahmins, an exclusive literary caste, which exercised unbounded influence on the growth and development of the Gujarati language. Here was the impact of the Midland, not communicated through armies and conquering settlers, but by the literary influence of a caste, which though probably not descended from the Midland constituted itself as the special repository and transmitter of the culture of Vedic Aryandom. This Nagar caste forged the literary dialect of Gujarat perhaps through the *Mugdhava bodh mauktika**—written anonymously by a pupil of Devasundara shortly before the appearance of Narsinh Mehta (circa 1400). This literary dialect has adapted itself as far as possible to the language of the people and has gradually developed into the spoken language of the educated sections of Gujarat, and the medium of its literature. But with all that it has remained absolutely distinct through the centuries. Any one with the slightest acquaintance with Gujarati will mark out at once the characteristic marks of this dialect—its Sanskritisation, its periphrases, its otiose clarity of enunciation—from the bulk of Gujarati speakers. In its characteristic accent the Nagar dialect differs widely from the intonation of the other castes (even educated sections amongst them). Sir George Grierson says, "that the base of Gujarati is some Outlandic language (probably north-western) but that its body is Midland." The truth seems to be if the relative position of the Nagar dialect with reference to the indigenous dialects of Gujarati is more closely studied, that not only the

* The book in question was written in 1394 A.D. and appears to be an elementary Sanskrit Grammar, written in an old form of Gujarati. Sir George Grierson finds in it a close connection with the Gaurjara Apabhramsa.

base of it but a goodly proportion of its limbs and its accent and distinctive manner belong to the Outer Band, while its adornments and its fripperies are from the Midland. Sir George Grierson himself points out numerous evidences of the affinities of Gujarati to the North-western, Eastern and Southern groups, but is not influenced by them in his classification. In the Encyclopædia Britannica article, from which the extract in para 3 has been quoted, he gives a table, in which he traces Gujarati from what he calls the Gaurjari Apabhramsa* and places it amongst Intermediate languages corresponding apparently to the Mediate Sub-Branch of his Survey along with Eastern Hindi (Awadhi), Rajasthani, Pahari and even Panjabi. The classing of Gujarati along with Eastern Hindi would have been more justifiable than the arrangement pursued in the Survey. It is in defence of the suggestion that Gujarati (with Bhili and Khandeshi) should in future be definitely allocated to the Mediate Branch that attention is directed here forcibly to its affinities with the languages of the Outer Band.

5. Phonetic Resemblances with the Outer Band—That such affinities are many and highly significant cannot be denied. Space permits us only to point out the most important. First as to phonetics. The Sanskrit syllabary imposed on the Gujarati language is inadequate for all its sound-requirements. The short *e* corresponding to *a* in *bat* and the short *o* corresponding to *a* in *fall* are very common to Gujarati; and in colloquial Gujarati not unlike colloquial Bengali the Sanskrit *a* frequently becomes the broad *ô* and *i* becomes *e*. The broad *ô* is common not only in Bengali and Oriya, but also in Lahnda and in the Konkani dialect of Marathi. The Gujarati preference for *o* instead of *an* has its counter part in Sindhi and Assamese. The short *ai* which is a feature of the Lahnda vowel system occurs also in Gujarati very frequently, as in *bhāi*, pronounced without the long stress on *a* as in Western Hindi. Again the sibilants tend in colloquial Gujarati as in Sindhi and Bengali to be pronounced like *sh†*. In Bengali this characteristic is regarded by scholars as a legacy from the Magadhi Prakrita. As to aspiration, Sir George Grierson points out as a peculiarity of Kashmiri phonetics, the absence of sonant aspirates. Thus *gh* becomes *g*, *jh* becomes *j*, *dh* becomes *d*, and *th* becomes *t*. This absence of aspiration is well-marked in colloquial Gujarati, e.g., *ekatu* for *ekthu*, *hāte* for *hāthe*. The Nagarists have retained the aspirate in their orthography with an eye to purity of lineage: there is a whole literature of controversy scattered in the pages of the Gujarati magazine *Vasant* regarding this aspirate. Much literary blood has flown over the spelling of the word *ame* (we). Now this dropping of the sonant aspirate is a marked feature of the Eastern Bengal dialect where *ghar* becomes *gar* and *ghoda*, *gora*. The change of *s* into *h* is a well-known phonetic peculiarity with Northern Gujarati and also in Bhil dialects; thus *manah* for *manas* (man), *huraj* for *suraj*. This peculiarity is present in the Pisacha languages as well as in Eastern Bengali and Assamese where *svasur* (father-in-law) becomes *hour* and *sakal* is turned into *hogol* or *hoggol*. Examples of the interchangeability of *n*'s and *i*'s of *metathesis* (i.e., of interchange of consonants in the same word), of tendency to double consonants and similar phonetic peculiarities can be quoted from Gujarati as well as from the Outer languages.

6. Epenthesis in Gujarati—One most important point remains to be noticed. Sir George Grierson rightly insists on *epenthesis* as an important differentiating mark with Dardic or Pisachi languages. By *epenthesis* is meant simply the change of the sound of a vowel by the influence of one in the next syllable. Thus *kukkari* (hen) becomes *kukkir* by attraction to the final *i*. Sir George Grierson does not notice this in Gujarati but I submit that evidence of a like vowel change are numerous in that language. In the phrase *ene gher* for the full form *ena ghare* (in his house), we see how the oblique case termination *a* of *ena* is changed to *e* and so also *ghare* becomes *gher* by attraction. In the Surati dialect of Gujarat, numerous instances of vowel changes happen which resemble *epenthesis*. Sir George Grierson mentions some but does not notice their significance. In regard to forms like *lavyo*, *karyo*, *chalyo*, *maryo*, the Surati changes them into *laivo*, *kairo*, *chailo*, *mairo*, etc. Exactly the same thing happens in Eastern Bengali where the literary Bengali *koriya*, *choliya*, *asiya* are transformed into *koira*, *choila*, *ayesa*. This peculiarity is undoubtedly a north-western characteristic and governed by the same principles as *epenthesis*.

7. Grammatical Resemblances—Grammatical resemblances are no less remarkable. In certain essential directions, Gujarati has no correspondence with Western Hindi. Some of the most prominent of these dissimilarities can only be mentioned. The first is the existence of the neuter gender. This is noted by Sir George Grierson, who mentions it as one of the points wherein Gujarati differs strongly from Western Hindi and agrees with Marathi, an Outer language. Gujarati also follows, says the same authority, "the Outer Circle in one of its most persistent characteristics in having the oblique form in *a*, which is quite strange to Western Hindi." The use of the help verb, *chhu* (I am) in the present and perfect and future (gerundial) tenses occurs also in various forms in the languages of the Outer Circle. In the Bengali conjugation, this help verb is fused into the participle to form one word. In this

* In the Language Chapter of the Indian Census Report of 1901, Sir George Grierson regards Gujarati as a dialect of the Nagara Apabhramsa.

† In Surati dialect, however the reverse tendency of pronouncing all *s*'s as simple *s* is seen.

respect colloquial Gujarati follows at least in pronunciation if not in spelling. Sir George Grierson maintains that Gujarati declension as well as conjugation agrees generally with Western Hindi, in that it is analytical, *i.e.*, has recourse to help-words and post-positions. He however admits the important exception in respect of the Gujarati dative and genitive cases. Here Gujarati follows the practice of the Outer Circle, which is synthetic, *i.e.*, forms its cases by means of inflectional terminations. The most synthetic of Indo-Aryan vernaculars are no doubt Marathi and Bengali, and in comparison, Gujarati is certainly analytical in its manner of declension. But I venture to think that Sir George Grierson based his opinion too much on the stereotyped formularies of the grammarians and not on the actual facts of living speech. These facts point indubitably to a pronounced synthetic tendency in Gujarati. The help-words in the conjugation are only required in the present continuous and the participial tenses. Even here in colloquial speech and pronunciation, the words are so slurred and fused that they become one word. In Parsi Gujarati which is only a developed form of Surati dialect,—these syncopated forms are found throughout the participial as well as the future tenses. Here the practice has a striking resemblance to the clipped forms which are so common in colloquial Western Bengali. I am of opinion that this syncopation is part of the process of synthetisation which in some Outlandic languages may be taken to be a return to the earliest form of Primary Prakrit, *karoch*, *kariach*, *karecha*, *karsu* from Parsi Gujarati, and even such forms from the Standard Gujarati as *kehto'to*, *n'hotō* are examples of this widespread tendency. Gujarati conjugation is in its essence though not in its form synthetic. One or two other points can only be mentioned in this brief discussion. The formation of the simple future by *s*, which obtains in Gujarati, is also found in Lahnda, and in some dialects of Rajasthani of which Jaipuri and Marwadi agree most closely with Gujarati. To quote again from the Survey on this important point: "One of typical characteristics of Lahnda is formation of the future with the letter *s* There is nothing like this in Sindhi but the *s* reappears still further south, in Gujarati where we have *marṣe*. The connecting link is Western Rajasthani immediately to the south of Lahnda. We thus have a line of languages with *s*-futures extending without a break from the north of Khagan, through the Western Punjab, and Western Rajputana into Gujarat." Historically this link is interesting for it traces approximately the passage of the Gujars into Gujarat.* Finally we will mention the case of the agential construction. The construction is an amplification of the Hindustani impersonal passive. In Hindustani impersonal passive construction, the object is put in the dative case, the participial verb into the masculine gender, and the subject is in the agential. In Gujarati, the verb is generally made to agree in gender and number with the object. In Marathi of the Konkan, there is the same idiom. These idioms are based on the fact that in the Midland language as well as in some Intermediate and Outlandic languages like Gujarati, Marathi and Sindhi, past and future participles are passive in their origin, and hence tenses in which they are used are to be construed passively. In Bengali, however, this passive origin has been forgotten, and a synthetic past tense has been evolved which can be conjugated as in Sanskrit. In Gujarati, in certain transitive verbs, *e.g.*, *saṃjyo* (I understood), the subject is put in the nominative and not in the agential. These verbs are not many, but at any rate they represent a stage further than the Western Hindi in the development towards a synthetic conjugation.

8. Proposed Classification—The above discussion emboldens us to suggest that Gujarati should be separated from the Central group, and that Jaipuri and Marwadi (or at least Marwadi) should be assigned to Gujarati. Their close resemblance to it has been already mentioned above and it has been also fully acknowledged by Sir George Grierson himself (*vide* p. 15, Vol. IX—Part II of the Linguistic Survey). Gujarati scholars have claimed Marwadi as a dialect of their language and they have reason. Gujarati with Bhili and Khandeshi should be classed as an Intermediate language in the Mediate Branch, along with Eastern Hindi. There remains Kachchhi. Gujarati scholars claim it also as one of their dialects. It has numerous evidences of borrowings from the Gujarati of which the use of the Gujarati conjunctive participle in *ine* is very common. The Survey states the main facts in this matter on page 184 of Vol. VIII—Part I. There are two sub-divisions of Kachchhi,—Bhatia, which has been mentioned already, and Kayasthi Kachchhi. The latter is based on Kachchhi but much mixed with Marwadi and Gujarati. These two come very close to Kathiawadi Gujarati. But there is one insuperable obstacle about classing Kachchhi with Gujarati or the Mediate languages generally. It is in regard to the treatment of the double consonants derived from the Prakrit. In most languages of the Inner and Outer branches, the practice is to drop one of the double consonants and lengthen the vowel preceding. In Kachchhi as well as Sindhi, this compensatory lengthening does not happen, although one of the consonants is dropped. Thus we have *hath* (hand) not *hatth*, or *hath*, *kan* (ear) and not *kann* or *kan*. This is one of the most distinctive peculiarities of Dardic languages; Kachchhi therefore belongs to Sindhi and the North Western Group.

* Sir George Grierson, however, thinks that the *s*-future had its origin in the Inner circle, *vide* page 335 footnote, India Census Report of 1901. But the explanation given above seems more plausible.

APPENDIX VIII

MAVCHI AND BAVCHI

1. Introductory—In the Census Report of 1921, the view held by Mr. Dalal in 1901 that Bavchi was a gipsy dialect was controverted and Bavchi and Mavchi were stated to be closely allied dialects, just as these two tribes were closely related. On the present occasion, an attempt was made to find out their connection. The Mavchi occurring in South Songadh is somewhat different from Khandeshi variety, a specimen of which has been included in the Survey (Vol. IX, pp. 95 *et seq.*). It has more Gujarati admixture and even case-terminations, as the following specimen will show. Possibly as the Survey states, its specimen was coloured by the Marathi speaking man who prepared the text. There is an important point of difference however. The text shown below gives the agential construction—*vāhne poire tyā bahkkāl akhyān* (the younger son spoke to the father); while according to the Survey the nominative construction (showing Marathi affinities), *e.g.*, *tō abōhōl akhyā* (he said to his father) is alternatively used. The Bavchi specimen given side by side is the translation of the same extract (as set for the Mavchi) from the Parable of the Prodigal Son. Two intelligent Bavchas—one a sixth standard Vernacular passed youth, who seemed a very knowledgable sort of fellow and was a chauffeur by profession, and another, a peon in government office in the City—were selected for this purpose. The second was illiterate, and was used by me while taking down the specimen to counteract whatever Gujarati influence the first may have shown in his translation :—

MAVCHI

Yoka jāne ben poira 'ātā.
 Tyāhā māṇé vāhné poiré tyā
 bāhkkāl āknyāṇ : " Apuṇ
 māl māl milkāt māhné
 jō māl bhāg ō etō tō
 vāntine māl dā." Tyā
 upne bāhkné tyā-ā
 milkāt vanti deni.
 Thod-hā dihin viti giya
 pāchhe vāhno pōirō tyā
 badi milkāt yokthi koyne
 du-u' mulkhāl chaliyo giyo.
 Ane tāt thod-hā dihamāṇ-é
 tyā māl milkāt mōj mōjamāṇ-e
 udāvi deni. Jo-ve tyen badāṇ
 udavi dena, to-ve tyā
 mulkhāl Kāl pōdyō né
 tō garib 'ālat māṇ-é
 yei pōdyō ne tyā mulkhamāṇ-e
 ronara māṇ-na yok ja-āṇ paṇi jāine to rō-an
 tāgyō tyā gōryō
 dōyṇe tyāl tyā ranamāṇ-e
 dukra chara dovdyo.
 Tōve tyēn rānāmāṇ-ena
 dukrāhā khāinā chhodāṇ-han

BAVCHI

Ek māhvā ben poha 'āttā.
 Timai thīne vahyané pohé tyā
 ābālā akhiyākā : " O Aba, āphe
 mal matā māithine
 jō māṇ bāg ō-i, to
 māl vehṇchine dé." Ti-yia
 upethine ābé ti-yia potā
 milkat véhṇchi deni.
 Thod-hā di-yi-hiyā pachchi
 vahyano pōhō ti-yi-ā
 hōgi milkat la-yi-ne
 du' gāvdé jātō rōyō.
 Ane tāt āglā thod-ha
 di-yihī tiyi a mal milkat moj majah māṇ-i
 'udāvi deni. Jōve ti-yi-yen hoga
 údavidentā, tōve ti-yia
 gāvāmāṇ-i Kāl podi-yio né
 tō garib 'ālat māṇ-i
 ō-i gō-yio ane ti-yia gāvāmaṇ-inā
 Ek mahva tāṇ, tō rōvāṇ
 lagi-yio. Ti-yia govān
 dani-yié ti-yi-ālā ti-yia khetāmāṇ-i
 buṇ-dhde chovādā dōvdi-yio.
 Tove ti-yiēṇ khet a māṇ-yina
 buṇ-dhdu khai-yanaṇ chholta

MAVCHI

māṇ-ené bōyāno vichār kā-yao
 ane kadēṇ tyāl kaiṇ dā-āṇ
 mādyāṇ nāiṇ-e tove tyal
 akkāḷ yeni né tyēn tya-yaj
 man-māṇ-e vichar koiyokā
 māṇ-āṇ bāhkātān
 kamar-yāhā khainā hāti
 joje tyā kōyātān vodāre
 bakhi-i ti-yār kōyeten-hēn.
 ne āiṇ'-i bukhé mōvtahuṇ.
 āiṇ'-i uṭhine bāhka pāṇ-ye
 jā hiṇ-ne akh-hiṇko "Oh Bahka
 āin-i tō'-ō né par mehra
 gunhegar hetā ūṇ ne
 aiṇ'-i firi pāso pōiro
 ākhāṇ tāyak maiṇ, ten-ye
 tumeṇ āliyāṇ-mān-e
 yōka āli kōi-ne rākhā."

BAVCHI

māṇ-ithine ti-yia pet boi-no irado karyo
 ane kādhāṇi ti-yiala kāin
 denāṇ nāin-iyā, tove ti-yiala
 hamaj i-yene ane ti-yien
 man-māṇ-i vichār koiyokā
 māṇ āba tāṇ
 majurlokha khai-māṇ vāste
 khubuch
 bakhi-yio rāṇ-di-yia māṇ-yiā iye-thi-hyo
 ane āiṇ'-i bukhé mōhūṇ.
 āin'-i māṇ ābā pāhān
 jāi-hi ane akhihiṇ ka "O Ābā
 aiṇ'-i tumhe ane bagwānā āglā
 gunegār heto ane
 āin'-i firithi tumhe poho
 ākhādnā rōkhō nahāṇ, tethi
 tumhe chākar māṇ-ina
 ek chākar rōknō thovā."

2. Points of Similarity—The above specimens indicate how closely allied the two dialects are. The same Gujarati passage from the Parable of the Prodigal Son was given for translation into these dialects independently at two different places—one at Songadh and the other in Baroda City. As a result at places a paraphrasing has happened, e.g., *jato royo* (Bavchi) and *chaliyo giyo* (Mavchi). Occasionally also different words are used as *gava* in Bavchi for *mulkh* in Mavchi, *khet* (in Bavchi) for *raṇṇ* (in Mavchi), *bagwan* (in Bavchi) for *parmehra* (in Mavchi), and so on. But Bavchi shows more Gujarati influence, that is all. In all essentials however the two dialects are almost identical. The phonetics are the same. The short *a* has the same sound in both. Both show a cockney tendency in dropping *h* e.g., 'ālat for hālat, bōg for bhāg, bagwān for bhagwān, etc. In both, vowels are very commonly nasalised. In both, *r* is frequently elided between vowels. Both drop *s* for *h*. Both have only two genders. The case terminations are mostly similar: the only difference seems to be that the locative—*l* in Mavchi gives place to—*mān* in Bavchi (which is a Gujarati borrowing). The Survey however states that locative suffix in *māṇ* is also found in Mavchi. The dative is —*l* or *la* with both dialects. Both show the combined case-terminations "*māṇ-ina*" (of-among) which is found in Gujarati. The verb shows many similarities—the most important being the conjugation of the transitive verb—which is the same as in Standard Gujarati. The participial forms are alike, only in Bavchi, a lengthened form is used in which the vowels have their full value, perhaps a legacy preserved in its archaic form from the Apabhramsa from which the dialect takes its origin. The imperative is—*a* in Mavchi, and —*e* in Bavchi. The frequent use of—*ne* in Bavchi after participial words, e.g., *la-yi-ne* and its comparative absence in Mavchi shows different degrees of Gujarati influence. One trace of Marathi in Mavchi is the use of *saṭi* (pronounced *haṭi*) which in Bavchi becomes the ordinary *vāste* (on account of).

3. Conclusion—These remarks are necessary in respect of these two dialects, for it is just possible that at the next census, both of them may disappear from the returns. Indeed Mavchi did disappear in 1921, possibly through a mistake of record or compilation. But both these dialects are fast giving place to Marathi and Gujarati. Varli is a form of Mavchi with strong Marathi influence.

CHAPTER XI

RELIGION

§ 1. MAIN RELIGIOUS DISTRIBUTION

361. Reference to Statistics—After dealing with different types of statistical material which are compiled for the census, we are concerned in this chapter and in the next, with two of the main principles of division on which most of the figures are based. This chapter deals with the figures contained in Imperial Table XVI which has three parts. Part A gives the distribution of the population by religion. Part B details the strength of various sects comprised in each of the four main religions. Part C gives the figures of Christians by sect and race. State Table XVII gives the distribution of figures of sects in the administrative divisions. As usual, these absolute figures are rearranged in natural divisions and converted into proportions in Subsidiary Tables of which the following is the list :—

SUBSIDIARY TABLE I—General Distribution of the Population by Religion.

„	„	II—Christians—Number and Variations.
„	„	III—Religion of Urban and Rural Population.
„	„	IV—Sects of Hinduism classified according to their nature.

362. Instructions to the Enumerating Staff—A summary of the standard instructions for recording responses to column 5 of the questionnaire is given below :—

(i) The name of the religion was to be entered in column 5 and thereafter with a small dash, the name of the sect was to be shown.

(ii) A list of the principal religions occurring in the State was given for ready reference.

(iii) For Brahmos and Aryas, the staff was enjoined to enter what the individual declared. Members of the Prarthana Samaj were to be shown as “Brahmo.”

(iv) Regarding “Raniparaj” tribes, it was laid down that those who called themselves Hindu should be entered as such, and that those who did not do so, should have the name of their tribe or caste entered in the column of religion, *e.g.*, Chodhra, Kokna, Vasawa, etc.

(v) Then followed detailed instructions re: sects, the names of principal ones, and the chief varieties under each. Thus “Vaishnava” includes Vallabhachari, Ramanuji, Swaminarayan, Ramanandi, etc. “Shaiva” includes Smarta and Dakshinachari Shakta. Under “Shakta”, the third great division of Hindu sectaries, it was specially laid down on this occasion that the staff were to distinguish between the non-descript worshippers of *Mata*—the bulk of whom are Kolis and Raniparaj—and the orthodox Brahmanical adherents of Bhavani, Mahalakshmi, Parvati, Ambaji, Kalika, Bahucharaji, etc. The first were to be shown as “Devi Bhakta” and the second under “Shakta”.

(vi) Special care was to be taken of the record of Christian sects. Teachers and pastors among the converts were generally selected as enumerators and lists of the strength of the different mission organisations were prepared and obtained for testing the accuracy of the return. Each convert, it was arranged, was to

be given a slip by their missionaries on which the name of his sect was to be shown and this was to be handed over to the enumerating staff. The inspecting staff were directed to pay special attention to this matter.

(vii) As to Piranas, the instruction was to show the name of the sect and add "Hindu" or "Muslim" before it, according as the individual person chose to be returned.

(viii) In the Abstraction stage it was laid down that where column 4 was blank (which was as a matter of fact a very rare event) it was to be filled in with reference to the name and caste of the person concerned; as to Indian Christians, if the sect was not shown, it was to be inferred from that of the mission at work in the neighbourhood. In difficult cases, local enquiries were to be made.

363. Basis of the Figures—Before the analysis of the figures is taken in hand, it is necessary to understand exactly what is meant by the statement that there are so many Hindus, so many Muslims, etc. Here we are confronted by the primary difficulty in the almost radical difference in outlook as represented by the difference in the connotation of the term "religion" on the one hand and its supposed synonym "dharma" on the other. The Indian word "dharma" covers the whole field of social conduct in all its wide relations. "Religion" only includes certain special departments of it, in so far as man's attitude is governed by his ideas as to God, future life and so on. Now, the census does not cover the whole sphere of conduct and in regard to religion, it does not care for minute differentiations of personal belief which are too endless for any practical use in demology. It is an attempt to record "religion in its communal aspect, merely distinguishing those who lay claim to one or other of the recognised sectional labels without looking too closely into the validity of their claims." Some religions like Islam and Christianity readily lend themselves to this labelling, as their doctrinal basis and cultural outlook, in spite of numerous sectarian differences under each, are fairly distinct enough for that purpose. But on the other hand with a system like Jainism on the one hand and the vast mass of amorphous tribal beliefs at the other end of the scale, there cannot be any escaping from the influence of circumambient Hinduism with which they are riddled. Even Islam is not without evident traces of this influence, for on the fringes of it, occur relatively small groups in which the forms and exercises of both religions are combined in an inextricable way. The main difficulty is Hinduism. It has as yet no clear-cut formulary of belief although the Pan-Hindu movement within recent years has done much to crystallise religious dogmas in a lucid manner. But its adaptability deprives it a great deal of synthesis and cohesion and its readiness to absorb the various animistic systems with which it has from time to time come into contact in the course of its long history has persuaded it to water its essential doctrines, prescribe a graduated system of ceremonial and thus help the evolution of a fluid process, by which beliefs and observances of lower class Hindus have tended continuously to mingle with tribal superstitions and even tribal magic in a manner which has so far defied scientific definition or analysis. If however Hinduism is difficult to define, the name "Hindu" is readily recognisable. The ignorant Talavia or Tadvi little knows, or cares, about the minutiae of "puranokta" and "vedokta" rituals, but he would not be returned as a Muslim: so also the Depressed Classes in spite of their social disabilities in Gujarat, as acute as anywhere else, would never dream of entering any other than "Hindu" for their religion.

364. Religion as a Basis of Statistical Classification—These considerations lead one to think whether it is worth while retaining religion as a principle of distribution of census statistics. So far as customs of demological importance like marriage, seclusion of women, and such other data regarding occupations and even educational progress, etc., are concerned, their distribution by religion is not of such vital importance as by horizontal divisions into economic and social strata. Thus the difference between Hindu or Jain or even Sikh in all such matters does not afford any useful basis for analysis of variations. The greatest difficulty about a horizontal classification however is that there is no readily intelligible test which can be of general application to all-India and by which differentiations on the basis of social strata can be appraised and distinguished. If caste was not

such a matter of controversy affecting materially the value of the return itself, it would have served as a more satisfactory basis, by a judicious distribution of the figures into broad groups, than Religion. Occupation would have offered another fairly satisfactory basis, had it not been for the fact that the statistics regarding it are so difficult to compile; the scheme is so intricate and inter-related that a differentiation by occupation is neither significant nor reliable. We saw while discussing figures of fertility that their distribution by occupations had failed to give satisfactory results. If it were possible to have an occupational scheme with major non-agricultural groups and a horizontal division of agriculturists based on size of holdings, etc., and to distribute demological figures according to these groups, perhaps valuable results could be obtained; but this would require additional columns to the schedule, and a revolutionary change in the Census Act itself, besides demanding from the census staff qualities of tact, discernment and accuracy, which are as yet unrealisable. Race, it is argued sometimes, would prove a more satisfactory substitute, but here again the great modern designations like Gujarati, Maharashtriya, Deccani, Bengali, Punjabi, etc., although they are acquiring a historic fixity and social significance all their own, are not helpful, in so far as the distinctive social attitude represented by each of these significations is still riddled by the cleavage of religion which governs such social practices as polygamy, prohibition of widow remarriage, early marriage, purdah, etc., these practices it must be remembered, affect population changes to a great extent, influencing statistics of civil condition, literacy, infirmities, etc. Finally, so long as the public attitude continues to be coloured by communal considerations, Religion will have to continue, however unsatisfactory it may be, as a basis of statistical classification.

365. Accuracy of the Return—The value of the figures under each head will be discussed later but in the meantime it will suffice to state that the general accuracy of the return cannot be doubted. For reasons mentioned later the figures for Hindu and Tribal are more accurate than in previous years. The record of Christians was carefully scrutinised with mission estimates and found correct. In the inspections at the last census, one or two cases came to my notice of Dhed converts being returned as Christians and these later on "reconverted" to "Hindu Ramanandi" by propagandist supervisors. These cases were sternly dealt with and the returns were at once corrected. In 1931, very special care was taken that no grounds for complaint on that score should exist. The returns for Jains and Muslims admit of little doubt. In respect of borderland sects (like the Pirana, Satpanthi, etc.) no discretion was left with the enumerating staff at all. Similarly as to Tribal aborigines, at the abstraction stage the rule laid down—as decided in the Census Conference of January, 1931,—was that in the case of the Raniparaj in the settled areas, like Central Gujarat, they should be compiled as Hindu and in the forest tracts where their condition was more primitive, they should be shown as Tribal. But there was very little occasion to apply this rule. Everywhere, except in Songadh and Vyara, Hinduism had so firmly established itself that rarely adjustments were required. As to the returns of Hindus, although Hinduism is hard to define, it is easy enough to distinguish it from other religions.

366. General Statistics regarding Religious Distribution—The main religious distribution is as shown in the margin, in which a summary of the

RELIGION	Strength in 1931	Proportion per 10,000	Variation since 1921
Hindu	2,152,071	8,809	+ 23.5
(a) Brahmanic	2,149,200	8,797	+ 23.4
(b) Arya	2,801	12	+ 334.2
(c) Brahmo	70	....	+ 100.0
Muslim	182,630	747	+ 12.5
Jain	48,408	198	+ 12.0
Tribal	44,890	184	— 72.5
Christian	7,262	30	— 2.1
Zoroastrian	7,127	29	— 5.3

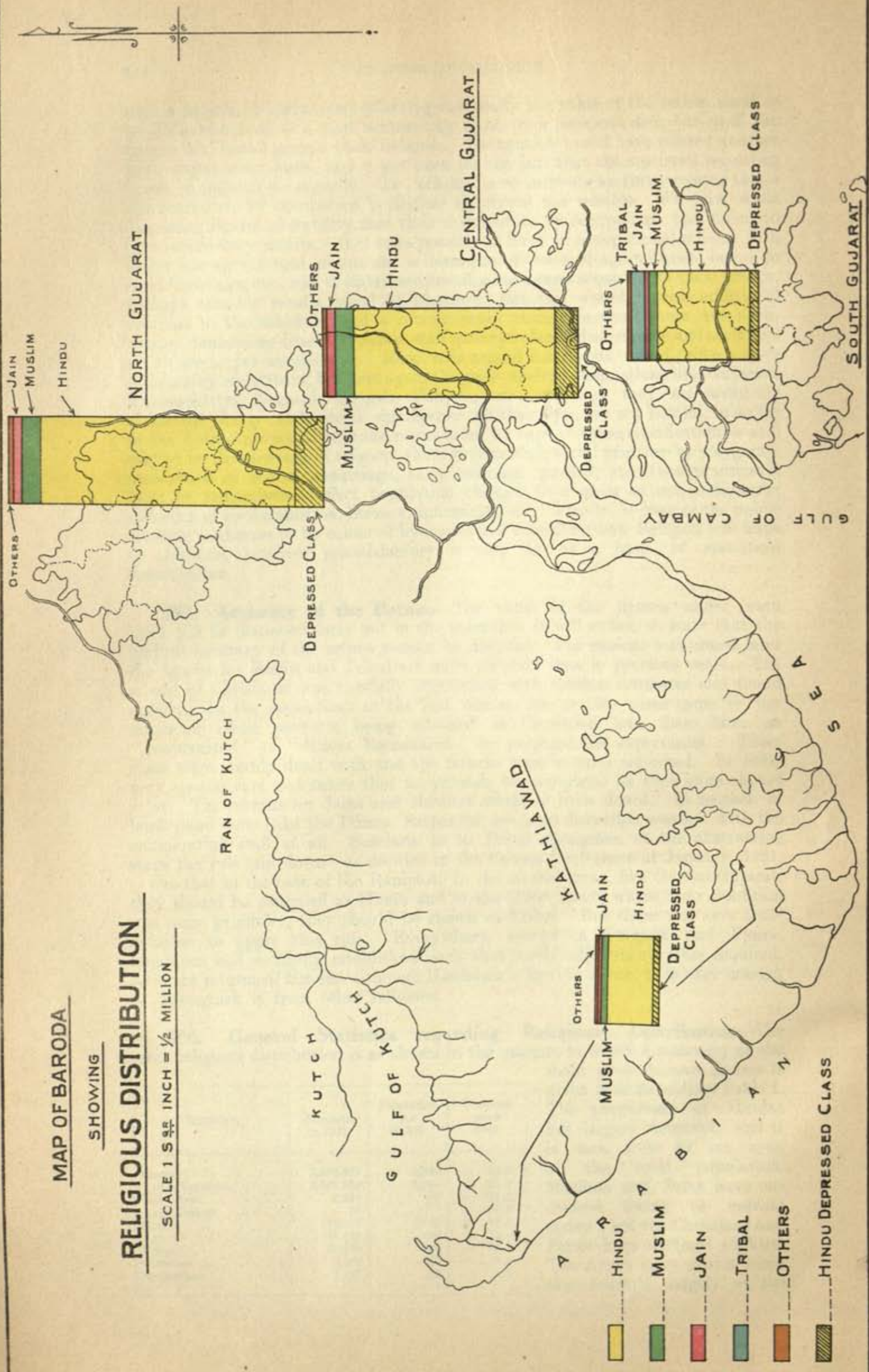
main proportionate figures is given from Subsidiary Table I. The proportion of Hindus has largely increased, and it is now over 88 per cent of the total population. Muslims and Jains have increased owing to natural causes; but the Christians and Parsis have declined slightly. The Aryas have grown more than fourfold, largely at the

MAP OF BARODA

SHOWING

RELIGIOUS DISTRIBUTION

SCALE 1 SQUARE INCH = 1/2 MILLION



expense of Christians. The Hindu rate of increase is double that of Musalmans. The Tribal religions have disappeared from the returns almost everywhere in the State, except in the two forest mahals of South Gujarat. The Brahmos are a small community almost limited to the capital and the Navsari taluka. Besides the above, there are 521 Sikhs, 55 Jews and 43 Buddhists. The Sikhs are almost entirely confined to the Camp, belonging to the British Indian regiment stationed there. The Jews are of the Bene-Israel community mostly found in the capital. The Buddhists owe their appearance in the returns almost entirely to the accident of a Japanese steamer having called at Port Okha on the census date.

367. Religion of Urban and Rural Population—Coming to the distribution of the figures by locality, the first point to notice is the relative prevalence of the different faiths in town and country. Subsidiary Table III gives the requisite proportions. It may be noticed that the proportions here are calculated on a different basis from Subsidiary Table II of Chapter II (*vide* para 61 *supra*). There the proportion of each religion found in towns was shown. Here the religious distribution in town and country is contrasted. Chapter II showed that Zoroastrians, Muslims and Jains—in the order stated—are the most urban of religions. This fact helps us to understand the

inset figures, which show that the religious distribution varies much in urban and rural areas: the towns contain double the proportion of Muslims and Jains in the general population, while the Tribal aborigines are hardly in evidence. Parsis are confined mostly to South Gujarat where their proportionate strength is four times as much as their ratio to the general population there. Urban

RELIGION				Proportion of urban population (per 100)	Proportion in the general population (per 100)
Hindu	..	..	..	78.7	88
Muslim	..	..	..	15.6	7
Tribal	..	..	..	0.2	2
Jain	..	..	..	3.9	2
Parsi	..	..	..	1.1	} 1
Christian	..	..	..	0.5	

Muslims are most concentrated in the Sea-coast areas, where they form 28 per cent of the town population, and in Kahnām where they are 21 per cent. Hindus are found to the greatest extent in Charotar and Chorashi towns where they form nearly 83 and 87 per cent respectively. The Jain proportion is largest in Mehsana *prant* towns and in the Vakal tract in Baroda. The Tribal religions form only 2 per mille of the town population, and in rural areas, they are confined, as stated already, to the Rani mahals, where they form 40 per cent. Except these mahals, everywhere else in the villages, Hindus dominate the figures.

368. Number and Distribution: Hindu—Subsidiary Table I gives the main details by locality. Hindus everywhere are predominant; and the range is fairly uniform from 778 per mille in Okhamandal to 911 in North Gujarat. In Baroda City, their strength is 791. In South Gujarat, where the Tribal religions occur, the Hindus claim four-fifths of the population. Everywhere else, they constitute at least 900 per mille.

Muslim—They are only 75 per mille in the State, but Okhamandal with 215 per mille and the City with 164 show the largest proportions of adherents of Islam. In North Gujarat the Muslim ratio (61) is the least.

Jain—These constitute only 20 per mille in the State, but in North Gujarat, where over 58 per cent of them are found, their proportion goes up to 28. Of the City population, 23 per mille are Jains. In Okhamandal they are least in evidence with only 4 per mille.

Tribal and other—The aboriginal religions are only confined to South Gujarat, where they form 111 per mille of the population. Even here, they are mostly concentrated in Rani mahals. Nearly 85 per cent of Christians are found in Central Gujarat and the City. About one-eighth of the converts reside in South Gujarat. Christians form 11 per mille of the City population. Nearly 90 per cent of Parsis are in South Gujarat, where they form 16 per mille.

A map is attached facing this page which illustrates the distribution in the different divisions. It shows also under Hinduism the proportion of the depressed classes. As to what are included under such classes, the reader is referred to the next chapter.

369. Variations in the Different Religions : Study of Absolute Figures

—We can discuss the variations by absolute figures and then by proportionate figures. Subsidiary Table I works out both ways for four decades and five censuses. Taking the dominant religion first, we should expect that the variations

DECADE		Variation amongst Hindus	Variation in population changes
1891-1901	.. ..	-27.63	-19.15
1901-1911	.. ..	+ 9.74	+ 4.1
1911-1921	.. ..	+ 2.6	+ 4.6
1921-1931	.. ..	+23.48	+14.9

in it should conform to the movement in the general population. But on the other hand there is little correspondence. As Hinduism did not formally accept converts (until recent years) the increase or decrease amongst them has been hitherto largely due to the caprice of the enumerating staff who converted the tribal aborigines to Hinduism, or reverted them back to their primitive faiths, much as they themselves willed. Wide

discretion in the past was left to them as to whom they should include as Hindu. Elaborate tests were laid down, which because of their very elaborateness crumbled at the least touch of practicality. It was because of this capricious fluctuation in figures that the late Mr. Sedgwick in the 1921 Bombay Report advised, as a sheer counsel of despair, that the class of Animists should be abolished and their figures included under the Hindu total. This would have been unscientific as it would have really obscured the essential differences between Hinduism and Tribal beliefs. But since then, the influence of modern ideas has so ordered the march of events that Hinduism has now become amenable to definition ; something like a creed can be now formulated for it, and its religious organisation has improved and acquired a missionary character, which in this State at any rate has brought about a real change in the figures. It has been well said that although Hinduism is doomed to die, it is determined to live. The practically wholesale absorption into its ranks of tribal aborigines almost everywhere, except in the two mahals of Songadh and Vyara, is the most conspicuous feature of this year's religious census. The enumerators were specially enjoined to take down whatever religion was returned and to use as little discretion as possible, and that too only where, in regard to such of the forest tribes as were too ignorant to state their faith, their caste or tribe names were to be written in the column of religion. In 1921, some discretion was left to the enumerators to find out whether these persons really knew anything of Hinduism. This discretion was left on this occasion to the compilation stage, but as pointed out already very few adjustments were really required, as these tribes themselves had been sufficiently prepared through sustained propaganda to enter "Hinduism" in the returns. In Central and South Gujarat this Hinduising movement was reinforced on the one hand by the political movement having its centre in Bardoli, and on the other, by a genuine desire amongst the tribes themselves to give up their rude divinities for the gods and goddesses of the Hindu pantheon. This latter movement is of old date, but in 1922-23, the *Mata* revival with its astonishing, though somewhat transient, developments, gave significant force to this Hinduising wave. The widespread changes in social habits, which resulted, will be studied elsewhere in this Report, but in the meanwhile, it is sufficient to state that the movement had a permanent effect on the religious attitude of these tribes and to conclude that the true Animist strength is not very much more than the figure of Tribal as disclosed in the census.

370. Variations in Hindu and Tribal—

The above considerations would only justify us to regard the increase of 23.5 per cent in the Hindu total as real, but for the sake of comparison with previous censuses, the figures of Hindus and Tribals (formerly called Animists) should be taken together and their variations calculated. The margin does this and shows that there

DECADE		Variations in Hindu and Tribal
1901-11	..	+ 5.2
1911-21	..	+ 5.2
1921-31	..	+15.3

is great similarity between these variations and population changes, although the rate of increase amongst Hindu and Tribal sections taken together is a little higher than the general rate of movement. If we exclude from the Hindu and Tribal totals of 1931, the figures of *hijratis*, the rate of variations is reduced from 15.3 to 13.9 per cent. If the aborigines (both Hindu and Tribal sections) are excluded from the Hindu totals, the rate of increase is 14.4 per cent.

371. Variations in the Strength of Tribal Hindus estimated—The Raniparaj consists of eighteen tribes. These number 312,051 in this census. In the 1921 Census Report, an attempt was made to estimate the real strength of Hinduism amongst the Raniparaj aborigines. Two tests were employed. First was that as soon as a Raniparaj tribe began to claim Rajput descent and acquired all the incidents of a Hindu caste, Hinduism may be said to have become an active influence. The second test, *i.e.*, the test of language as a criterion of Hinduism is however proved to be not very satisfactory (*vide* Chapter X). It was held that as soon as a tribe had become sufficiently Hinduised, it began to abandon the tribal language. This is not true so far as Chodhras, Bavchas, Vasawas, Dhodias and Central Gujarat Bhils are concerned. They have stuck tenaciously to their languages and yet Hinduism has become an intenser force with them than ever before. So language fails as an adequate test. But as the reverse proposition is not true, namely that in proportion as a tribe adopts Gujarati it forsakes Hinduism, the language test helps to fix the minimum

strength of Hindus amongst the Raniparaj. The estimates for 1911 and 1921 were calculated in the last Report and are given in the margin. For 1931 the calculation must proceed on the known fact that Central Gujarat sections of these tribes have gone over bodily to Hinduism and that in South Gujarat, Chodhras and Dhodias, although showing great attachment to their own dialects are predominantly Hindus. The Raniparaj are divided accordingly into two broad divisions—(i) those who have wholly given up their old dialects and adopted Gujarati or Marathi and (ii) those who have only partly done so. The strength of the first is 89,733 (*vide* para 342 *supra*) and of the second is 222,318. Of these latter, only 41,934 speak Gujarati and Marathi. Thus 89,733+41,934 give the minimum strength of Hinduism amongst the tribes, which is 131,667. Add to this the figures of Bavchas, Chodhras and Dhodias, and the speakers of Bhil dialects in Central Gujarat and we get 229,920 as the estimate on the basis of the above tests of Tribal Hindus. These estimates form a better basis than the census for gauging the actual rate of absorption of these tribes by Hinduism. As the margin shows, although the strength of the tribes grew in 1911-21

YEAR		Estimate of Raniparaj Hindus according to the tests laid down	
		Raniparaj Hindu	Raniparaj Tribal
1911	..	104,685	142,241
1921	..	119,935	138,512
1931	..	229,920	82,131

by nearly 5 per cent, the Hindu section increased by over three times as much. In the latest decade, their numbers have grown by over four times the general rate of increase amongst the Raniparaj. The strength of aboriginal beliefs has declined proportionately since 1911; the last census showed that they were wiped out in certain areas and are now surviving only in their forest fastnesses. The census return of

DECADE			Variation per cent among		
			Tribal Hindus	Tribal Aborigines	Total Tribal strength
1911-21	..	..	+14.6	— 2.6	+ 4.6
1921-31	..	..	+91.9	—40.7	+20.7

Tribals is only about half of the above estimate: showing that the process of absorption is even more complete than the tests worked upon as above would indicate. If the estimates made above are accepted, then allowing for the general rate of variation of 20.7 per cent to operate, the number of Tribal aborigines should have become 167,284 in 1931, but instead it is only 82,131; thus 85,153, or nearly 30 per cent of the mean strength of the Raniparaj in the decade passed over to Hinduism since 1921. If we accept the return of Tribals in 1931 as approximately correct, as I myself am inclined to do, then on the basis of our above estimate for 1921, the number of aborigines claimed by Hindus during the last ten years, would rise to 122,394 or nearly 43 per cent.

372. Variation amongst Muslims—The variations amongst Muslims are little affected by any inaccuracy of record and are therefore governed by real causes. The Muslims shared in the general decrease in 1901, but their decline in 1911 was particularly put down to the effect of migration in South Gujarat. In the

DECADE	Variation per cent among	
	Muslim	General population
1891-1901	-12.6	-19.15
1901-1911	- 2.5	+ 4.1
1911-1921	+ 0.9	+ 4.6
1921-1931	+12.5	+14.9

decade that followed, the Muslim strength remained stationary, their adult population—particularly in the City being thinned down by the joint influence of emigration and also of the epidemics of influenza and plague that harried the period. In the last decade the increase amongst Muslims has been due to natural causes. The extra Indian migration more or less stopped: the community on the other hand received many accessions to its strength in the last ten years through the repatriation of thousands of their

compatriots who had settled in South Africa. The Muslims received hardly any adventitious aid from the *hijrati* factor. There is little doubt also that the Muslim gain through conversion is practically nil. The rate of increase therefore is less than the general rate and far less than amongst Hindus.

373. Variations in other Religions—The variations amongst Jains also are an accurate record of real movement. There is no reason to suppose that Jains

DECADE	Variation per cent among			
	Jain	Parsi	Christian	General population
1891-1901 ..	- 4.1	+ 2.5	+ 1,090.6	- 19.15
1901-1911 ..	-10.0	- 5.4	- 6.4	+ 4.1
1911-1921 ..	- 0.5	- 5.3	+ 3.0	+ 4.6
1921-1931 ..	+12.0	- 5.4	- 2.1	+ 14.9

wish to pass off as Hindus. As a commercial community they enjoy a high status, but in social observances they are indistinguishable from Vanias of the Hindu persuasion. The return at least for the last three censuses has encountered no difficulty. There was no Vania returned who had left the column of religion blank. There were

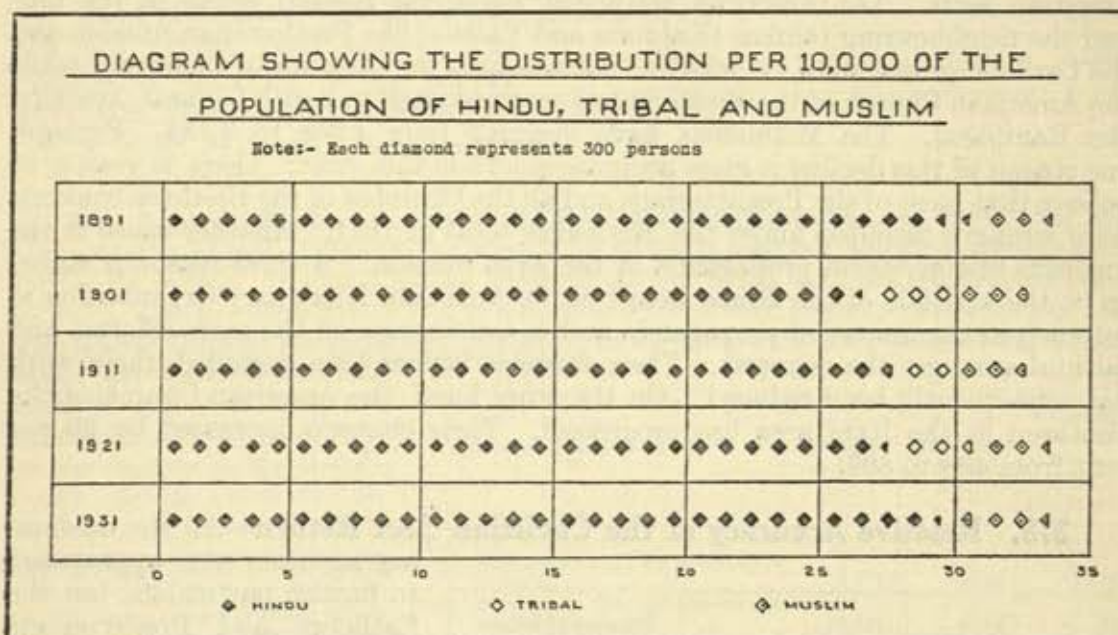
also no Jains found who had left the caste column unspecified. They are an educated community and particulars about them could be readily compiled. This community has suffered until the latest census through emigration. In 1921, the figures should have shown an increase, but for the fact that in 1911 there was a large gathering of Jains at Gandevi on the census day and the Jain total for that census was unduly swollen on that account. The decrease in 1911, which was heavy, was put down to emigration. The increase amongst Jains in 1931 is 12 per cent and is due to gain through migration (probably owing to the factor of the returned emigrant) and to natural causes. The Parsis increased slightly in 1901, but since then have consistently declined. Their rate of natural increase is generally lower than in other religions as their families are usually small sized; and the Navsari Parsi emigrates as soon as he is able to earn a living. The Aryas have an active mission in the City and their alliance with the Hindu Sabha has helped them in winning converts by hundreds from the Christian fold and stemming effectively the tide of Muslim conversion in Gujarat. The actual decline amongst the Christians is 159 but if they had the advantage of the same rate of natural increase as the others, the Christian total in 1931 should have been 8,334 or an increase of 913. Thus, the real decline is 1,072. The Aryas during the same period have increased from 645 to 2,801. I am inclined, therefore, to attribute half at least of the gain amongst Aryas to re-conversion amongst Indian Christians in the State.

374. Variations in Proportionate Figures—The above discussion has now prepared us for the study of changes in the religious distribution from census to census. The variations in the proportionate figures since 1891 are detailed in columns 3 to 7 of Subsidiary Table I. The figures are given there by natural divisions. The differing rates of variation in the religions when compared with

the general rate of variation give the clue to the changes in the religious distribution. Thus Muslims and, to a smaller extent, the Jains decreased less than the general population in 1901; that is why their position in the distribution improved in that year. In 1911, their decline in numbers accounted for their

appreciable drop in their proportionate strength. In 1921, their practically stationary strength in absolute figures, while the population rose by nearly 5 per

RELIGION	Proportion per 10,000 of the population				
	1891	1901	1911	1921	1931
Hindu	8,850	7,922	8,351	8,196	8,809
Tribal	184	767	568	903	124
Muslim	781	845	791	763	747
Jain	208	247	214	203	198



cent, helped to deteriorate their proportions still further. In the present census, the phenomenal increase amongst the Hindus has depressed still further the relative strength of the other groups.

375. Comparison with All-India Results—It will be interesting to compare the variations in the different religions in the State with all-India figures. Only the provisional totals are to hand but the all-India variations since 1921 help us to understand how far the factors of migration and re-conversion have influenced the State figures. The Hindu increase in this State is more than twice as large, showing that the gain from Tribal is larger here than in other parts of India. The Muslim rate of growth is the same in both cases, proving that the increase is unaffected by migration. The Jain gain here is nearly six times as large—industrial depression possibly has driven many Jain families back to their homes in the State, but perhaps the all-India figures are not quite complete. The Parsi figures are not complete, but even then it illustrates how much the community in this State suffers from emigration. The loss through this cause must be put down to at least 10 per cent.

RELIGION	Variation per cent since 1921 in	
	This State	India
Hindu	+ 23.5	+ 10.0
Tribal	— 72.5	— 26.9
Muslim	+ 12.5	+ 13.1
Jain	+ 12.0	+ 2.3
Christian	— 2.1	+ 25.4
Zoroastrian	— 5.3	+ 5.1

§ 2. DISTRIBUTION AND VARIATION OF SECTS

376. The Sect Return : Its General Accuracy—Following the precedent of other years, this census undertook an elaborate record of sects. The general results are compiled in Imperial Table XVI-B and C and State Table XVII. The proportions regarding sects of Christians are set out in Subsidiary Table II and those in respect of Hindu sects for three censuses in Subsidiary Table IV. As pointed out in para 365 above, special care was taken in instructing the staff about the nature and name of sects, and in respect of Christian denominations, the co-operation of missionary bodies was freely sought to test the accuracy of the figures. As will be shown presently, the census figures make a fairly close approach to the truth.

377. Sects of Christians—We shall deal first with the figures relating to Christian sects. The American Methodist Episcopal Mission works in the City and the neighbouring talukas (Kahnam and Vakal) ; the Presbyterian mission and the Catholic propaganda vie with the Salvationists for the souls of Charotar ; while the American Church of the Brethren has confined itself to South Gujarat, amongst the Raniparaj. The Methodists have declined from 4,958 to 3,185. Perhaps, one reason of this decline is more accurate record in this year. There is reason to believe that most of the Presbyterians and all the Churches of the Brethren converts were wrongly included under the Methodist total in 1921. Another cause is the vigorous re-conversion propaganda of the Arya mission. A third reason is stated to be the attitude of the Home Board of the American Missionary Organisation to retrench in the matter of propaganda and to concentrate on the more efficient and faithful amongst the converts. Their finances having been curtailed, their work has consequently been reduced. On the other hand, the American Church of the Brethren in the Rani area has progressed. Their converts increased by 80 per cent from 498 to 897.

378. Relative Accuracy of the Christian Sect Return—All the mission-

NUMBER OF SECT	Locality	Number of Indian Christians according to	
		Census of 1931	Mission Estimate
Methodist Episcop- alian.	Kahnam and Vakal ..	3,168	2,247
Church of the Bre- thren.	Rani and Semi-Rasti.	740	1,200
Roman Catholic ..	Charotar	1,961	Not avail- able
Presbyterian ..	Central Gujarat ..	213	Not avail- able

ary agencies were approached to furnish particulars, but the Catholics and Presbyterians could not give details, while the principal agency, the American Methodist Episcopal mission, gave full details. Steps were taken to appoint Christian enumerators from these denominations so that no grounds for complaint could arise. As the above figures show the estimate of the Methodist mission is actually less than the census

record while the Vyara mission in Rani claimed 460 converts more than the census figure. This point was enquired into through local officers and I have assured myself that this claim cannot stand.

379. Variations in the Number of Christians—Subsidiary Table II shows that Indian Christians really began to figure appreciably in the returns in 1901. In the two previous censuses, their number was well under a thousand, mostly concentrated in the capital and round about it. The famine of 1900 brought a goodly crop of "rice Christians", and the 1901 figure showed an increase of over 1,000 per cent. In 1911, the tide of conversion receded somewhat and 1921 saw a small increase. The present census has however registered a decline of 2 per cent, but it is more serious in Central Gujarat (13.8 per cent) than anywhere else. The Christian settlements in North Gujarat and Kathiawad are mostly railway employes and others in similar occupations. In the Southern portions of West Kadi, bordering on Viramgam, the Irish Presbyterian mission has begun some kind of activity without much success so far.

380. Race, Caste and Tribe of Christians—Of the Christians, the Indians

number 7,064 and Europeans and Anglo-Indians only 198. The Indian Christians by caste and race are distributed as in the margin. The largest number is returned under Indian Christian unspecified. The next largest total is under Vankar (1,519) who form over 21 per cent. Goanese and Feringhis are lumped under "Portuguese Indians" and are, therefore, rather larger in number than in 1921. Under "Unspecified" must have come large numbers of "Depressed Classes" converts, who did not return their castes. The families of converts, in the second and third generation, generally forget or wish to forget their caste of origin.

NAME OF CASTE OR TRIBE	Strength in 1931		
	Persons	Male	Female
Bhangi	8	5	3
Chamar	82	50	32
Kanbi	11	9	2
Maratha	1	..	1
Pathan	7	4	3
Portuguese Indian ..	196	113	83
Primitive and Forest Tribes	538	328	210
Shenva	88	47	41
Turi	22	11	11
Vankar	1,519	810	709
Indian Christian Unspecified	4,592	2,358	2,234
Total ..	7,064	3,735	3,329

381. Sects of Hindus—Coming to the distribution of Hindus by sects, it may be said that except in respect of Devibhaktas there is no reason to complain about the relative accuracy of the results. In 1921, a scheme of classification of Hindu sects was adopted, according to which, a fairly comprehensive idea of their nature and of their relations *inter se* can be had. This scheme has been continued this year also. In the margin the main heads of this classification are shown with their strength and their variations in each since 1921. Some note on the changes in the classification should, however, be made here. Parnamis who were treated as a Guru-worshipping cult in 1921 have been transferred, on a closer review of its doctrines, to Class II. Satya Keval is now found to be another name for Kuber panth and is, therefore, transferred from Class II to III. Saji Sawai and Nakalanki now belong to Class V. With these changes, the proportions and variations in the marginal table have been worked out. Class I has quadrupled itself, owing to vigorous Arya proselytisation. Class II shows a large decline but this is apparent as large numbers of Bijapanthis have returned themselves as Ramade Pirs, and to that extent, the ranks of Guru-worshippers have swollen. It is important to remember that the Guru-worshipping cults are developments from the body of Pauranik and Vedic Hinduism and the only point where they differ from the particular branch from which they have broken away is round the personality of their founder whom they have deified so much that such deification has remained, to the exclusion of other doctrines, the most significant element of their ceremonial. Thus the Santram panth has grown out of the Shaiva cult. The Kuber panth is similarly a deflection from the Ramanuji system of Vaishnavism. So are the Gopinath panthis. The Ram Sanehi and Ravi Saheb sects are similarly outgrowths of the central Vaishnava doctrine. The orthodox sects—Shaivas, Vaishnavas and Shaktas—which form the great bulk of Hinduism have increased only by a little over three per cent. This is due largely to the fact that in 1921 by an arbitrary distinction 30 per cent of the believers in Shakti were shown as Shaktas and 70 per cent shown as Devibhaktas. Thus we obtained 84,988 Shaktas and 198,306 Devibhaktas. In the present census, a stricter and more accurate record as already mentioned, was insisted on. Only those worshipping the recognised goddesses of Pauranik Hinduism were recognised as Shaktas. That is why Shaktas have declined from 84,988 to only 53,133. It is also one of the reasons why the Devibhaktas have jumped from 198,306 to 510,038. The other and the chief reason however of this extraordinary rise is that the Hindus amongst the forest tribes have increased from 95,370 to 267,161, and all these unclassifiable Hindus have been grouped under the convenient name of Devibhaktas. It is proper, therefore, to exclude all Shaktas from the total of Class IV in the two censuses in order to get at the true rate of variation in this most important group of

HEAD OF CLASSIFICATION	Strength in 1931	Percentage of total	Variation per cent since 1921 (+ or -)
(i) Movements of comprehensive reform	2,871	0.13	+300
(ii) Movements checked by defence of orthodoxy	110,157	5.12	- 36
(iii) Guru-worshipping cults	83,427	3.88	+407
(iv) Orthodox sects based on Vedic and Pauranic Hinduism ..	1,327,800	63.79	+ 3
(v) Sects on the borderland of Hinduism and Islam ..	15,586	0.72	+84.5
(vi) Sects tending towards Tribal beliefs	551,361	25.62	+159
(vii) Hindu unspecified, etc. ..	15,869	0.74	+552

Hindus. After this is done, we find that the rate of increase rises a little but only up to 6 per cent. This is much lower than even the State average of natural increase; and the main reason is that other sectaries notably Guru-worshipping cults have increased at the expense of the orthodox body. To a smaller extent, the element of "Hindu unspecified" which looms rather more largely in this census than in the last accounts for this slower rate of increase. A third reason for the slower rate of increase amongst the Vaishnavas and Shaivas is that their followers belong to relatively higher strata of society which propagate much less than the lower classes of Hindus.

§ 3. CERTAIN FEATURES OF THE SECT RETURN ILLUSTRATIVE OF RELIGIOUS TENDENCIES

382. Proportionate Distribution of Main Heads since 1911—Having considered the

CLASS	Proportionate strength per 10,000 Hindus in		
	1931	1921	1911
I—Movements of comprehensive reform	13	4	4
II—Movements checked by defence of orthodoxy	512	988	1,270
III—Guru-worshipping sects	388	94	70
IV—Orthodox sects of Vedic and Pauranic Hinduism	6,379	7,630	7,299
V—Sects on the borderland of Islam and Hinduism	72	49	36
VI—Sects tending towards Tribal beliefs	2,562	1,221	1,265
VII—Hindu unspecified	74	14	56

variations in absolute figures, it will be useful to turn to proportions. It is interesting how year after year the Guru-worshipping cults are claiming more and more adherents from the main body of orthodox Hinduism. 39 per mille of Hindus belong to one or other of these groups. The main body of Vedic and Pauranic Hindus has declined by 1,251 per 10,000 in the last 10 years. Sects on the fringes of Islam have increased their proportionate strength a little. The vast body of Animistic Hindus (Class VI) have

increased by 159 per cent. But this proportion is calculated on the 1921 Census figure of Tribal Hindus which we have rejected. We have calculated that something like a lakh and a quarter of aborigines have passed to the banner of Hinduism. Most of these are Devibhaktas and compiled in Class VI. The remainder of the increase under this head must be put down to the fact that the castes and tribes, generally given to the worship of the Mata of the indeterminate kind breed much more rapidly than more advanced social strata.

383. Brahmos and Aryas—Certain of the sects require individual treatment. We have seen in the marginal table attached to the previous paragraph that Class I although small in numbers has increased by 300 per cent and advanced its proportionate strength from 4 in 1921 to 13 on the present occasion. This is almost entirely due to the vigour with which the Arya mission has developed its work, though the Brahmos also have increased their modest total from 35 to 70. The Aryas now number 2,801. Nearly three-fourths of them are found in Central Gujarat including the City. Navsari town is another large centre, but it is remarkable how the Arya mission has worked in particular rural centres like Itola, Ranoli, etc., and met with much success in re-converting the Christian convert, the Tribal Bhil and even the Muslim Koli. Their appeal is to nationalist sentiment and as representing the church militant of Hinduism, they prefer to work their reforms on the traditional plan. Very few Aryas of the State observe the reformed *anusthan* (rituals) of the *samaj*. Marriages are usually confined to their own castes and other ceremonials follow the orthodox pattern in most cases. The Arya Kumar Ashram in Kareli Bag in the City however works more on *anusthanic* lines and carries on regular services on the basis of the exalted ideals of the late Swami Dayanand, the founder of the movement. The Brahmos are confined to the City and Navsari town and a few other places. About nine families belong to it. No branch of the Calcutta organisation exists here nor is there a regular service. A joint theistic service with the Arya Samaj is however occasionally held in the City. In its own home, in Bengal, the Brahmo movement still retains something of its old vigour, although its eclectic attitude towards the great world religions seems to have led its present organisers to become lukewarm about increasing their numbers. But in its protest against orthodox Hinduism, it is still radical and thorough going, far more so than the Arya Samaj, as most of its members are *anusthanic*, i.e., observing

to the full, all the reformed ceremonials. The community, as Mr. Edward Thompson* points out, in its prime was and still is, "rich in intellect, and in artistic ability the most gifted group in the world." Generally the attitude of orthodox Hindus towards Brahmos and Aryas is changing. The Hindu Mahasabha has now made the definition of "Hindu" wide enough to include them; and on their part, Aryas and Brahmos have advanced eagerly to claim the Hindu name and share the benefits of its all-embracing organisation. The two reform sects have influenced profoundly the attitude of educated Hindus generally, in raising the age of marriage, the removal of *purdah*, the emancipation of women and all other matters of social reform, but their membership does not increase as fast as the spread of education would lead one to expect. Aryaism indeed has multiplied but their numbers are still infinitesimal and they have grown more at the expense of Christianity, aboriginal religion and even of Islam, than Hinduism. In fact as education advances, orthodoxy slackens its shackles and the liberal-minded Hindu does not have the same need of going out of his way and joining these reform organisations as before.

384. Vaishnava Sects—The four principal Vaishnava sects are Vallabhachari, Swaminarayan, Ramanandi and Ramanuji, of which the first two belong to the *classes* as opposed to the third which is a popular denomination to which the *masses* (including the bulk of the depressed classes) belong. The Ramanujan system, the earliest departure from the orthodox monistic position of Shankara, was founded in A. D. 1150 in South India and made a stronghold for itself in South Deccan. In Gujarat, its followers are confined to those Brahmans who are not Shaivas and the few Vanias who do not belong to the Swaminarayan or Vallabhachari sects. The Ramanuji Shri Vaishnava doctrine takes the earliest phase of Vaishnavism and in its conception of a personal monotheism may be said to make, next to Brahmoism and Arya Samaj, the closest approach to the Christian religious position. The Vallabhachari and Swaminarayan sects are based on Krishna worship. The Ramanandi system, started by a disciple of Ramanuj (A. D. 1300-1400), turns to the more austere and human figure of Ram as the pre-eminent *avatar* of Vishnu, insisting on virtue, mercy and charity. The decrease in Ramanujis is more apparent than real. Ramanuji is often mistaken for Ramanandi, as the former sect is not very well known in the State and the census staff are apt to confuse between the two. The decline therefore amongst the Ramanujis must be explained by the abnormal increase amongst the Ramanandis: judging from the figures of the previous censuses, and applying the general rate of Vaishnava increase, we should put the corrected figure for Ramanujis at the present time at 117,060. The deficit of 68,543 required to make up this total must be met from Ramanandis whose correct figure is therefore reduced to 516,100 which gives them 7.9 per cent as their true rate of variation. The Vallabhachari decrease is remarkable, being continuous since 1901. The adherents are all respectable and educated groups. The sect is very well known and there can be no doubt that its record is unambiguous and correct. The decrease is therefore real; as the castes from which its adherents are recruited are increasing in numbers, the decline in numbers of this sect must be put down largely to deflection to other denominations, as seen in the rise of the Swaminarayan sect—a relatively modern movement of dissidence dating from about the beginning of the nineteenth century. The Swaminarayanis have gained in numbers, by about 33 per cent since 1911. They have also grown in wealth and importance. Part of the decrease amongst Vallabhacharis must be put down to the attitude of their younger sections who are indifferent to their doctrines and are apt to be rebellious against the influence of their high priests or *Maharajas*. The present movement of nationalism in Gujarat with its insistence on personality and idealisation of poverty and service has also had a great deal to do with turning men's minds away from the somewhat florid and colourful ritual of Vallabha's creed. "He took up the doctrine of *lila*" as an efflorescence from the Supreme Being, "and made of it a bright-hued and gorgeous ritual. 'If the human soul is identical with God'—said this Vaishnava prophet 'the practice of austerities must be discarded as directed against God and it is rather by a free indulgence of the natural appetites and the pleasures of life that man's

SECT	Number	Variation since 1921
Vallabhachari ..	153,818	— 3.4
Swaminarayan ..	71,246	+25.0
Ramanandi ..	584,643	+22.0
Ramanuji ..	45,813	—58.0
Vaishnava unspecified.	57,271	+10.2
All Vaishnavas ..	922,340	+ 7.4

Vallabhacharis	
YEAR	Variation with 1901 as 100
1901 ..	100
1911 ..	94
1921 ..	87
1931 ..	84

* In *An Indian Day*, page 36.

love for God will best be shown.' * Thus the worship of Vishnu developed into an elaborate system of erotic theism concerning itself exclusively with the mythical incidents of the life of the infant Krishna (Bal Gopal) in Vrindavana. The doctrine of Bhakti was interpreted into absolute self-surrender to God and even to His earthly representatives. Much of the sexual license resulting therefrom has now happily disappeared through the influence of education."† The Swaminarayan was started as a kind of Puritan reaction against emotional excesses to which the Vallabhacharyan sect was prone. But their advance in wealth and social importance has weakened their original Puritan strictness of attitude in many matters.

385. Sects bordering on Islam—The Hindu and Muslim sections or Pir-worshipping

Worshippers of Muslim Pirs and Saints	1931	1921	1911
Hindu	15,586	8,015	5,714
Muslim	2,365	2,001	2,102

sectaries together number 17,951 and have more than doubled themselves since 1911. The Hindu sects bordering on Islam have increased by nearly 85 per cent since 1921, while the Muslim Imamshahis have grown by 18 per cent only. The gain amongst the Hindu section must be to a certain extent discounted by the fact that the Matia Kanbis' total has risen from 431 to

3,530. This latter figure includes 2,920 *hijratīs*, by excluding whom, the true rate of increase amongst the Satpanthis or Piranas is reduced to 50 per cent. Even then, the rate of increase is very high as compared to the Muslim section, whose figures are small and show a net increase of only 13 per cent in the last 20 years. Many Matia Kanbis have left the Pirana fold and gone over to Vaishnavism of the usual pattern or to Arya Samaj. Many prefer to call themselves "Hindu" Pirana. The tendency for these borderland sects to affiliate themselves to Hinduism is obviously on the increase and will result in the near future in the total absorption of these Piranas into the fold of Brahmanism. The recent decision of a Shankaracharya to exclude these Satpanthis from Hinduism was widely resented by these people; thereupon the Hindu Sabha not unnaturally took steps to repudiate promptly the Hindu divine's decision and to reclaim these *refusés* back to the Hindu fold. On the other hand, there was amongst the Pirs, one missionary of Islam, who achieved some notable success in the decade amongst his Hindu following, by which he helped to swell the numbers of the Hindu section of Pir-worshippers. In South Gujarat the success of Maulana Pir Motamiyan of Mangrol is noteworthy. He belongs to the famous Chistiya order of saints. The founder of his family in India was Baba Ferid (circa 1150 A. D.) of Ajudhan. The latter attained a foremost place in his time as a missionary of Islam and became the sole deputy of Khwaja Moinuddin Chishti of Ajmere. Baba's descendants came over to Gujarat about 400 years ago and established a religious seat at Mangrol (Navsari *prant*). The present occupant of the *gadi*, Pir Motamiyan III succeeded his inheritance in 1915. Educated in the modern learning, he worked with credit in Baroda and Sachin States, before he became the head of his order. The remarkable feature of his teachings is his endeavour to keep alive a real *entente* between Hindus and Muslims by insisting on a high reverence for the cow working on the basis of the underlying harmony between Islamic and Vedanta philosophies and allowing full liberty to his Hindu followers to retain their Hindu name and continue their old social relations. His non-insistence on a formal conversion in a large measure explains the increase in the numbers of Hindu *Satpanthis*. The Pir is credited with about a hundred thousand followers in Surat and Khandesh districts and Navsari *prant*. It is remarkable that this success has been achieved in spite of the frowns of Muslim orthodoxy.

In 1921, it was pointed out that Islamic reform concerned itself mainly with the removal of the taint of man-worship, caste system and idolatrous tendencies. "In Gujarat these tendencies are seen in the orthodox hostility towards Pirana sectaries, the growing desire for knowledge of Urdu and the anxiety to provide through its means religious instructions for Muslim children."‡ In the decade that was closed by the Census of 1931, these tendencies were deepened. The linguistic reactions have been already dealt with in the Chapter on Language. The restiveness amongst the Khojas against the personal authority of their religious head was seen in the development of the *masidia* movement in Kathiawad. The Ismailia Bohras in Sidhpur and elsewhere, were still under the rule of their Mullahs, but the stirrings of the younger section among them, so noticeable in Bombay City, against priestly domination and the administration of *wakfs* (religious trusts), were not without their echoes here. But the chief religious movement amongst Muslims in the State was the triumph of the reform party in 1924 in taking over

* Vide Article *Hinduism* by Dr. Julius Eggeling, *Encyclopædia Britannica*, Vol. XIII, page 510.

† Baroda Census Report of 1921, page 124.

‡ Baroda Census Report, 1921, page 135.

the management under the guidance of the State authorities, of the Juma Masjid—a Shahi Mosque—under a committee of educated personnel, its renovation at a large expense, the increase of its income, and the spurring on to new life of its ancillary organisations like its library, boarding, etc. Much greater attention than hitherto began to be paid to the education of Muslim youths. All the Muslim organisations, also in the City and elsewhere, actively co-operated with the authorities, in keeping back communal bitterness from the State.

386. Sects among Jains—The sects of Jains were easy to compile. The three main groups are well-known; there was no reason to suppose falsification of returns. The element "sect unspecified" only forms about 2 per cent, as against 6.2 per cent amongst Vaishnavas, but this is more due to the carelessness of enumerators than to indifference of Jains themselves. The feature of the variations is the increase amongst the Sthanakwas (the non-idolatrous Jains)—which is continuous since 1911, and the equally persistent decline amongst Digambaris. The Svetambaris are the predominant sect amongst the Jains and retain amongst its members, the bulk of the wealth and public enterprise of the community. The chief feature in Jain religious activity in the decade, apart from petty squabbles between *sanghvis** and anti-*sanghvis*, is the organisation of a campaign against the taking away of immature youths from the bosom of their families and initiating them to monasticism. Here is a cause of fission that goes straight back to the antique origins of the Jaina faith. In essence a monastic system, it has exalted renunciation as the perfect mode of conquest of the passions. Throughout its history, Jainism has carried with it the germs of this conflict between the monastic and the lay attitude towards life. In the last decade this conflict came again to a head and caused much bitterness and social disruption. On the one hand, the monastic case was well represented by Jain religious *munis*, notably Shri Ram Vijayji, who exalted the ascetic ideal, justifying the policy of recruiting *sadhvis* and reinforcing their arguments by oratory of a very high order. On the other, the secular case was persistently brought before the public through an active press propaganda, in which the inevitable abuses with consequent disruption of family life were emphasised and brought home to the Jain community. The State has responded by bringing in a bill to remedy the abuses, which is before the public.

JAIN SECTS			
Sect		Strength	Variation since 1921
All Jains	.. ..	48,408	+12.0
Svetambari	.. ..	39,350	+11.6
Digambari	.. ..	3,487	— 4.7
Sthanakwasi	.. ..	4,680	+32.8
Unspecified	.. ..	891	+15.3

387. The Mata Movement†—Finally the special reactions of the Mata movement must be briefly referred to before this chapter is concluded. The ordinary features of aboriginal religion are recorded in the note on Primitive and Forest Tribes in the Caste Glossary (Appendix IX). The absorption of aborigines gradually into the Hindu religious organism in an old process, as stated already in para 369 above. The description of that process in Sir Edward Gait's Census Report of 1911 cannot be bettered and is here given :—

"An aboriginal tribe in an environment where Hindu influences are strong comes gradually and half unconsciously to adopt Hindu ideas and prejudices, to take part in Hindu festivals, to attend at Hindu temples and to pay a certain amount of homage to the Brahmans. Some degraded member of the priestly caste, or perhaps some Vaishnava Gosain in search of a livelihood, becomes their spiritual guide; and as time goes on, the difference between them and their Hindu neighbours, in respect of their social customs and outward religious observances, becomes less and less marked, until at last they are regarded by themselves and their neighbours as regular Hindus. The change takes place so slowly and insidiously that no one is conscious of it. There is no formal abandonment of one ritual for another. Sometimes it happens that a tribe is thus divided into two sections, the one Hinduized and the other still Animistic. In such cases open proselytisation often takes place amongst the unregenerate. The theory seems to be that the latter have lapsed from a higher state, and the Hinduized section of their community make no difficulty in admitting them after they have performed such ceremonies of purification as may be prescribed by their spiritual preceptors."

The Mata movement started in November 1922. The great curse amongst these primitive tribes is their addiction to drink. A certain amount of temperance propaganda had been carried on among them previous to 1922 actuated by genuine temperance motives on the part of the Raniparaj teachers and others who did not share in the vice of their fellow tribesmen.

* Those who lead and organise a pilgrimage to Jain Shrines.

† Abridged from notes supplied by me to Mr. P. W. Sergeant, for his *Ruler of Baroda, Chapter XXV*.

This had provoked occasional counter-activity on the part of the liquor dealers, but no serious disturbance had occurred, the propaganda being largely futile from the point of view of temperance. In November 1922, an extraordinary change came over the Raniparaj people. An invasion of *gaulis*, religious zealots of the primitive revivalist type, came from Baglan (in Nasik) and swept through the Songadh taluka, a Bhil stronghold. At the start there was much crude magic in their ceremonies with the brandishing of the red cloth (*selu*) which symbolised the sweeping away of the old divinities. The *gauli* usually worked himself into a frenzy of excitement and by means of incantations, declared the complete extirpation of the old gods and goddesses. "There runs Sailibai" the *gauli* would shout "there goes Devlibai"; and in place of the banished deities the goddess Bhavani, a form of the *sakti* of Shiva, was installed. Her cult involved the observance of cleanly habits, abstinence from drink, and vegetarianism. In consequence the converts sold their poultry and sheep for a song, the profiteers, mostly Parsi or Vohra, reaping a rich harvest. From Songadh, the movement rapidly spread to Vyra and Mangrol everywhere destroying the drink pots, scattering the poultry and demolishing the old animistic images and gods. In Mahuva, the *gaulis* began to train up others in the practice of *dhun* (religious trance) in which condition, religious mandates were given and prophecies uttered. Here in Mahuva the Chodhras and Dhodias more educated than the rest, gave a more secular aspect to the movement. The pseudo-*gaulis* speaking Gujarati took the place of the Khandesh evangelists. Also temperance workers not belonging to the tribes began to take advantage of the movement about January 1923—when a large conference was held at Shekhpur in Mahuva taluka in which the movement was given a definitely agrarian turn; the class consciousness of the Raniparaj, against the Parsi liquor interest which had maltreated them in the past, was sought to be roused. In Rani and Semi-Rasti, there was almost complete cessation from drink for some months. Agitation became more and more secular and violent, but the religious interest was organised on a more permanent basis under Hindu influence. The whole of 1923 was occupied in this organisation. *Bhajan* meetings were held everywhere and became a regular feature of aboriginal life: attempts to give *diksha* to educated tribesmen were made and advantage was taken of the anti-drink movement to introduce changes in food, dress, habits, etc. While the anti-drink fury and the class-war subsided, as they were bound to do, these changes in religion and social attitude have persisted and tended to become permanent. The ritual observances of higher class Hindus began to be copied and Brahman priests came to take an interest in these matters and assist in the domestic ceremonies. The tribal organisation in respect of Dhodias and Chodhras was re-shaped according to the Hindu pattern. Hypergamy established itself amongst Chokapura Chodhras and Chuvani Vasawas. Claims to Rajput descent became more clamorous and insistent. And the local Arya Samaj fanned the flame by investing some of the "Bhil Kshatriyas" with the sacred thread.

SUBSIDIARY TABLE I—GENERAL DISTRIBUTION OF POPULATION BY RELIGION

Religion and Locality	Actual No. in 1931	PROPORTION PER 10,000 OF THE POPULATION					VARIATION PER CENT INCREASE (+) OR DECREASE (—)				Net Variation 1891-1931
		1931	1921	1911	1901	1891	1921-31	1911-21	1901-11	1891-1901	
1	2	3	4	5	6	7	8	9	10	11	12
Hindu											
Baroda State ..	2,152,071	8,809	8,196	8,351	7,922	8,850	+ 23.48	+ 2.60	+ 9.74	- 27.63	+ .68
Central Gujarat ..	640,604	9,004	8,690	8,409	8,202	8,879	+ 20.29	+ 7.78	+ 11.49	- 36.20	+ 2.98
Baroda City ..	89,320	7,915	7,964	7,891	7,783	7,897	+ 18.42	- 3.78	- 2.96	- 12.13	- 2.84
North Gujarat ..	920,241	9,112	9,089	9,035	8,939	9,055	+ 12.41	+ 8.83	+ 0.81	- 25.00	- 7.50
South Gujarat ..	322,922	7,986	4,714	6,479	4,215	8,518	+101.30	- 26.19	+ 71.65	- 53.47	+ 18.68
Kathiawad ..	178,984	8,762	8,821	8,736	8,662	8,686	+ 14.86	+ 0.06	+ 3.67	- 4.06	+ 14.31
Amreli ..	155,400	8,934	8,909	8,877	8,810	8,877	+ 14.34	+ .1	+ 5.41	- 4.06	+ 14.31
Okhamandal ..	23,584	7,775	8,144	7,861	7,868	8,686	+ 18.33	- .2	- 7.07	- 4.06	+ 14.31
						Separate figures are not available				Separate figures are not available	Separate figures are not available
Muslim											
Baroda State ..	182,630	747	763	791	845	781	+ 12.51	+ .9	- 2.50	- 12.57	- 3.24
Central Gujarat ..	55,528	780	831	834	840	774	+ 9.00	+ 4.0	+ 7.94	- 16.29	+ 2.44
Baroda City ..	18,549	1,643	1,604	1,732	1,800	1,793	+ 22.08	- 11.7	- 8.33	- 10.11	- 11.16
North Gujarat ..	61,255	606	608	632	667	625	+ 11.86	+ 4.1	- 5.49	- 18.95	- 10.77
South Gujarat ..	26,113	646	670	692	847	759	+ 14.44	- 1.7	- 8.82	+ 4.93	+ 7.64
Kathiawad ..	21,185	1,037	1,045	1,061	1,140	1,151	+ 13.82	- 1.5	- 4.68	- 4.68	+ 2.14
Amreli ..	14,664	843	864	893	967	1,151	+ 11.18	- 3.3	- 3.40	- 4.68	+ 2.14
Okhamandal ..	6,521	2,150	2,129	2,072	2,069	2,069	+ 20.22	+ 3.0	- 6.81	- 6.81	- 6.81
						Separate figures are not available				Separate figures are not available	Separate figures are not available
Jain											
Baroda State ..	48,408	198	203	214	247	208	+ 11.99	- .5	- 10.0	- 4.06	- 3.82
Central Gujarat ..	10,344	145	137	136	160	127	+ 23.17	+ 4.9	- 7.46	- 3.11	+ 15.86
Baroda City ..	2,639	234	242	222	218	213	+ 14.94	+ 4.0	- 2.56	- 8.44	+ 6.63
North Gujarat ..	28,264	280	296	324	376	309	+ 5.97	- 1.1	- 14.19	- 7.33	- 16.64
South Gujarat ..	1,381	79	71	83	89	68	+ 31.34	- 12.6	+ 3.24	+ 23.05	+ 45.78
Kathiawad ..	3,980	195	193	197	188	158	+ 15.83	- 2.2	+ 7.56	+ 15.04	+ 40.14
Amreli ..	3,862	222	219	220	213	158	+ 15.49	- .6	+ 8.34	+ 15.04	+ 40.14
Okhamandal ..	118	39	36	59	59	59	+ 28.26	- 38.7	- 7.41	- 7.41	- 7.41
						Separate figures are not available				Separate figures are not available	Separate figures are not available
Tribal Religion											
Baroda State ..	44,890	184	767	568	903	124	- 72.47	+ 41.3	- 34.52	+490.37	+ 50.36
Central Gujarat ..	..	..	247	516	670	217	-100.00	- 50.1	- 16.21	+137.69	- 100.0
Baroda City ..	..	..	12	20	51	1	-100.00	- 41.2	- 62.45	+ 5,788.89	- 100.0
North Gujarat ..	..	..	3	..	17	11	-100.00	+26,200.0	- 99.93	+ 19.21	- 100.0
South Gujarat ..	44,890	1,110	4,332	2,530	4,595	421	- 69.56	+ 73.7	- 38.50	+ 927.04	+234.00
Kathiawad ..	..	..	7	..	5	..	-100.00	..	-100.00	..	..
Amreli ..	..	..	8	..	6	..	-100.00	..	-100.00	..	..
Okhamandal ..	..	..	..	..	..	..	..	..	..	..	..
						Separate figures are not available				Separate figures are not available	Separate figures are not available
Christian											
Baroda State ..	7,262	30	35	35	39	3	- 2.14	+ 3.0	- 6.35	+1,090.56	+1,024.15
Central Gujarat ..	4,878	69	92	103	126	1	- 13.82	- 6.3	- 11.06	+11,812.28	+8,457.9
Baroda City ..	1,264	111	111	76	75	43	+ 20.61	+ 40.1	- 3.36	- 53.57	+150.79
North Gujarat ..	173	2	2	4	..	..	- 7.49	- 46.3	+1,350.0	- 50.0	+260.42
South Gujarat ..	897	22	15	2	1	1	+ 80.12	+730.0	+ 39.53	+ 79.17	+3,637.50
Kathiawad ..	50	2	2	..	4	1	+ 78.57	+250.0	- 86.07	+361.54	+284.61
Amreli ..	..	..	..	..	3	..	-100.0	..	- 97.96	..	..
Okhamandal ..	50	16	11	3	4	..	+ 85.18	+285.7	- 36.36	..	..
						Separate figures are not available				Separate figures are not available	Separate figures are not available
Zoroastrian											
Baroda State ..	7,127	29	35	39	43	34	- 5.35	- 5.3	- 5.40	+ 2.47	- 13.15
Central Gujarat ..	89	1	2	2	2	2	- 28.23	+ 13.8	+ 3.81	- 23.91	- 55.06
Baroda City ..	593	53	61	56	57	50	+ 3.31	+ 2.3	- 5.87	+ 2.41	+ 1.89
North Gujarat ..	49	..	1	1	1	..	- 12.50	- 27.3	- 22.22	+167.57	+ 32.43
South Gujarat ..	6,371	157	199	214	252	233	- 5.77	- 5.8	- 5.40	+ 2.04	- 14.29
Kathiawad ..	25	1	1	2	1	1	+ 66.67	- 48.3	+ 45.0	+ 66.67	+108.33
Amreli ..	18	1	1	1	1	1	+ 20.20	- 6.2	- 20.0	..	..
Okhamandal ..	7	2	..	5	..	..	+700.0	-100.0	..	..	..
						Separate figures are not available				Separate figures are not available	Separate figures are not available
Other											
Baroda State ..	619	3	1	2	1	..	+500.97	- 20.77	+182.61	- 8.00	+ 1,138.00
Central Gujarat ..	38	1	1	..	..	..	+171.43	+ 16.67	+ 20.00	..	..
Baroda City ..	495	44	6	3	7	3	+816.67	+ 80.00	+ 50.00	..	..
North Gujarat ..	25	..	1	4	..	..	- 10.70	+600.00	+300.00	..	..
South Gujarat ..	3	..	..	..	..	..	+ 0.00	- 57.14	- 53.13	..	..
Kathiawad ..	58	3	..	4	..	..	+1,833.33	- 94.80	..	..	..
Amreli ..	4	..	..	..	..	..	+100.00	..	..	..	..
Okhamandal ..	54	18	..	..	..	..	+5,300.00	..	..	..	..
						Separate figures are not available				Separate figures are not available	Separate figures are not available

SUBSIDIARY TABLE II

CHRISTIANS—NUMBER AND VARIATIONS

NATURAL DIVISION	ACTUAL NUMBER OF CHRISTIANS IN						VARIATION PER CENT						
	1931	1921	1911	1901	1891	1881	1921 to 1931	1911 to 1921	1901 to 1911	1891 to 1901	1881 to 1891	1881 to 1931	
	1	2	3	4	5	6	7	8	9	10	11	12	13
Baroda State ..	7,262	7,421	7,203	7,691	646	771	— 2.14	+ 3.02	—	6.35	+ 1,090.56	— 16.21	+ 841.89
Baroda City ..	1,264	1,048	748	774	504	613	+ 20.61	+ 40.10	—	3.36	+ 53.57	— 17.78	+ 106.04
Central Gujarat ..	4,878	5,660	6,039	6,790	57	77	— 13.82	— 6.27	—	11.06	+ 11,812.28	— 25.97	+ 6,235.06
Kathlawad ..	50	28	8	60	13	24	+ 78.57	+ 250.0	—	86.67	+ 361.54	— 45.83	+ 108.33
North Gujarat ..	173	187	348	24	48	44	— 7.49	— 46.26	+ 1,350.0	—	50.0	+ 9.09	+ 293.18
South Gujarat ..	897	498	60	43	24	13	+ 80.12	+ 730.0	+ 39.53	+ 79.17	+ 84.62	+ 6,800.00	

SUBSIDIARY TABLE III

RELIGION OF URBAN AND RURAL POPULATION

NATURAL DIVISION	NUMBER PER 10,000 OF URBAN POPULATION WHO ARE						
	Hindu	Muslim	Tribal	Jain	Zoroas- trian	Chris- tian	Other
1	2	3	4	5	6	7	8
Baroda State	7,867	1,552	18	390	111	52	10
Baroda City	7,914	1,643	..	234	53	112	44
CENTRAL GUJARAT excluding City ..	8,184	1,385	..	340	5	84	2
Charotar	8,346	1,182	..	326	..	144	2
Vakal	8,339	1,019	..	624	9	9	..
Kahnam	7,450	2,083	..	431	11	20	5
Chorashi	8,660	1,266	..	57	11	6	..
NORTH GUJARAT	7,999	1,405	..	584	3	8	1
East Kadi	8,079	1,470	..	435	4	11	1
West Kadi	7,827	1,320	..	849	..	4	..
Trans-Sabarmati Area	8,110	1,109	..	775	6	..	..
SOUTH GUJARAT	7,160	1,563	158	243	837	39	..
Rasti	7,067	1,696	31	231	951	24	..
Semi-Rasti	7,224	1,122	..	717	937	..	..
Rani	7,705	855	948	216	135	140	1
KATHIAWAD	7,344	2,291	..	357	4	2	2
Midblock	7,486	2,064	..	446	4	..	..
Scattered Area	7,477	1,136	..	1,387	..	..	..
Sea Coast Area	7,122	2,843	..	20	5	6	4

NATURAL DIVISION	NUMBER PER 10,000 OF RURAL POPULATION WHO ARE						
	Hindu	Muslim	Tribal	Jain	Zoroas- trian	Chris- tian	Other
1	9	10	11	12	13	14	15
Baroda State	9,066	528	229	146	7	24	..
Baroda City .. .. .	..	..	..	..	..	..	..
CENTRAL GUJARAT excluding City ..	9,178	652	..	104	1	65	..
Charotar	9,139	559	..	145	..	157	..
Vakal	9,206	598	..	124	1	71	..
Kahnam	8,886	998	..	113	..	3	..
Chorashi	9,471	459	..	33	1	35	1
NORTH GUJARAT	9,347	437	..	215	..	1	..
East Kadi	9,326	452	..	222	..	..	..
West Kadi	9,374	430	..	196	..	..	..
Trans-Sabarmati Area	9,393	368	..	239	..	..	..
SOUTH GUJARAT	8,131	484	1,278	50	38	19	..
Rasti	9,289	618	8	55	28	2	..
Semi-Rasti	8,965	811	93	73	51	7	..
Rani	5,906	22	3,959	22	39	52	..
KATHIAWAD	9,202	648	..	145	..	2	3
Midblock	9,452	352	..	196	..	..	..
Scattered Area	9,521	255	..	222	..	..	2
Sea Coast Area	8,719	1,224	..	41	1	7	8

SUBSIDIARY TABLE IV

SECTS OF HINDUISM CLASSIFIED ACCORDING TO THEIR NATURE

Class	NAME OF SECT	Strength in 1931	Variation per cent since 1921	PROPORTIONATE STRENGTH PER 10,000 IN		
				1931	1921	1911
1	2	3	4	5	6	7
	HINDU	2,152,071	+ 23.42	10,000	10,000	10,000
I	<i>Movements of Comprehensive Reform</i> ..	2,871	+ 300.41	13	4	4
	Arya Samaj including Veda Dharma	2,801	+ 312.51	13	4	4
	Brahmo Samaj including Prarthana					
	Samaj	70	+ 84.21	..	..	..
II	<i>Movements checked by Defence of Orthodoxy</i>	110,157	— 36.01	512	988	1,270
	(a) <i>Recent</i>	1,503	— 33.40	7	13	1
	Radhaswami	698	+ 174.80	3	1	..
	Shreyas Sadhak Adhikari Varga ..	805	— 59.81	4	12	..
	(b) <i>Modern</i>	108,654	— 36.04	505	975	1,269
	Bij Panth	61,363	— 53.32	286	754	1,005
	Dadu Panth	2,188	+ 18.33	10	11	14
	Kabir Panth	32,737	+ 6.08	152	177	206
	Mota Panth	167	+ 14.38	1	1	1
	Nirat Panth	1,292	+ 183.95	6	3	..
	Parnami Panth	8,762	+ 75.80	41	28	40
	Uda Panth	2,145	+ 1,410.56	9	1	3
III	<i>Guru Worshipping Cults</i>	83,427	+ 406.91	388	94	70
	Bhabharam Panth	1,387	+ 21.66	6	7	6
	Gopinath Panth	7,172	+ 194.17	33	14	4
	Kuber Panth including Satya Kewal ..	12,349	+ 676.17	58	9	3
	Nanak Panth	105	..	1	..	..
	Ramade Pir	58,548	+ 443.72	273	61	50
	Ravi Saheb	1,685	+ 443.65	7	1	..
	Santram	2,181	+ 452.15	10	2	7
IV	<i>Orthodox Sectaries based on Vedic and Puranic Hinduism</i>	1,372,800	+ 3.20	6,379	7,630	7,299
	(a) Shaiva or Smarta	396,994	+ 2.95	1,845	2,213	2,064
	(b) Shakta	53,133	— 37.48	246	488	508
	(c) Vaishnava	922,340	+ 7.35	4,286	4,929	4,727
	Madhavachari	1,057	+ 225.23	5	2	1
	Radhavallabhi	8,492	+ 141.59	37	20	9
	Ramanandi	584,643	+ 22.24	2,715	2,744	2,560
	Ramanuji	45,813	— 58.00	212	625	619
	Swaminarayan	71,246	+ 24.99	321	327	316
	Vallabhachari	153,818	— 3.36	741	913	1,010
	Miscellaneous and Unspecified					
	Vaishnavas	57,271	+ 10.24	255	298	212
	(d) Ganesh Panth	333	..	2	..	..
V	<i>Sects on the Borderland of Hinduism and Islam</i>	15,586	+ 84.53	72	49	36
	Ganj Pir	51	..	..	..	..
	Nayakaka	466	— 65.91	3	8	12
	Pirana Panth	14,528	+ 118.53	66	38	22
	Saji Sawai	186	— 43.63	1	2	2
	Sat Panthi including Nakalankis ..	355	+ 251.49	2	1	..
VI	<i>Sects tending towards Tribal Religions</i> ..	551,361	+ 159.07	2,562	1,221	1,265
	Ajepal	1,526	+ 670.70	7	1	1
	Devibhakta	510,038	+ 157.19	2,371	1,138	1,186
	Hari Bava, Tulsi Upasak and other					
	degraded Vaishnavas	38,984	+ 175.73	181	81	76
	Khijadia Panth	813	+ 351.66	3	1	2
VII	<i>Hindu Unspecified and others</i>	15,869	+ 551.70	74	14	56

CHAPTER XII

RACE, CASTE OR TRIBE

§ 1. GENERAL

388. Nature of the Caste Census—This final chapter of the Report will be devoted exclusively to the discussion of the returns of Race, Caste or Tribe. The full title of this chapter should be Race, Caste, Tribe or Nationality, but in the Indian Census, the term "Nationality" is reserved for persons of non-Indian races who belong to the nations of Europe and America, and these are so few in this State that it is not worth while retaining the full title. Race is a division of people into stocks, each with a common possession of similar physical characters which marks it off from the rest of mankind. "Tribe" would connote according to Dr. Haddon, "a group of a simple kind occupying a concentrated area," with a common dialect, a common social organisation but undeveloped and primitive in mental equipment and civilisation. "Caste" is a term special to Hindus and Jains: it is a system of segmentation of Hindu society into which, at different times and in various ways, more than one principle of division have entered and coalesced; but in general four kinds of social distinctions may be recognized, following the Indian Census Report of 1911:—

- (i) the four traditional classes (or *varna*) into which the Manavan scheme reduced Hindu society, viz., *Brahman*, *Kshatriya*, *Vaishya* and *Sudra* with a fifth (and modern) division of miscellaneous (and untouchable) *Sudras*—viz., *asprishya Sudra*;
- (ii) the modern social groups based on a common traditional occupation,
- (iii) the sub-castes or endogamous groups into which each main caste is subdivided, which are further subdivided into closely knit septs or brotherhoods, e.g., *gōl*, *bhag*, etc. Thus the Audich *Brahman* sub-caste has two sections—*Sahasra* and *Tolakia*. The *Nagar Brahman* sub-caste has six subdivisions each having a priestly and non-priestly section—all exogamous to one another. Besides these, there are
- (iv) the minor subdivisions or exogamous groups within each sub-caste, composed of persons with a reputed common ancestor, and between whom marriage is prohibited. These are the main distinctions of caste observed in present-day Hindu society, but so far as Gujarat is concerned, we see here such an infinite fragmentation of society that distinctions under class (i) have more or less lost their validity, and only classes (ii) and (iii) alone matter from the point of view of demography. As to class (i) of the four main divisions, the *Brahman* alone has remained as a class apart, the *Kshatriya* has lost its identity or rather has become identified with one or two dominant castes, and a variety of miscellaneous groups has claimed kinship with the name, with a view to bettering their status. The *Vaishya* name is also similarly identified with the *Vania*, a group of closely allied castes, connected pre-eminently with trade and commerce, which has given its distinctive tone to Gujarati society. But the *Sudra* has lost its antique significance, and the agrarian interests formerly associated with its name have now become so important in the social economy that the social gradations within them form indeed a new scheme of horizontal social grouping—a new network of caste within caste. Thus we see that caste, in different ways indeed from the principle of nationality, has subserved a similar function, namely it has brought together different people under one banner. The *Gujarat Brahman* for instance has traditionally 84 divisions, in their origins widely different from one another by language and social environment. Similarly the *Gujarat Vania* has 40 sub-castes—each a real caste dif-

ferent from the others—and some recruited even from the Rajput and other stocks. Even the sections within each Vania sub-caste bear reminiscences of older ethnic divides. Then come the modern functional groups, the very important artisan caste amongst which the identity of the calling is an active principle of association. These are individually important enough for figures in each to be recorded and compiled. As to class (iii), there is the question whether all sub-castes are to be compiled.

389. Limitations of the Caste Return—It is obvious that castes grouped under the general names of Brahman and Vania are distinct enough from one another for their strength to be separately noted. The Depressed Classes comprising orders, the members of which are considered beyond the pale of Hindu society and contact with whom is considered a pollution to caste Hindus, are a definitely ascertainable unit (at least in this State) whose numbers, distribution and variation from census to census it is important to know. Again, there is the miscellaneous body of Hinduised aboriginals, who have been half absorbed in the body of Hindu communion, but whose tribal organisation has not yet completely adopted all the incidents of a Hindu caste. At the other end there are tribes, whose formation differs from a Hindu caste, although in faith, the members of the tribe may belong loosely to the Hindu religious system. Thus the Talabda has differentiation out of the great Koli race and become a typical Hindu caste, while the Bhil still remains a tribe. The different sections, tribes, or semi-castes, such as are conscious enough to be returned by a distinctive name, have also to be ascertained. Beyond these there are numerous small groups, which have little or no demographic value. Within the sub-castes themselves there are, as pointed out above, numerous sub-sections, individual numbers of which are too small or unimportant for compilation. In this respect the tendency of the Baroda Census has been to neglect from decade to decade more and more these infinite ramifications, and to concern itself mainly with the true castes, and with such only of the sub-castes as are really true castes themselves (*e.g.*, sub-castes of Brahmans and Vanias). The justification for this policy is that beyond the limited interest which these minute divisions, with which Gujarat society is riddled, have for their members, there is little demographic value in their tabulation for any scientific presentation of figures. In 1901 and 1911, the Baroda Census busied itself by setting out in details, the figures of sub-castes and septs of sub-castes in the State. In 1911 for instance 235 caste and sub-caste names were recorded of Hindus and Jains. No less than 65 of these were Brahman sub-castes and 22 were Vania. Besides, the above 207 sub-sections of sub-castes, were separately compiled in the Caste Table. In 1921 these sub-sections were generally dropped: sub-castes of Brahmans and Vanias and all other true caste names alone were compiled. In this census, only such castes have been tabulated as have a strength of one per mille of the population; certain other castes also have been included, that fall below this level and yet are of some local importance or are required for all-India purposes. Also all true Brahmans, all Vanias, all members of the so-called Depressed Classes and all members of the Tribes that are recognised to be Primitive and Forest have been included in the Caste Table. Although the total strength of Brahmans and Vanias was shown, the sub-castes in each of these groups, below the above minimum, have been neglected.

390. Reference to Statistics—The general caste return is shown in Imperial Table XVII. The variations since 1881 in the strength of the primitive and forest tribes have been shown in Imperial Table XVIII. The taluka figures of chief castes are compiled in State Table VII. The race and sect of Christians is shown in Imperial Table XVI-C and the territorial distribution of Europeans and Anglo-Indians is given in Imperial Table XIX. With these Tables this chapter is principally concerned. Past Census Reports of the State are full of much valuable material bearing on the ethnography of the local population. In 1911, a caste glossary based mainly on the materials contained in the Gujarat Population Volume of the Bombay Gazetteer of 1899-1901 (Volume IX—Parts I-II) was prepared. In 1921, when I wrote my first Report, I did not venture to recast this glossary mainly because I thought that a decade was too short a time to admit of social changes in the castes and tribes inhabiting this State. Since then, Mr. Euthoven's

Tribes and Castes of the Bombay Presidency appeared in three volumes; and much new material has come to light through my own investigations and the reports of census committees and notes of honorary correspondents. These I have ventured to incorporate in the new and revised Caste Glossary which forms an appendix to this chapter. In this Glossary, in view of the new matter added, many unimportant entries have been taken out and the arrangement is revised on a more suitable plan. As this Glossary serves the purpose of an ethnographical survey on a small scale adequate enough for the reader of this Report, this chapter will be exclusively devoted to a statistical analysis of the figures, as to their local distribution and variations. As we have seen in the Chapters on Sex, Civil Condition, Infirmities, Occupation, Literacy and Language, caste has entered largely into our discussions. It forms an important criterion by which the above figures can be distributed and analysed.

391. Utility of the Return—That brings us to the consideration of the general utility of the caste return. It has been hitherto impugned on two grounds: from one side, Indian demographers have themselves doubted the utility of the return of the population by caste, "on the ground that the distribution of various castes and tribes changed only at large intervals and that it was not necessary to obtain figures at each decennial census." On the other hand, the caste return is attacked, because it has the effect of perpetuating—what is deemed to be undesirable—namely the system of caste differentiation, and secondly because the returns are worthless as the lower castes are always trying to pass off as something higher than what they are. It is true social changes do take longer than a decade to effect themselves. But then if caste is dropped, a return merely of religious distribution is too broad and colourless to be of any use either for economic or sociological analysis. On the other hand caste is vital and still excites the deepest interest in the Indian mind. The Hindu knows more about his caste than about his own sect or religion. One of the commonest type of mistakes in the sect return is where a Hindu, forgetting his sect, returns his caste name under religion. A Hindu Vaishnav would sooner call himself a Hindu Patidar or Hindu Vania than refer to his Vaishnavism. As we shall see presently, the number of those who have definitely abandoned caste even amongst Brahmos and Aryas—at least in Gujarat is so infinitesimal, that any demand for dropping the caste return cannot be taken seriously as representative of general public opinion. The demand for abandonment of the caste return however was renewed in this census more vigorously than before, and a number of names held in the highest respect in the country were associated with it. But it roused protests in many parts of this State, as elsewhere, and amongst certain sections, the untouchables and the like, the move was looked upon with suspicion, owing to the unfortunate myopia with which their outlook is coloured, and interpreted as a dodge on the part of the higher castes to minimise the strength of the submerged classes in the country. The Government of India, however, backed up by the census authorities, responded sympathetically to enlightened opinion in this regard. In his reply to the Secretary of the Jat-Pat Torak Mandal of Lahore of the 1st November 1930, the Joint Secretary to the Government of India stated the policy of the Government as follows:—

"Though Government have every sympathy with the desire of the Mandal to abolish any anti-social features that may appear to the Mandal to be involved in the caste system, they do not consider that the mere fact of not stating caste in the census return will have any effect in the direction.

"In the case of all persons who have actively ceased to conform to the caste system and who have accordingly broken it in their marital or commensal relations, but who do not belong to reforming or schismatic communities such as the Arya Samaj or the Sikhs or Jains, a return of *nil* will be both accurate and adequate and will be accepted by enumerators, particularly where they have personal knowledge of the accuracy of the householder's reply.

"It is not possible to go further than this or to make a general dispensation from the necessity of returning caste in the case of people who observe it in practice, whatever their theoretic sympathetic inclinations, or to take any steps which will make it difficult for the Census Department to get from the general public, information desired for the general good and for the obtaining of accurate measurements of social progress."

392. The State Attitude in regard to the Caste Return—We are in this State in full agreement with these sentiments and consider that the abandonment of the census return of caste in the present state of Gujarat social development is entirely premature. Wherever there was any desire on the part of any person not to record caste, enumerators were instructed not to press. Brahmos, Aryas and persons of similar persuasions who had avowedly abandoned caste were of course expressly exempted from the necessity of recording caste. The accuracy of the return will be appraised in the following paragraphs but in the meantime the experience of seven censuses in this State confirms the view that the caste return is one of the most accurate of all the census tables, and is far more reliable than age-statistics for instance, or the return of infirmities or occupations. Lastly caste figures have also an important economic bearing which is not always realised. In the absence of any accurate data of wage-levels or of earning power, caste through its reactions on the employments of the people does afford something like a horizontal scale—however rudimentary—from which we can derive some idea of social values in the different grades of the population. Besides the literacy scale on which castes have been divided in this Report into Advanced, Intermediate and Illiterate has helped us to understand many of the reactions of caste on such important social problems as fertility, marriage, infirmities, occupations and educational progress; for it cannot be doubted that caste in its broad groups is still of importance as representative of types of social environment; and figures relating to age, civil condition, occupation, etc., if presented by castes, show interesting correlations which are often the result of race, historical circumstances and the contrasted social attitudes prevailing in the different strata of society.

393. Nature of the Instructions—The Caste Tables with which we are now concerned were compiled from the entries in the census cards against column 8. The vernacular word "*nyat jat*" does admirably for the distinctions connoted in Caste and Race or Tribe—*peta nyat* stands for sub-caste. The instructions given to the enumerators were based on the Imperial Code (Chapter VII, page 38):

"Enter here the name of the caste for Hindus and Jains; and after writing the name of caste, show also the name of the sub-caste, *e.g.*, Brahman-Audich; care should be taken to enter the true caste name. If any one states his occupation as the name of his caste, ask him further and ascertain whether the occupational name is a true caste designation. Avoid modern territorial names like 'Dakshini,' 'Bengali,' 'Pardeshi,' 'Marwadi,' 'Kathiawadi,' etc. Enquire what a person's true caste is, see if it is included in the alphabetical index of castes given to you and then enter the proper name. For Musalmans, write the true name of race, *e.g.*, Mughal, Saiyad, Pathan, Baluch, Pinjara, Vohra. For Buddhists and Christians, write race, *e.g.*, Indian Christian, Burmese, Buddhist, etc. For non-Indians, state their nationality, *e.g.*, Portuguese, Canadian, Turkish, etc. If persons return themselves as Anglo-Indians such should be entered. If Indian Christians state the tribe or caste to which they formerly belonged previous to conversion, such tribe or caste should be entered."

In addition to these instructions, every supervisor was supplied with a detailed index of caste names in which supplementary information was given about the different kinds of Muslims, the number of castes ascertained to belong to the depressed classes, the number and kind of primitive and forest tribes and certain other cautions which are necessary for a careful record. Along with a list of true caste names, a list of spurious caste names was also appended in which occupational names of recent coinage were shown, against which the enumerating staff was specially cautioned. As mentioned already a large proportion of Hindu castes are based on occupations which are of fairly old standing but more modern than the older four-fold functional divisions. These have definitely become castes and are recognised as such in the Hindu social system. There are other occupational groups however which are recent in formation and have not yet hardened into castes. These are therefore to be excluded from the table, *e.g.*, Kadia (house builders), Kagdi (stationery sellers), Kapadia (seller of clothes). These names may comprise members from different castes—even Brahmans—and may, and does, include Muslims and other non-Hindus.

394. Accuracy of the Return—In view of the detailed instructions there was not much difficulty felt in the Abstraction Office in the compilation of the caste returns. Instructions regarding them have been modified and elaborated through successive censuses and the people themselves take an interest in seeing that the return is correct as far as possible. In Gujarat if anything is well known about a son of the soil, it is his caste. Caste organisation still exists as a living reality in the State, and there is comparatively less possibility, at least in regard to the higher castes, the agriculturists and the artisan groups, of anybody passing off as belonging to a caste not his own, than in other parts of India. The greatest difficulty, however, in the census of castes, is in respect of castes that are afflicted with social aspirations. There is the genuine variety of castes wishing to forget their past and to change their old names for new ones with less opprobrious associations, and otherwise trying to ape the customs of the socially superior groups. In regard to these, the census maintained an attitude of responsive sympathy. So long as any new name adopted did not cause any confusion, or prevent comparison with past figures, the Census readily agreed. Thus the Hajams were allowed to call themselves Valands or Nai Brahmans although they were excluded from the Brahman total; the Dheds were renamed Vankars; the Barias were separated from the Koli total but their claim to be considered Rajput was firmly turned down; and lastly the great agricultural communities, who seemed to dislike their old name of "Kanbi," were thereupon shown under Patidar in the Table. The Bhils were persuaded by certain propagandists to ask to be allowed to return themselves "Aryas," but as this was likely to cause confusion with genuine members of the Arya Samaj, this request was disallowed. The forest tribes in the vernacular census instructions used to be known as the Kaliparaj—"the black folk." But this was resented by the vocal sections of the tribes, and the name—given to them by Mr. Gandhi himself—of Raniparaj was adopted in the present census. Certain Muslim Piranas used to be known as Shaikhdas and it is believed that all of them returned themselves as "Shaikhs." Technically, this was correct, as "Shaikh" is the generic term for all unclassifiable Muslims. But through these accretions, "Shaikh" lost its value as a race name of Arabic origin.

395. Caste Claims and how they were disposed of—The following Table collects all such cases wherein there was some move either from the whole caste, or from a section of it for new names or affiliations, and the action taken finally on each case is noted in the third column:

Old Name of Caste, Race or Tribe	Claim made to new names or affiliations	Final action taken
Anjana Kanbi ..	.. Claim was made to Rajput status. The name Kanbi was disliked. "Chaudhari" preferred.	Claim to Rajput status held not proven. "Kanbi" name was abolished—Anjana removed from general head of Patidars and shown under "Anjana Chaudhari" in the Table.
Antyaj : Dhed	.. Articulate sections of the depressed classes expressed occasional dissatisfaction with the Antyaj name. At the conference of 7-8 March 1931, some pressed to be called 'Arya,' but were dissuaded from carrying out their resolution when it was explained that "Arya" will cause confusion with genuine members of the Arya Samaj. 'Sramik' was another name suggested. It is curious that nobody thought of Mr. Gandhi's title for these classes—'Harijan'—which does not seem to have caught on locally. The predominant Antyaj caste was previously shown in Caste Tables as Dhed. Their leaders preferred "Vankar," as they thought "Dhed" had a derogatory meaning.	"Antyaj" is expressive and does not seem to have any special opprobrious signification but "Vankar" was used instead of Dhed as there was no chance of confusion.
Baria (Baraiya)	.. There was a large and genuine movement from Central Gujarat Baraiyas to be considered distinct from Kolis, and affiliated to the Rajput. Petitions were received from 32 villages signed by over 1,000 persons. Local enquiries confirmed the genuineness of their feeling. Similar agitation, but less intense, was observed in 1921. Representative Rajput Thakores and other Rajput organisations were asked whether they were prepared to consider Barias as belonging to them. They refused, but admitted having taken girls in marriage from them as from Makwanas and Talabdas. The "Padhiar" surname is genuinely Baria, and it occurs amongst Rajputs also.	Baria, Khant, Makwana and Talabda shown separate from Koli total. Their claim to Rajput status turned down, as the census was no forum for recording such decisions.

Old Name of Caste, Race or Tribe	Claim made to new names or affiliations	Final action taken
Barot	Brahmabhats renewed their claims to be separated from Bhats or Barots.	As in 1921, they were shown separate in this census also. They were not included under Brahmans.
Bhil	Claim to be considered Kshatriyas was found only in a very limited section who were moved by Arya Samaj propaganda. They wished to be known as Arya.	They were allowed to return Bhil Kshatriya or simply Bhil but not 'Arya.'
Gandhrap	A section, Hindu by faith, stated that they had nothing to do with Gandhraps, but were a separate caste called Jagari.	As their numbers are very small, Jagaris were provisionally included under Gandhraps, but for the Caste Glossary, their numbers were specially sorted out and shown separately (<i>vide</i> under "Gandhrap"—Caste Glossary).
Hajam	Next to the Barias, the caste hitherto known as Hajam was most persistent. But there were two sections: both opposed to the Hajam name, but one preferring to call themselves Valand and owing to "barber" as hereditary occupation and another, presumably Arya Samajist in leanings, wishing to be known as Nayee or Nai Brahman and claiming that haircutting and shaving were not their ancestral occupation. In North Gujarat, a largely signed petition signed by persons frankly calling themselves Hajams was received. But enquiries showed that the "Hajam" name was resented by the bulk of the Hindu barbers.	The word "Hajam" was removed from caste table for Hindus following the barber's profession, the Muslim section continuing to be shown as "Hajam". The Hindus were allowed to return either Valand or Nai Brahman as they chose.
Kalal	The Hindustani section wanted to be known as Kal-lar Kshatriya.	Shown under Kalal.
Kaliparaj	This name applied generally to Forest Tribes means "black folk" and was resented by them. The feeling was general. "Raniparaj" was more colourless and appropriate.	"Raniparaj" was adopted.
Kamalia	Wanted to be shown as Hindu	Those were shown as Hindu who said they were Hindus.
Kanbi	A section of the Kanbi caste who were co-sharers of the village land used to be known as Patidars. Now "Patidar" name is generally affected by all the Lewa and Kadwa castes and any attempt to distinguish between the Kanbi and Patidar sections was futile.	"Patidar" was substituted for "Kanbi" for Lewa and Kadwa castes. Anjanas were taken out so also Karadias from the list of Kanbis. Konkani and Maratha Kunbis were also shown separate. The miscellaneous Kanbis included Maru, Uda and Barad sections.
Karadia Kanbi	They wanted to be separated from Kanbis and shown under Rajputs.	The "Kanbi" name being abolished, Karadias were shown separately. They could not be included under Rajputs.
Luhar	"Panchal Brahman" was the new title affected by their Gnati Sudharak Mandal, in support of which they referred mysteriously to a judicial decision, which they were unable to produce.	The old name continued.
Machchhi	A section of them dwelling on the banks of the Tapti wanted to be known as Talabda Koli, who, they admitted, were unwilling for such intrusion.	The old name continued.
Mahar	A Bombay organisation applied to be shown under "Mayavanshi Rajput."	The affinities of depressed classes to the Rajput race have been pointed out in the Caste Glossary. But their inclusion under the Rajput total as a special section would have been misleading. Old name continued.

Old Name of Caste, Race or Tribe	Claim made to new names or affiliations	Final action taken
Modh Ghanchi	.. The 1921 Report has reference to their claim to be considered as Modh Vanias, which was then turned down, but the claim was not formally renewed.	Nothing was done, but it is suspected individual members of this caste have passed off as Modh Vanias.
Salat	.. No formal claim was made, but some returned themselves as Sompuri Brahmans but they were included under Salat.	The old name continued.
Shaikhda	.. This caste of Hindu-Musalman resented the old title as opprobrious and applied to be returned as Muslim Shaikhs.	Those who wanted the "Muslim Shaikh" name to be recorded were allowed to do so.
Sonar	.. The Deccani goldsmith caste have long claimed to be a variety of Brahmans—Daivadnya Brahmans and local representatives were returned as such.	The old name continued.
Sutar	.. Some Sutar were returned as Vishwakarma, after the name of their patron saint. Thus Vishwakarma was wrongly compiled as a sect in 1921. It is really a caste name.	The old name "Sutar" was continued, and "Vishwakarma" removed from list of sects.
Thakarda	.. A section calling themselves Thakarda Solanki, from Kadi taluka, wanted to be separated from Koli and shown under a distinct heading. On enquiry there was no reason to separate them from the general head of "Thakarda" and as they themselves were separated from the Kolis, nothing further was deemed necessary to be done.	The old name continued.

396. Parvenu Accretions—Apart from these genuine cases, the most difficult problem is to isolate from genuine entries the element of the surreptitious social climber. In all sections of the superior castes there are doubtful elements whose inclusion is always a matter of doubt. Amongst Brahmans and Vanias, the cross breed or *varnasankar*—variously known as Bārad, Pānchā, Bāj—is a distinct though unimportant element. The Rajput caste is again the favourite resort of many of these spurious cases. Quite a few Barias must have found room there as Padhiar Rajputs and this it was not possible to prevent at the compilation stage. Again large numbers of Patanwadias and other Kolis passed off as Barias. A few of the aspiring untouchables are apt to call themselves Kshatriyas or Rajputs. A few Dabgars, Sonis and Modh Ghanchis and such others of the prosperous artisan classes masqueraded as Vanias. The Patidar class, which is fast developing into a national caste, has similarly absorbed many non-descript elements—mostly recruits from Kathiawad. Amongst Musalmans, Pinjaras are rather given to calling themselves Pathans; Maleks and Kasbātis pass off as Shaikhs and in rural areas "Ghanchi" and "Vohra" have become often interchangeable. Occasionally, however, a caste like the Saiyad is jealously guarded and allows little chance of such unlawful entry. Even so, the clandestine entry of persons inferior in the social scale as Saiyads is not uncommon and could not be prevented. The transmogrification of a Quasab into a Saiyad, as he grew in affluence is enshrined in the Persian proverb: "Im sāl Qusāb budam pār sālo shaikhji arjan chuṇ gallā shebad Saiyad shawī."

§ 2. STATISTICAL ANALYSIS OF THE RETURN

397. General Results : Caste not Returned—These general considerations are necessary for the understanding of the Caste Tables properly. We will now take the general results and set them in order. First we shall study the phenomenon of "caste not returned", in order to see how far modern influences are operating in the direction of denial of caste. The general policy in this regard has been already stated. No one was really prevented from showing "nil" against caste if he so chose. Brahmos and Aryas and members of other schismatic sects which were based on the denial of caste were of course presumed to return no caste. Even in their case as the marginal table shows that the majority were prepared to indicate the castes to which they belonged, or at least the caste

of their origin. It will be noticed also that under "Hindu" there are two classes shown—(1) caste not returned, *i.e.*, of genuine cases of protestant Hindus with whom caste observances had ceased to have a meaning and (2) caste unspecified, a large class, some of which may have belonged to number (1) but all owing their inclusion thereunder because they omitted to return their caste through inadvertence, ignorance or choice or because the enumerator was too careless to record their caste. Even the two classes together do not form more than 1 per

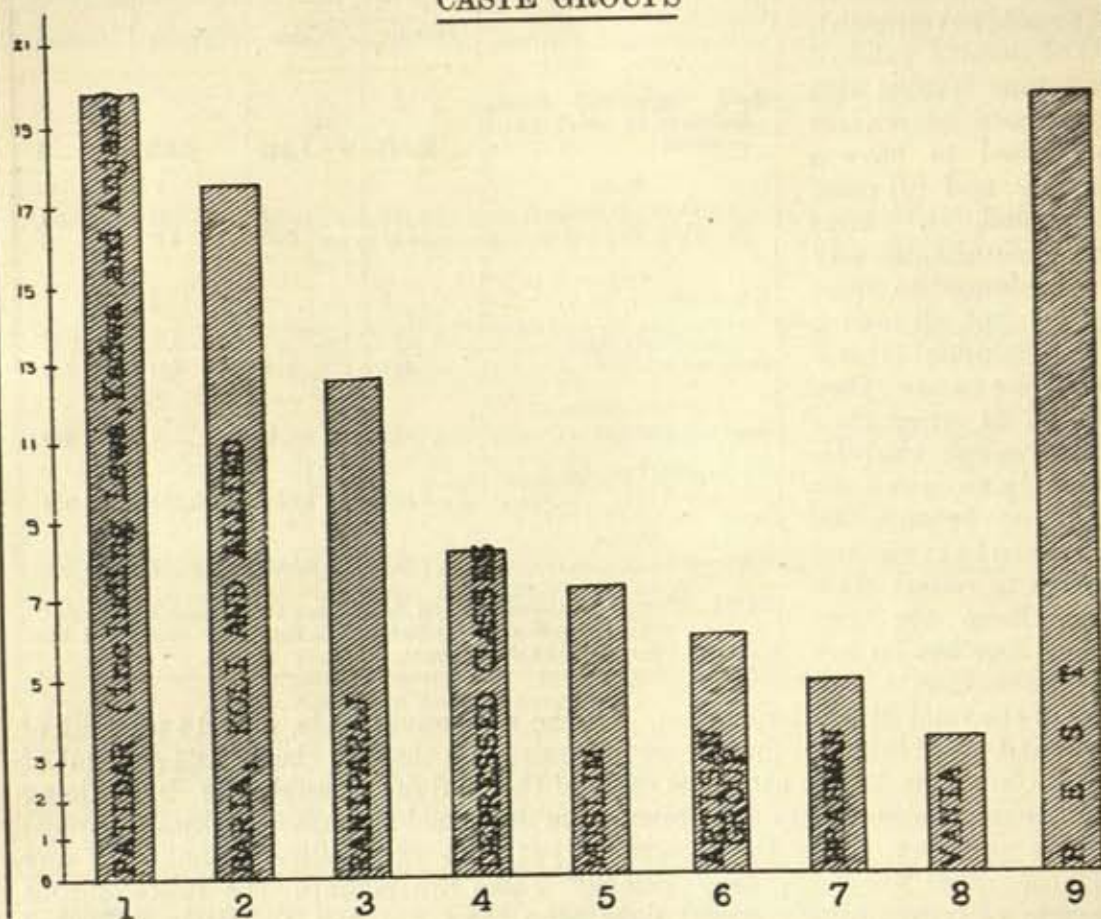
RELIGION	Number who have not specified caste			Proportion per mille of such religions
	Persons	Males	Females	Persons
Total Unspecified among Religions in which Caste occurred	13,577	7,443	6,134	6
<i>Hindu</i>				
I. Caste not returned ..	58	11	47	} 1
II. Caste unspecified ..	1,281	959	322	
<i>Jain</i>				
Unspecified	1	..	1	..
<i>Hindu Arya</i>				
Caste not returned ..	412	181	231	140
<i>Hindu-Brahmo</i>				
Caste not returned ..	16	9	7	229
<i>Indian Christian</i>				
Unspecified	4,592	2,358	2,234	650
<i>Muslim</i>				
Unspecified	7,241	3,938	3,303	40

NOTE:—Caste Table shows figures for "Minor Hindu and Jain Castes" and "Other Muslims", which include figures for Hindu and Muslim unspecified shown above.

mille of the total Hindu population. Of the two reform sects, only 14 per cent of Aryas and 23 of Brahmos did not record their caste through choice. 65 per cent of Indian Christians did not show the caste of their origin, possibly the bulk doing this through choice as they are drawn from depressed and other backward groups and are anxious to forget their origin. 4 per cent of Muslims do not show any caste or race to which they belong. These are perhaps the miscellaneous converts of comparatively recent date, who have not yet definitely affiliated themselves to any recognised Muslim group. In 1921 there were 2,376 Hindus of unspecified castes, 728 similarly placed Jains and 9,597 unclassified Muslims. The decrease in numbers in 1931 may be due to better record on the present occasion. At any rate the figures of both censuses are convincing enough to show the strength of the hold of caste on the population.

398. Distribution of Castes—We will now consider the question of distribution. Let us first take the castes in broad groups. There are seven large groups in the Hindu, Jain and Tribal castes, the Muslims form the eighth group, and the rest of the population may be lumped together in the ninth group. The seven groups: (1) Brahman consisting of all true Brahman castes—even those like Tapodhan, Vyas and Rajgor, whom it is the fashion of other Brahman castes to look down upon; (2) Vania similarly comprising all true Vania castes; (3) the agricultural, forming the largest group consisting of Lewa and Kadwa Patidars and Anjanas; (4) the miscellaneous labouring population of Koli and semi-Koli race, and including Barias, Talabdas, Khants and Makwanas who have Rajput affiliations; (5) the Raniparaj, localised in South and Central Gujarat; (6) the Depressed Classes consisting of the 13 recognised castes found in this State; and (7) the Artisan group consisting of the modern occupational castes: Bhavsar, Darji, Kadia, Kansara, Kumbhar, Luhar, Mochi, Sonar, Soni and Sutar. Included under Luhar, Kumbhar and Sutar are the subcastes formed by fission or change of occupation which are known as Luhar-Sutar, Kumbhar-Sutaria and Kadia-Kumbhar. The Muslims have been grouped together here, but they have really two well-marked divisions—(i) foreign elements and (ii) local converts. The latter are also divided into trading or occupational groups which are as organised as any Hindu caste. Among the chief castes included under the Rest are the Rajputs, Bharwads, Rabaris, Ravalias and Vaghris. A diagram is shown here giving the respective proportions which will help the reader to understand the Table given below it. A map is also attached below the Table to illustrate the distribution of the chief social groups.

**DIAGRAM SHOWING PROPORTIONS OF MAIN
CASTE GROUPS**

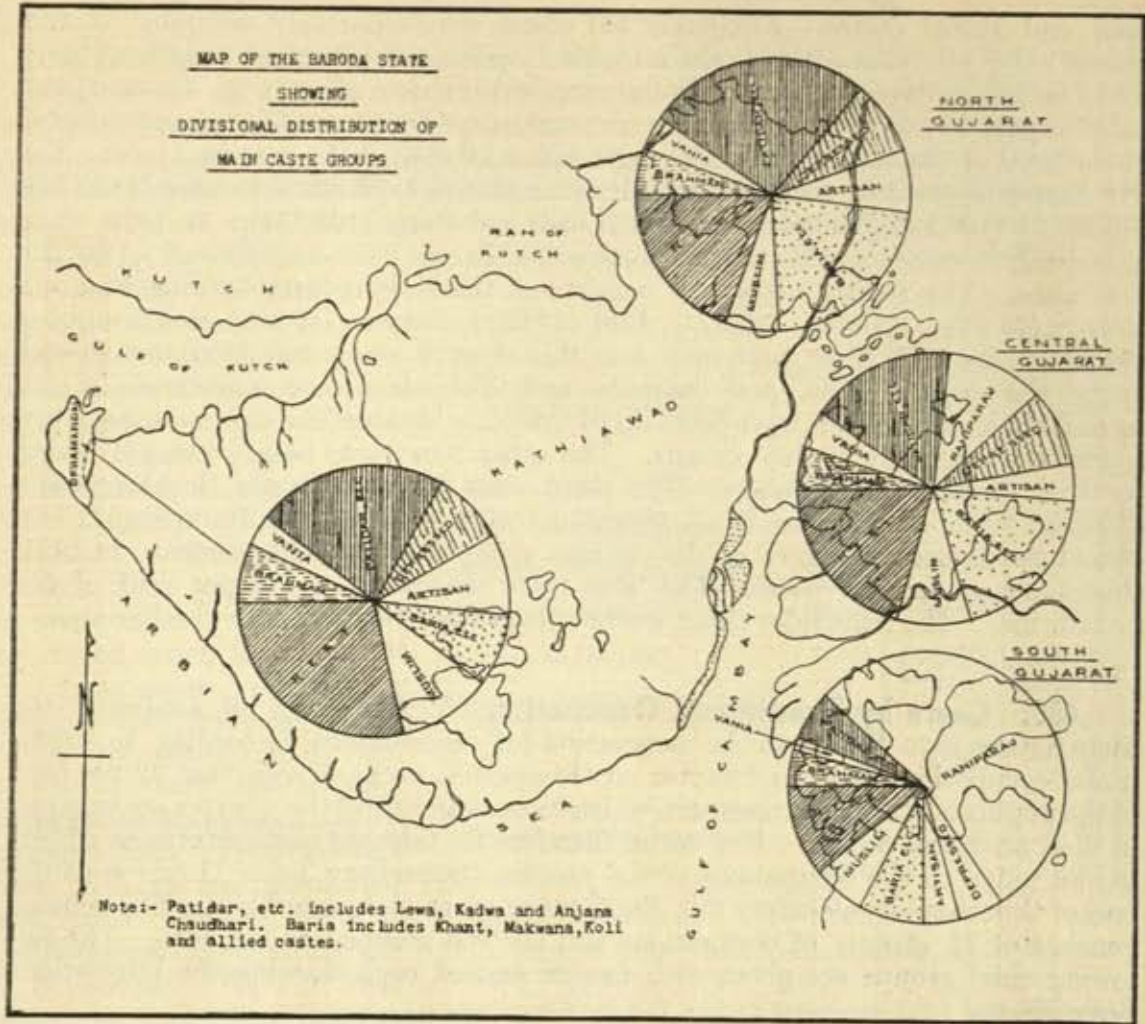


1	Patidar ..	19.8	4	Depressed ..	8.3	7	Brahman ..	5.0
2	Baria, etc. ..	17.7	5	Muslim ..	7.4	8	Vania ..	3.5
3	Raniparaj ..	12.7	6	Artisan ..	6.1	9	The Rest ..	19.5

NOTE.—Figures against serial numbers denote percentage to total population.

SUBSIDIARY TABLE I
SHOWING THE PROPORTIONS OF THE CHIEF SOCIAL GROUPS IN THE
DIFFERENT DIVISIONS

SOCIAL GROUP	BARODA STATE		CENTRAL GUJARAT		NORTH GUJARAT		SOUTH GUJARAT		KATHIAWAD	
	Strength	Per cent-age	Strength	Per cent-age	Strength	Per cent-age	Strength	Per cent-age	Strength	Per cent-age
1	2	3	4	5	6	7	8	9	10	11
Patidar and Anjana ..	484,491	20	141,227	17	273,711	27	22,849	6	46,704	23
Baria, Talabda, etc. ..	435,087	18	161,980	20	224,076	22	31,137	8	17,894	9
Raniparaj ..	312,181	13	90,816	11	2,778	..	218,370	54	217	..
Depressed Classes ..	203,043	8	72,362	9	93,832	9	20,303	5	16,546	8
Artisan Group ..	149,343	6	34,981	4	76,015	8	18,297	4	20,050	10
Brahman ..	123,714	5	42,907	5	49,187	5	17,937	4	13,683	7
Vania ..	86,477	4	33,572	4	38,735	4	5,773	1	8,397	4
Muslim ..	182,630	7	74,077	9	61,255	6	26,113	7	21,185	10
Rest ..	466,041	19	172,419	21	190,418	19	43,598	11	59,606	29
Total ..	2,443,007	100	824,341	100	1,010,007	100	404,377	100	204,282	100



The above map and table show how some groups are widely diffused and others are localised. The Brahmans are only 5 per cent in the State and in the different divisions they retain this proportion more or less unchanged. In Kathiawad they form 7 per cent because of the temple places of Dwarka and Beyt. The Vanias are only 4 per cent of the general population, and everywhere except in South Gujarat, where they are only 1 per cent, they retain this proportion. The Patidars are about a fifth of the total population; but in South Gujarat they are only 6 per cent. Of the Patidars the Lewas predominate in Central Gujarat and the Kadwas in North Gujarat. But a fifth of the Lewas is found in Kathiawad and about one-twelfth in South Gujarat. The Anjanas are almost entirely localised in North Gujarat. The Raniparaj are mostly found in South Gujarat, where they form 54 per cent of its population. In Central Gujarat, less than a third of these tribes reside, while the other divisions are practically without them. The depressed classes are met with everywhere, and their general ratio (8 per cent) is practically repeated in every division, except in South Gujarat where they are in rather less numbers. The Artisans form only 6 per cent, but they are apparently in greatest strength in Kathiawad.

399. Castes by their Size—Another way to look at the caste return is to take the individual castes (taking the Brahman and Vania sub-castes as separate caste names and the forest tribes and depressed classes individually) and consider them according to their strength. We shall for that purpose omit the Muslim races and castes and just confine ourselves to the Hindu,

SIZE	No. of Castes	Strength in 1931	Percentage to total population
I 100,000 and over	5	847,988	38
II 50,000-100,000	7	426,153	19
III 20,000-50,000	16	483,153	21
IV Below 20,000	114	488,075	22
Total Hindu, Jain and Tribal ..	142	2,245,369	100

Jain and Tribal castes. Altogether 141 castes were separately compiled in this census; the miscellaneous Hindu and Jain castes not compiled numbered only 2,883 excluding the number of Hindu unspecified shown already in the marginal table of para 397 above. These miscellaneous castes are counted as one and included in the total of 114 (castes with a strength below 20,000) in the marginal table. The five castes of greatest size are Lewa Patidar (226,871), Kadwa Patidar (219,159), Thakarda (190,195), Vankar (Dhed) (107,988) and Baria (103,774). In 1921, there were only 3 castes of this size—Vankars and Barias have now moved up to the first class. The second class now consists of the Rajput (94,805), Bharwad and Rabari (64,378), Talabda (59,225), Bhil (53,235), Talavia (52,407) and Kumbher (50,996). In 1921 there were only 4 in this class of which two have now moved up to the higher class, and Rajputs and Talabdas have continued in the second class. Bharwads have come up to this class because Rabaris have not been separately compiled in this census. The other four have been promoted owing to their increase in numbers. The third class consists of one Brahman caste (Audich) with 45,222, one Vania (Shrimali) with 34,172, three Raniparaj tribes, two of the Depressed, three of the Artisan group and six other castes. In 1921, this class had only 13 castes. The first three classes absorb 78 per cent of the population. The remainder about a fifth belong to small-sized individual groups.

400. Caste by Traditional Occupation—A third way of analysing the caste figures is to distribute the population (of all religions) according to traditional occupation. In the Chapter on Occupation we have seen that 32 per cent of the population belong to castes in which more than half of the workers are engaged in their ancestral calling. It is useful therefore to take the caste returns as affording an index to the occupations of the people. Subsidiary Table II (given at the end of this chapter) attempts this distribution on an elaborate basis. The scheme consists of 33 groups of occupations and the *rest* grouped as the 34th. The following chief groups are given with figures against each showing the proportions per mille :—

Number of group in Sub. Table II	Name of group	Proportion per mille	Number of group in Sub. Table II	Name of group	Proportion per mille
I	Landlords and Cultivators ..	274	XIII	Traders and Pedlars	53
II	Military and Dominant	48	XV	Barbers	12
III	Labourers	174	XVII	Weavers, Carders and Dyers ..	52
IV	Raniparaj	128	XIX	Carpenters	11
V	Graziers and Dairymen	29	XXI	Potters and Bricklayers	21
VII	Hunters and Fowlers	15	XXIX	Leather workers	23
VIII & IX	Religion including Temple Service.	61	XXXIII	Sweepers	13
XII	Musicians, Dancers, etc.	15	XXXIV	The Rest	14

The Subsidiary Table itself indicates the races or castes included under each group; a supplementary Subsidiary Table (II-A) is also appended in which detailed names of castes included under "Others" in each group are shown. The above list does not include writers (who fortunately for the State number only 2 per mille) and bards and genealogists who are more than three times as many as writers. Fishermen, Tailors, Washermen, Masons, Oil-pressers, Blacksmiths, Gold and Silversmiths and Village servants are other castes omitted but together these do not form more than 4 per cent. Of the rest who are included, 27 out of 100 persons have an agrarian bent, 17 have the call to labour humbly either on the land or in other ways, 6 would turn to religion, 6 others will be disposed towards trade, 5 will swagger with a militant air, 11 will be inclined to industry and only 2 will be found to cater for the sanitary needs of their fellows.

401. Caste and Occupation Tables Correlated—It is interesting to compare some of these figures with the facts regarding the general strength of workers (earners and working dependents) in actual employment on the corresponding occupations, as elicited from the Occupation Table (Imperial Table X). This comparison will afford some basis for finding out the probable sources of supply for each type of occupation. The figures of castes associated with some occupation by tradition will not however be enough. It will be necessary to

find out also the number of workers (earners and working dependents) also in each group to find out a correcter basis of comparison, for which purpose figures have to be collated from Imperial Table XI. A further caution is also necessary. In Subsidiary Table II, primitive and forest tribes have been separated from the rest of the population, presumably because they have no traditional occupation. But two-thirds of them are actually occupied on labour, and a third on cultivation. Their workers have also to be distributed similarly. Thus we arrive at the marginal table which will be of interest. We find that

Traditional Occupation with which Caste is associated	Strength of Caste	Strength of workers in Caste	No. of workers actually employed on the occupation
Landlords and Cultivators ..	774,603	375,632	433,901
Labourers (agrestic and general)	643,947	319,793	271,307
Military and Dominant	118,014	54,265	8,700
Graziers and Dairymen	71,171	38,728	38,191
Religious (including Temple Service)	147,983	57,687	15,379
Trade	128,439	41,511	28,016
Writers (Public Administration Professions and Liberal Arts).	22,479	7,616	26,394
Sweepers	31,018	16,940	6,077
Village Service and Watch ..	10,904	5,974	7,330

under (1) Agriculture (landlords and cultivators), (2) Professions and letters, and (3) Village service, the traditional sources of recruitment are deficient and the demand has to be met by recourse to other castes. Thus it is explained why large numbers of people not traditionally used to agriculture have flocked to the land and why people denied the use of arms (like Marathas) or deprived of the opportunities of service to religion (like the Brahman) have crowded the public services and overstocked the learned professions. The commercial classes also show a large surplus, who find no room in their familiar calling and attempt to eke out a living either through agriculture, state service or other occupations as lawyers, teachers or doctors. Even the Bhangi finds little scope now for his humble but most necessary function in rural society. Only about a third of their workers are able to find employment as sweepers.

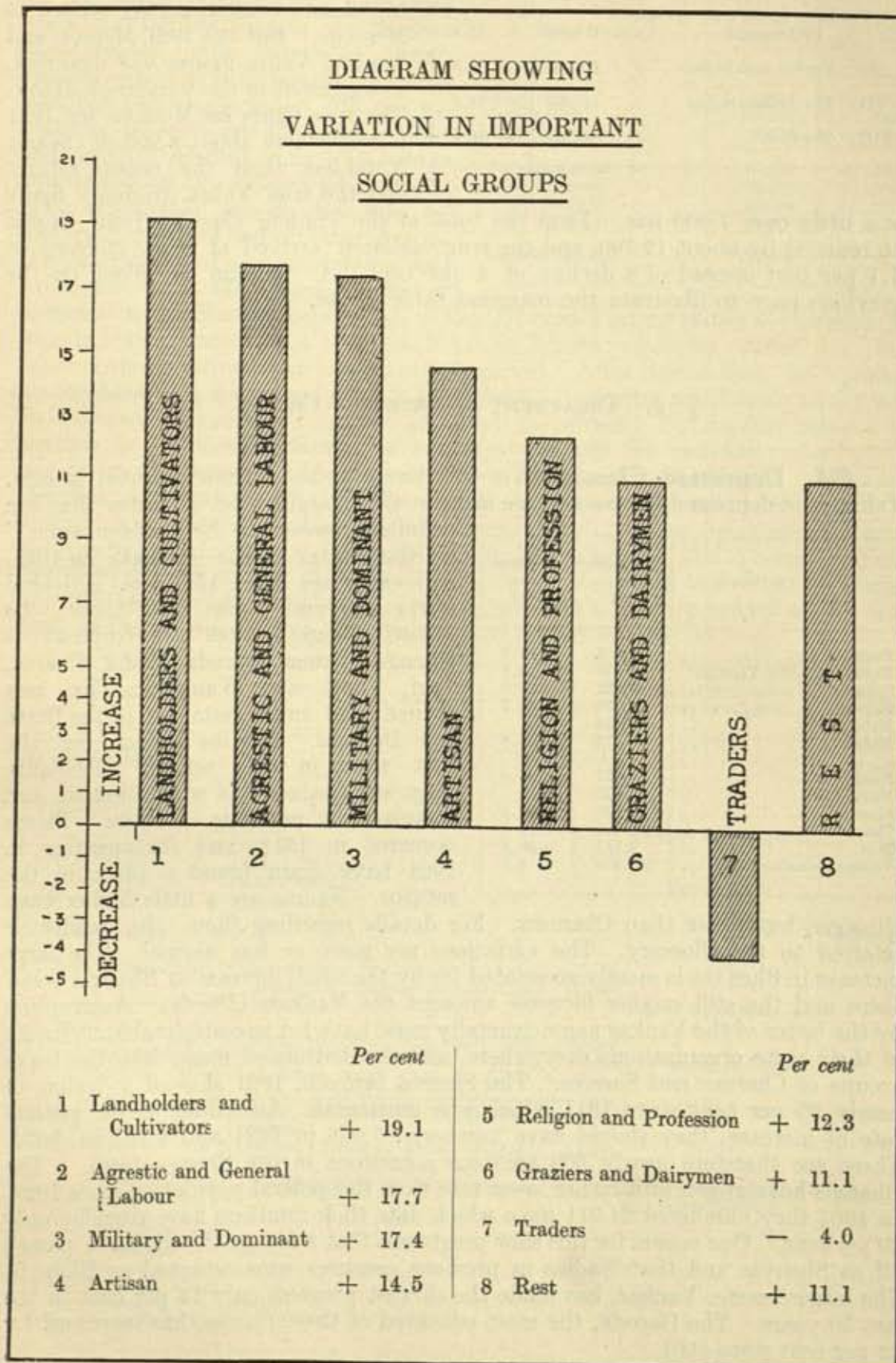
402. Variation : General Results—We will now consider the question of variations in the strength of castes. Subsidiary Table III (at the end of this chapter) gives the variations in castes and tribes since 1901. The absolute figures are given first and the rates of increase or decrease are worked out in the final columns. In the margin, a summary of variations is given for the main castes, divided according to the literacy percentage scale with which the reader is now familiar. The Brahman increase is only 8.6; it is further reduced to just 8, when we deduct the *hijratis* from the increase. Of these, the Gujarati section has grown by 9.5 per cent. The Lewa Patidars have grown by 16 per cent. But this is only apparent. Without the *hijratis*, their increase is only 7.4. We see therefore that in the Advanced groups, the real increase is much less than the growth of the general population. The slow increase amongst Patidars is due not only to their low birth rate, but also to loss through migration. As shown already in the Chapter on Civil Condition, the rate of increase amongst the selected castes of the Advanced group is only 11.4. Maratha Kshatriyas show a decline of 9.5 per cent, but combined with Maratha and Konkani Kunbis, their total strength shows an increase of 2.7 per cent, which may be taken as their real variation. Many Marathas not specially entered as Kshatriya must have been compiled as Maratha Kunbi. In the Intermediate division, the most remarkable

CASTE	Strength in 1931	Variation per cent since 1921
Advanced		
Brahman	123,714	+ 8.7
Lewa Patidar	226,871	+16.2
Maratha Kshatriya	12,164	- 9.5
Vania	86,477	+10.2
Intermediate		
Anjana Chaudhari.. ..	38,459	+17.4
Baria, Khant and Makwana	128,901	+29.6
Kadwa Patidar	219,107	+16.2
Kumbhar	50,996	+18.5
Rajput	94,805	+19.7
Talabda	59,566	-18.1
Illiterate		
Bharwad	64,378	+10.3
Koli and allied castes	238,411	+10.7
Depressed Classes	202,777	+14.7
Primitive Tribes	312,051	+20.7
Muslim		
Fakir	6,495	+34.0
Ghanchi	7,426	+82.5
Malek	11,206	+43.0
Memon	8,971	-35.3
Molesalam	10,862	+15.1
Momna	13,829	+95.0
Pathan	15,884	+17.7
Saiyad	9,590	+ 7.6
Shaikh	26,073	- 2.9
Vohra	28,355	+ 7.2

growth is seen amongst Barias, Khants and Makwanas who are supposed to have grown by nearly 30 per cent. Here again the increase is only apparent. The Barias themselves, an aspiring community, are a caste to which many of the lower caste Kolis (Patanwadia and the like) wish to attach themselves as a half-way house to the Rajput status. Particularly was this tendency evident in this census, as it was decided that the Barias would not be shown under Kolis in the Caste Table. As a result many of these Patanwadias, etc., called themselves Baria. The increase in the Baria section alone is over 42 per cent. It is necessary, therefore, to take the Baria, Khant and Makwana total and add it to that of Talabada and Koli and allied castes, to find out the true rate of variation, which is 13.8 per cent. The Rajputs show an increase of nearly 20 per cent. Part of this is spurious for reasons already stated. They could not have grown at a faster rate than the general population, as they do not marry their widows, and their females are in serious defect. The Depressed Classes' increase is genuine, so is that amongst the Forest Tribes.

Amongst Muslims, the low increase in Saiyads is due to reasons similar to those given for Advanced Hindus. The Vohras show only 7 per cent increase. But the Vohras consist of two groups: the Agriculturist and the Trading. The first increased to 16,436 in 1931 from 5,391, i.e., trebling itself, while the second declined from 21,064 to 11,709 or nearly halved itself. Obviously the census figures for these sections separately are not reliable and even the total strength of Vohras as shown by the census does not appear to be entirely correct. Some persons returned as Ghanchis in rural areas have been found to be really Vohras. But even if the total of Vohras of both sections is accepted as correct, the strength of each section has to be estimated. The question remains, which year's figures are to be accepted as a correct basis. In 1911, the agriculturist and trading sections numbered 11,858 and 13,177 respectively. In 1921, the corresponding figures were 5,391 and 21,064. Thus as between the 1911 and 1931 figures, those of 1921 appear obviously to be incorrect. If we assume a 5 per cent increase for the agriculturists in 1921, they should have numbered 12,430 in that year, instead of 5,391, and the trading section would then be only 14,025 instead of 21,064. Thus the true increase in the agriculturist section is reduced to 32.2 per cent; and the true variation amongst the traders is a decline of 16.5 per cent. Shaikhs show a decline, but the 1921 figures included many Maleks and other miscellaneous elements. That accounts for the large increase amongst the latter in 1931, the figure for which year may be taken as correct. If the Shaikhs and Maleks are taken together, the increase is only 7.5. Memons and Mumnas are two other groups with whom, owing to confusion of names, the mistakes in record usually happen. The matter was enquired into closely in this census, and it was found that large numbers of Mumna population in Sidhpur and Patan talukas were often mistaken for Memons and recorded as such in 1911 and 1921. The two combined show a variation of 8.8 per cent in the last ten years. If the 1931 figure of Memons is considered correct and an increase of 9 per cent is assumed, then there must have been only 8,163 Memons in 1921 instead of 13,871 and there should have been 12,800 Mumnas instead of only 7,092 in that year. Thus the real increase amongst Mumnas is only about 9 per cent.

403. Variation in Social Groups—We will now group the castes according to their main hereditary occupations and see how far the variations in each differ from the general rate of increase. For the purpose of estimating the strength of landlords and cultivators, and agrestic and general labour, we shall again distribute the Raniparaj tribes, as we have done in para 401 above. Under Religious and Professional, we have combined priests and devotees, temple servants, genealogists, bards and astrologers, and the writer castes. The Artisan groups are the same as those selected for Subsidiary Table I above. The below table gives the strength of these different social groups and their



SOCIAL GROUPS	Strength in 1931	Variation per cent
I. Landlords and Cultivators	774,603	+ 19.1
II. Military and Dominant..	118,014	+ 17.4
III. Agrestic and General Labour	643,947	+ 17.7
IV. Graziers and Dairymen..	71,171	+ 11.1
V. Religious and Professional	170,462	+ 12.3
VI. Traders and Pedlars ..	128,439	— 4.0
VII. The Artisan Group ..	149,343	+ 14.5
VIII. The Rest	387,028	+ 11.1

variations since 1921. The highest increase is recorded amongst those castes and races associated with agriculture. Labour and Dominant come next in contributing to the general growth of population, while in the rear come the Religious and Professional castes, with Traders actually recording a decrease. But this decrease is not real. The Trading classes consist, among others, of Memons. But the 1921 Memon and Trading Vohra figures are incorrect, as suggested in the paragraph above. The true figure for Memons for 1921 is somewhere about 8,200 or nearly 5,700 less than the census return, and the true Vohra (trading) figure

is a little over 7,000 less. Thus the total of the Trading class for 1921 should be reduced by about 12,700, and the true variation arrived at is an increase of 6.1 per cent instead of a decline of 4 per cent. A diagram is given on the previous page to illustrate the marginal table above.

§ 3. TREATMENT OF SELECTED GROUPS

404. Depressed Classes—We will now notice a few selected groups. Taking the depressed classes first we show in the margin a list of castes that are

NAME OF CASTE	Strength in 1931	Variation since 1921
Bhangi	31,018	+12.7
Burud including Vansoda.	478	+18.1
Chamar	42,802	+21.8
Garoda	7,796	+18.7
Holar	54	....
Mahar	572	— 2.4
Mang	37	+ 8.8
Nadia	622	....
Shenva	9,643	+58.8
Thori	56	....
Turi	1,711	+50.4
Vankar including Dhed ..	107,988	+ 8.4

definitely known to be "untouchable" in the State. Their strength in 1931, and variations since 1921 are indicated in the marginal table. Of these, the following eight castes are Gujarati:—Bhangi, Chamar, Garoda, Nadia, Shenva, Turi, Thori and Vankar. The rest occurring in small numbers in the State are Deccani. Nadias occur for the first time in this census. Probably they were mixed up with Bhangis and Chamars in previous censuses. Thoris occurred in 1911, and disappearing in 1921 have again found a place in the returns. Nadias are a little higher than

Bhangis, but lower than Chamars. For details regarding them the reader is referred to the Glossary. The variations are more or less normal. The large increase in Shenvas is mostly accounted for by the small increase in Bhangis below them and the still smaller increase amongst the Vankars (Dheds). Assumption by the latter of the Vankar name generally must have led to considerable stiffening of their caste organisations everywhere, and the drifting of many into the lower groups of Chamar and Shenva. The Shenva figure in 1921 showed a decline of nearly 20 per cent since 1911 which was unnatural. According to the general rate of increase, they should have numbered 7,966 in 1921 and 9,161 in 1931. There are therefore nearly 500 spurious accretions in the Shenva total. The Bhangis have grown at a rather lower rate than the general population since 1921. In 1901 they numbered 24,011 since which date their numbers have risen by only 20 per cent. One reason for this slow progress is that a few on the top have passed off as Shenvas and that Nadias in previous censuses were returned as Bhangis. The largest caste, Vankar, has made the slowest progress only 14 per cent in the last 30 years. The Garoda, the most educated of these classes, has increased by 32 per cent since 1901.

405. Muslim Castes and Races—We will now separately deal with Muslim castes and races. While considering broad social groups, we included different sections of Muslims under each. But their proportions vary in these groups. Thus though under Landlords and Cultivators, Muslims form rather less than one-seventh, under Labour their contribution is only 1 per mille. Under Military and Dominant, their representatives are only Arabs and Behlms: Pathans who have also warlike traditions are in this State given to agriculture. Under Religion, the Muslim quota is only one-ninth, but in Trade, they bulk more largely, being about a fifth of the total strength of the classes traditionally associated with it. In the margin the Muslims are divided into Advanced, Intermediate and the Rest (according to our familiar percentage scale) and the variations in each are indicated. They are further divided into (1) foreign elements and (2) indigenous converts, who are further sub-divided into (a) the trading section and (b) other groups. The variations in each are shown and compared with the general rate of increase in the Muslim population. The Advanced group shows a decrease, but this is only apparent as it contains Memons, figures regarding which for 1921 have required adjustment (*vide* para 402 above). After this is done, the variation under Advanced is changed into an increase of 7.7 per cent, which is about the same as Advanced Hindus and may be accepted as correct. For similar reasons the decline in the Trading section of local converts and the increase under 'other' are to be discounted. But generally it seems true that the Muslim population depends for its growth mainly on its indigenous elements and not on its foreign; and like the Hindus, it is being replenished, not by its most affluent or most intellectual, but by its hardier, but less educated and poorer sections. We have now to set out the component sections of each of the elements forming the Muslim population. For this purpose, we give a table prepared on the same basis as that shown on page 329 of the Census Report of 1921:—

Variations amongst Muslims		
Social Groups	Strength	Variation since 1921
Advanced	53,847	— 3.4
Intermediate	100,537	+ 24.6
Rest.. ..	28,246	+ 8.8
Foreign elements	60,351	+ 5.8
Local Converts	122,279	+ 16.2
(i) Trading	23,266	— 37.3
(ii) Other	99,013	+ 45.3
General Muslim	182,630	+ 12.5

Name of Group	Including	Number of caste names compiled	Strength
I.—Foreign Elements			60,351
A.—Arab	Saiyad, true Shaikh and Arab	3	
B.—Pathan	Pathan, Khokhar, Afghan	2	
		(Afghan not compiled)	
C.—Mughal	Mughal	1	
D.—Baloch	Baloch, Makrani	2	
E.—African	Siddi (Habshi)	Not compiled	
F.—Sindhi	Sindhi	1	
II.—Indigenous			122,279
A.—Neo-Musalman	Khoja, Memon, Vohra (peasant), Vohra (trading), Molesalam, Kasbati, Momna, Sipahi, Dhadhi, and Mirasi	10	
		(Mirasi included under Dhadhi)	
B.—Converts w h o have still retained Hindu caste or occupational names	Chhipa, Darji, Bhat, Bhoi, Khatri, Dhobi, Machhi, Sutar, Rathod, Parmar, Makwana, Behlim, Gandhrap, Gola, Ghanchi, Kalal, Kumbhar, Luhar, Mali, Hajam, Bhadbhunja, Salat, Saraniya, Bandhara, Mochi, Galiara, Hijda and Bhand	6	
		(Others included under other Muslims)	
C.—Converts w h o have adopted new occupational names.	Bhadela, Bhathiara, Bhisti, Dudhwala, Khatki, Naghori, Nat, Pindhara, Pinjara, Poladi, Rangrej, Panjigara, Tai and Kasai	6	
		(Others included under other Muslims)	
D.—Converts w h o are menials or labourers ..	Maleks.. ..	1	
E.—Unclean	Bhangi .. ..	....
F.—Religious Mendicants	Fakir	1	
G.—Unspecified Muslim .. ..		....

406. Race of Christians—Christians are made up of 7,064 Indians, 63 Anglo-Indians and 135 persons belonging to European and allied races (*vide* Imperial Table XVI). Europeans consist of 111 subjects of the Empire and 24 belonging to other races—mostly of American nationality. Anglo-Indians have increased from 44 and European British subjects have increased from 80 to their respective present figures in the last ten years. The increase amongst Europeans is wholly due to the presence of a ship in Port Okha on census day, which contributed 27 European males (British subjects). If these 27 are omitted, the number of European British subjects is reduced to 84. The Anglo-Indian increase is wholly due to the opening of the workshops in the Marshalling Yard and Goya Gate in Baroda City and the Dabhoi Railway Station. The number of Europeans residing within the State limits (excluding the Camp) is much less than before because many high posts which used to be filled by Europeans are now held by Indians since many years. Apart from the adventitious presence of Europeans in Port Okha, the others usually reside in Baroda City and environs. The next largest settlement is in the Mehsana Railway Station. As to record of Anglo-Indians, it may be mentioned that since 1921, a stricter reckoning has been made of them, so that non-descript Indian converts of the “Feringhi” type were treated as Indians. A distinct tendency is also observable amongst educated Goans of good families to call themselves Indians, dress their ladies in *saris* and in other ways to assimilate themselves to Indian ideas. The Indian Christians are divided by race or caste as shown in the margin (*vide* Imperial Table XVII). The largest section is the Indian Christian of

Caste or Race	Strength in 1931
Depressed Classes	1,719
Kanbi, Maratha	12
Pathan	7
Portuguese Indian	196
Raniparaj	538
Caste unspecified	4,592

the indeterminate variety as pointed out already; they are mostly drawn from the socially degraded Hindu castes and do not care to disclose their origin. On the other hand, the Indian convert in the second or third generation is so completely changed that he does not in many cases really know from what caste his ancestor was drawn.

407. Forest and Primitive Tribes—Imperial Table XVIII gives details of the eighteen

Name of Tribe	Strength of tribe in 1931	Variation since 1921
All Tribes	312,051	+ 20.7
Bavcha	1,186	+ 16.6
Bhil	54,542	+ 24.9
Chodhra	38,786	+ 18.1
Dhanka	3,457	— 54.6
Dhodia	26,132	+ 22.4
Dubla	12,894	— 58.8
Gamit	59,213	+ 13.9
Kathodia	551	+ 48.1
Kokna	7,952	+ 17.6
Kolgha	991	+ 3.9
Kotwalia	2,207	+ 57.2
Mavchi	919	+ 90.2
Nayakda	11,802	+ 36.1
Tadvi	20,817	+ 47.0
Talavia	52,565	+ 156.0
Valvi	132	— 91.0
Varli	368	+ 79.5
Vasawa	17,527	+ 30.2
Unspecified	10	— 94.0

tribes which are usually found in the State. The marginal table gives the strength of each tribe and the variation since 1921. To understand the variations, it is important, however, to remember the following points. Talavias are a socially superior sept of the Dublas. Vasawas also have differentiated out from the Bhils but as a sept distinct from them. Tadvis also represent a fission (as the name implies) from Bhils. Chodhras have a sub-section known as Vālva or Valvādi, with which Vālvis are sometimes confused by the enumerators. These Valvis are perhaps a degraded sept of the Gamit tribe, themselves the most depressed economically of the Raniparaj. Dhanka (toddy tapper) is something of a generic name for all these tribes, so that persons returned as Dhanka are like “Raniparaj” unspecified. Kolghas and Valvis are the untouchable sections amongst these tribes. Tadvis are localised in Central Gujarat. Nearly 72 per cent of the Bhils are met with in Central Gujarat and the rest from what are known as the Rani Bhils of Mangrol, Songadh and Vyara talukas. Nearly one-third of Talavias live in Central Gujarat and the rest in the Southern division. Seven out of 12 Nayakdas reside in

South Gujarat, the rest mostly in Sankheda taluka. Over two-thirds of Vasawas are in South Gujarat (Mangrol and Songadh talukas) and the rest in Central Gujarat (mostly in the Kahnām area and Vaghodia taluka). Chodhras, Dhodias, Gamits and Dublas are almost entirely confined to South Gujarat. Dublas are mostly to be met with in the Rasti, Chodhras are on the other hand spread in Semi-Rasti and Rani tracts, while the bulk of the Gamits are in the Rani area. These considerations will help in the explanation of some of the curious jumps which the figures

show. The large decline in the Dhankas is rather a testimony to greater accuracy of record. They declined by nearly 60 per cent in 1921, so that this accuracy is continuous and progressive since 1911. Dublas have declined by nearly 59 per cent, largely accounting for the extraordinary rise of 156 per cent amongst Talavias. Both these tribes taken together show only an increase of 26 per cent, which may be considered as the true rate of increase amongst them. The large increase amongst Tadvīs is mostly due to the fact that nearly half of the persons returned as Dhanka in 1921, were shown under their true name in 1931. The decline amongst Valvis was due to the fact discovered after the Caste Table was ready that certain Valvis were wrongly compiled as Chodhras. Generally it may be said that these tribes are Gujarati-speaking,—only Varlis, Kathodias and Koknas originating from the Konkan speak a *patois* of Marathi and Gujarati. For further details, the reader is referred to the Caste Glossary.

§ 4. RACE COMPOSITION AND MODERN TENDENCIES

408. Race Composition of the Gujarati People—Having now completed the statistical analysis of the caste return, we shall attempt to estimate the strength of the different elements of the Gujaratis. The Gujarati people, as pointed out in the Chapter on Language, is a composite population into whose formation various race elements have mingled at widely different points of time. The primary element is the aboriginal, represented in this State by the eighteen tribes, in the higher sections of which there is decided Aryan admixture. Next come the Aborigines of the Plain, the Koli and allied castes, together with the semi-Rajput communities. Then there are the communities in which there is evidence of the Rajput and Gujar strains, the latter of which has given its modern name to the country and its people. Then there are the intellectual stocks—the Brahmans, Kayasthas and non-Rajput Vānias—which are of relatively pure Aryan lineage—leaving the residue of miscellaneous groups in which the Aryan and Dravidian stocks have mingled. At the base are the aboriginal tribes, the primitive inhabitants of the country. From the Raniparaj, the Chokapura (Pavagadhia) section of Chodhras has to be omitted to get an idea of the purer aboriginal element. As the Chokapuri were not separately compiled in this census, a 20 per cent increase on the figures for 1911 has to be added; this done, we get the remaining Raniparaj—301,766—as definitely aboriginal. Even then there is considerable admixture: the Central Gujarat Bhils, Tadvīs, Talavias and Naiks show decided Aryan influence in their physical and mental characters. It is proper therefore to distinguish between the early Aboriginal and the Aboriginal of the Plain, for which purpose we have to omit these Central Gujarat sections from the above total, and we thus get 222,009 as the estimate of the early Aboriginal element. The Aboriginal of the Plain consist of these Central Gujarat settled Bhil communities—79,757 as recorded in the last census—and also of Kolis proper with allied tribes, excluding the upper layer of Baria, Khant, Makwana and Talabda who may be termed Quasi-Rajputs. These excluded, the second class will number 326,353. Then we have to estimate the races with the Rajput strain. These include the undoubted Rajputs, the quasi-Rajputs as above, the castes of Rajput descent like Oswals, Shrimalis (among Vānias), Karadias and Anjanas, Bhavsars, Luhars, Kathis, Vaghers, Vadhels, Chokapuri Chodhras, the converted Rajputs like Molesalams, Behlins and Memons, and lower down in the social scale—Ravaliās, Vaghriās, Vankers and Chamars. Akin to the Rajputs but pastoral and agricultural in occupation are the large groups associated with the Gujar name like Lewas, Kadwas, other Kanbis, Kachhias and Sathwaras with their corresponding Muslim converts, Maleks and Mumnas, who are predominantly agricultural; and Ahirs, Bharwads, Rabaris and Gujar Charans, who are pastoral—the typical Gujar calling. Then again the Gujar strain enters largely into some of the prominent artisan castes—Darjis, Luhars, Kumbhars, Sonis and Sutars. For these we have to estimate from the 1911 figures with the addition of a presumed 20 per cent increase. We have to add lastly the few Sikhs to make up the total under this head. These calculations give a total of 1,277,529 for races with the Gujar and Rajput strains. Then we have to cal-

RACIAL GROUPS	Strength	Proportion to Population
I. Early Aborigines	222,009	9.1
II. Aborigines of the Plain ..	326,353	13.4
III. Races with a Rajput and Gujar Strain	1,277,529	52.3
IV. Brahmans and allied Aryan including Parsi ..	204,938	8.4
V. Miscellaneous Aryo-Dravidian		
i. Non-Gujar Artisan ..	58,336	2.4
ii. Other castes including Marathas and indigenous Muslims	293,195	12.0
VI. Foreign Elements		
i. Muslim	60,351	2.4
ii. Other including European and Anglo-Indian ..	296	
Total Population ..	2,443,007	100.0

culate the strength of Brahmans and allied Aryan groups, and the residue of Aryo-Dravidian elements, finishing up with the foreign elements amongst Muslims and Christians. A marginal table is prepared which gives also the relative percentages of these elements, to the total population. The Brahmans and allied groups contain, besides all true Brahman castes (there being no evidence of Gujar Brahmans in this State) and all non-Rajput Vanias, Parsis, Brahmakshatris, Brahmabhats, Barots, Targalas, Kayasthas and Prabhus. The foreign elements consist of those amongst Muslims which we already know and of Buddhists, Jews and Europeans. These leave us with 58,336 non-Gujar artisans and 293,195 for the miscellaneous residue of Aryo-Dravidian Hindus and Muslims. The Gujar together with the Rajput forms the most dominant element. The Aborigines of the Plain come next followed by the Aryo-Dravidian and the rest.

409. Who are the Rajputs and Gujars?—Having now obtained a general conspectus of the composite Gujarati population, it will be necessary to see how far the scheme fits in with known facts of anthropology and history. The classical Risley classification of Indian races would place the whole of the Gujarat population under the "Scytho-Dravidian" group. This classification is surprising in view of Risley's own admission that Rajputs and Gujars are not Scythians, but Indian Aryans. But the *Bombay Gazetteer* (Gujarat Population) would class Rajputs and Gujars with the White Hunas or Mihirs. This theory however is grounded on the surmise—for it is nothing more than a surmise—that the Gujars are a race of foreigners who swooped on India from the North-West, like the Sakas and the White Huns. From the Rajput word of 'mer' or 'midh' signifying a title of honour, it is argued that the Gujars were the same as Mihiras (the Sanskrit name for White Hunas). None of the Rajput clans have any tradition associating them with Scythians or other non-Indian races. The Gujars appear in Indian history about the 6th century A.D. on the break-down of Buddhism in the land. They appear in Rajputana and Broach in two isolated groups where they establish dynasties. The Broach dynasty spreads into the whole of Gujarat, lasts for about 200 years till the middle of the 8th century and disappears from Indian history but not without leaving its name and impress unfaceably on the Gujarati people. Now it is suggested from mere verbal resemblances, that Gujars may have been the same as Khizars. "The similarity of sound" says Rao Bahadur C. V. Vaidya, in his *History of Mediæval India*, "has often misled antiquarians into strange theories, and the attempt to identify the Gujar with the Khizar is not less strange than the now generally abandoned identification of the Jats with the Goetae." The nasal index of the pastoral Gujar which is 66.9 is shown by Sir H. Risley himself to be even lower than that of Parisians and to stand first in that regard amongst all Indo-Aryans. Gujars have characteristically long heads also. This is an insuperable objection to treating Gujars and Rajputs as part of the Scythian stock which was a broad headed race. "Still less probable is it," to quote from the India Census Report of 1901 "that waves of foreign conquerors entering India at a date when the Indo-Aryans had long been an organised community should have been absorbed by them so completely as to take rank among their most typical representatives, while the form of their heads, the most persistent of racial distinctions was transformed from the extreme of one type to the extreme of another, without leaving any trace of the transitional forms involved in the process." There is no need again to assume an extra-Indian emigration when the facts of history are enough for us to hold that the Gujars are an Aryan tribe, pastoral in characteristics, but raised through the pressure of times to a military and aggressive nation. Not one of the accepted lists, in Indian tradition or history, of non-Indian tribes mentions the Gurjara as one. The Mahabharat lists speak of Chinas, Kambojas, etc., but not Gurjaras. Pauranic lists mention Sākas, Yavanas, Turushkas and Gandharvas, but not these. Even as late as 8th century A.D. when Hinduism is firmly established, Mlechhas mentioned in the Mudra Rakshas are Chedis, Gandharvas, Hunas, Khasas, Sākas, but not Gurjaras. It is suggested as the ground for the surmise that Gujars were an alien tribe of invaders, that they were Hinduised, of set purpose, by the Brahmans who admitted them to Kshatriyahood, in order to crush the Buddhists and their Kushan allies. This hypothesis assumes that Scythians were crushed with the aid of their own kinsmen. There is no shadow of a reason for this supposition. Hindu kings have repeatedly beaten the nomad hordes without any such assistance. Gautamiputra in 150 A.D. defeated the Pahlavas, Sakas and Yavanas in the Dekhan; the great victories of Samudragupta (370-395) are well-known. Chandragupta II overthrew the Sakas in 395-415 A.D. Yasodharman crushed the Hunas in 530 and Sri Harsha had one of his earlier triumphs over Turks and Hunas in the beginning of the 7th century. In none of these struggles does it ever appear that the Hindus sought the aid of Gujars. Again if Hindus did accept the Gujars as allies, Bana, the laureate of Brahmanism, would not have gloried in the victory of Prabhakar Vardhan over them. Besides, if the Gujars and Rajputs were really a nomad horde, it is hard to believe that they should have been so completely Hinduised as to become within two hundred years, the predominant racial group in Gujarat and Rajputana, to be accepted without demur as the flower of India's chivalry. No alien race would have been vested with so much honour. Then again there is no reason to suppose that they are the same as Khizars. What we know of the history

of Khizaria does not show that the Khizars were ever a conquering people. Their homeland was the venue of wild hordes, from whom they fled and took refuge "among the seventy mouths of the Volga." They were a civil commercial people; while the Gujars of India were a pastoral people, hardy and war-like, and cattle breeders by profession. These latter cannot but be of the same stock as the Ahirs. The traditional origin of the Agnikula Rajputs—the Parmar, Chauhan, Padihar and Solanki—need not support a theory of a body of alien immigrants adopted into the Kshatriya fold after their purification by fire. It might far more suitably support the raising of an indigenous Aryan tribe lower in the social scale—probably Vaishya in origin—to the Kshatriya status by reason of its deeds in conquest and its militant organisation. And indeed that seems to have happened. A thousand years of Buddhism had obliterated, in Western and Northern India, as it did in Eastern India, all distinctions of caste and respect for Brahmans. The tradition of Parashuram's extirpation of Kshatriyas was followed, and reinforced under Buddhism, by a long sustained levelling movement. The Scythian interlude showed to the Brahman that the only way to renew Hinduism was to raise Vaishyas and other lower orders to the military brotherhood. That is how the Gujars—an ancient Vaishya tribe—came into fitful prominence on the stage of Indian history. But the Brahmans took care that the Gujars did not grow too powerful—Prabhakar Vardhan had to punish them for that reason. To quote again from Mr. Vaidya* :—

"The Gujars like the Jats are the ancient Vedic Aryan Vaisyas; and that explains why their names are not met with in ancient records before the fifth or sixth century. For such ancient scanty historical records as we possess concern themselves chiefly with kings and kingly families and rarely mention the common people. In the third century A.D. the Vaisyas for the first time came into prominence because (most Kshatriya kingly families being killed or driven further south) many Vaisya families took to the profession of arms against the foreign invaders of Scythic origin. The Guptas thus were Vaisyas who first opposed the Yue-chi and latterly opposed the Huns. It seems that when the Huns first invaded India and founded a kingdom at Sialkot the Gujars moved down into Rajputana, the sandy deserts of which have always afforded shelter to Aryans of the Punjab and the middle country when oppressed and dispossessed by foreigners. That seems to be the reason why the Gujars came into prominence about the time of the Huns. They moved from the Punjab into Rajputana and founded a kingdom at Bhinmal about the beginning of the sixth century. They even sent off-shoots further southwards and we find the Gujara kingdom of Broach founded by Dadda at about the same time. These two kingdoms were found in a flourishing condition by Hiuen Tsang. Pratāpavardhana conquered the Gujaras not because they were Huns or foreigners; he conquered them as every conquering hero in India did who conquered both foreigners and Indians in his *digvijaya*. The Gujaras of Bhinmal were to his south-west and he must have established his overlordship over them also. Yet the Gurjara kingdom of Bhinmal was strong and even Harsha did not entirely dispossess the Gujaras. They were probably only in nominal subjection to him as we have already stated. And they not only remained strong but in the next century grew stronger and subdued Kanauj itself."

410. Proposed New Classification—If the view that Gujars and Rajputs are Indian Aryan tribes is adopted, then we have the following broad classification of the Baroda State population :—

Group No.	Name of Group	Population strength	Percentage to total
1	2	3	4
I	Early Aboriginal	222,009	9.1
II	Civilised Aboriginal with Aryan Strain	326,353	13.4
III	Indian Aryan	1,482,467	60.7
IV	Aryo-Dravidian	351,531	14.4
V	Non-Indian Elements	60,647	2.4

411. Modern Tendencies—From these speculations on race, we turn with relief to describe such of the recent tendencies within castes which are worthy of note. It has been well said that although caste at any given moment seems rigid and immutable, yet it is not so unamenable to change, as its seeming rigidity and its apparent injustice would lead one to expect. New castes have come into existence from time to time; once formed, they appear to be inexorable, but the fact that the formation is possible shows that the system admits of change and is capable of adapting itself to new conditions. Particularly is this the case with the occupational groups, which still cling tenaciously to their old callings. Where modern conditions have rendered their employments unprofitable, enterprising individuals have drifted away from their present castes to new trades or have

* Vaidya's *History of Medieval Hindu India*, page 356.

taken to the land. Thus are formed the new castes, Kadia-Kumbhars, Luhars, Sutar-Luhars and Kumbhar-Sutarias. In 1911, the first named group was still forming with only 45 persons. In 1931, these Kadia-Kumbhars (*i.e.*, potters who have taken to the more elaborate work of builders) numbered 1,946. Sutar-Luhars were similarly a new unit formed by fission in 1911. They were only 72 then,—they are now 2,040 and they include among them also Luhars who had turned Sutars. We see thus two opposite processes coalescing for purposes of association. We have not yet seen in the State, evidence of artisan groups consolidating under one name—like that of ‘Rohela Tank Kshatriya’; but there is a great deal of activity amongst these for self-improvement and search after new caste names to raise themselves in the eyes of their fellows. The instances of Valands and Panchal Luhars have been already cited. Indeed so intense was the agitation for changing the name of the old barber caste that the rival claims of ‘Nai Brahman’ and ‘Valand’ nearly split the community in twain. The old Valand Hitechhu Mandal was broken up about 1928, their conferences became inactive and their organ ceased publication. The Prajapati Sabha for the Kumbhars began to function fairly actively during the decade. Apart from these special activities, other sections were busy in organising caste *sabhas* for social reform. The Luhana caste formed its *mandal*, and an active, and somewhat obstreperous youth league formed amongst them, made it hot for their elders to waste money on caste feasts, on occasions of marriage or death. Similar youth league activities were prominent amongst Patidars, Vanias and other higher castes, helping to swell the protest against child-marriages or disparate union of old men with young girls and other social evils. Everywhere there was stirring and men’s minds were deeply moved to social service.

412. The Problem of Untouchability—Particularly was this stirring noticeable amongst classes which are submerged. As an offshoot of the *mata* movement, some of the Raniparaj tribes, particularly the Dhodias, kept firm in their attitude towards drink and took praiseworthy steps to improve their community in education. The so-called Antyajias, whose touch still causes pollution to the orthodox Hindu, showed great progress in education and social organisation. With the active sympathy—and even indulgence—of the State authorities, the Antyajias have gradually improved their claims with the caste Hindus. In social organisation they have begun to show signs of intelligence and even leadership. The great meeting of 7,000 Antyajias in Chhathiarda (near Mehsana) on the 10th April 1927, which lasted for 3 days, and the Dalit Parishad on the 17th May 1931 are two memorable events in the history of their uplift movement. His Highness the Maharaja has always been very keen on the removal of untouchability which has so far acted as a bar to their progress. On the 10th April last year, he gave a banquet, to which he invited all the prominent leaders of the Antyajias and his leading officials sat down with him and ate freely in the company of these people. Still more recently, the decision of the Education department to throw open schools for caste Hindus in selected areas to the children of the depressed classes has attracted considerable notice and roused violent protests from Brahmans and other higher classes in certain towns. The problem of untouchability has however neared solution very considerably in the last ten years. Two factors however which militate against its removal must be remembered. As Mr. H. N. Brailsford remarks in an article in the “New Leader” :—

“More than half of the difficulty is that the outcaste are themselves penetrated by a sense of their own degradation and feel for the higher castes a shrinking reverence which has eaten into their very nerves. The other half of the difficulty is that the untouchables often are, in fact, degraded—dirty, ignorant, abysmally poor, and given to practices which really are disgusting and mean.”

These remarks, true as a whole, have to be modified in certain areas, where long established schools working amongst them have achieved marvels of sanitation and cleanliness. The so-called Dhedwadas of Chhani, Unjha and other places in the Raj are as clean as, and even better swept than, the homes of higher classes.

413. Signs of Co-operative Effort—From these evidences of class consciousness and the urge for self-improvement, we can judge that organised effort on co-operative lines can become more and more successful if worked properly. Weavers’ and Chamars’ societies were begun during 1911-21, but since then considerable progress on these lines has been recorded. There are now 41 weavers’ societies as against 19 in 1920, while societies for economic improvement of Chamars rose from 5 to 11 in 1930. Societies on co-operative lines for the economic needs of depressed classes generally began to be formed in the last decade. There were seven such societies. Altogether there were 1,226 members of these societies, and their working is reported to be fairly successful. Amongst higher classes, there is a society for the Chandraseniya Prabhus

of the City but the most noticeable organised effort on these lines was observed in respect of Audich Brahmans of Unjha, which was begun in 1925, as a sort of *gol* (circle) of connubial villages to counteract the *kulinism* of the Sidhpur Audichas; but the society developed as a "better-living" organisation with nearly a thousand members. Over 11 lakhs in personal budgets of its members have been saved since its establishment in respect of expenditure on social ceremonies. A great number of social reforms, such as the raising of age of marriage, the discouragement of disparate marriages, the spreading of education and such like, have been effected. Owing to the severity of its money penalties, the society encountered some opposition at first, but the community has since appreciated its good work and on its side the society has learnt more wisdom and moderation in its dealings with delinquents. The Kadwa Patidar Kelavni Mandal was started in 1920, to give point to the reform movement amongst Kadwa Patidars. They organised themselves as an educational and social reform society—working for healthy activities and spreading decent social influences amongst its youth. They established a very successful boarding institution at Kadi with the object of combining manual training and knowledge of useful arts with a literary education. It roused considerable enthusiasm amongst its people and collected large funds. In 1929, with the active help of the State, it started a reform propaganda work with a paid staff of itinerant lecturers. Their main plank was the advocacy of adult marriages, child welfare, sanitation, prohibition of caste-feasts and other extravagances, and the dispelling of ignorance. This staff was further supplemented in vacations by batches of touring students, who worked in close co-operation with the authorities. Altogether 126 villages were visited in a year's work, and 423 addresses were given, sometimes with the aid of magic lanterns, to nearly 60,000 persons (including 19,000 women and 6,000 children). Eight pamphlets were issued and broadcasted throughout the *prant* and the monthly organ "Chetan" ably supplemented these activities. As a result of these lectures, etc., in 13 villages public opinion vowed itself to persevere in the reforms and 9 *seva mandals* were established in other centres and older organisations were revived with new life.

414. Caste and Democracy—From these activities one sees proofs how caste, even on its old basis, is subserving the ends of patriotism. It has been already emphasised that caste is like nationality, in binding different races together although it does this in different ways. Wherever, as in the higher classes, its hold and organisation have become feeble, there intellectualist tendencies are utilising the cloak of caste to serve the purpose of consolidation. Brahmans are in this respect weaker in organisation in Gujarat than elsewhere in India. But the Vania has become the representative custodian of commercial interests. The greatest advance however is in the direction of consolidation of agrarian interests under the Patidar which is fast developing into a national caste. The movement against *kulinism* amongst Patidars has indeed grown apace, *gols* have multiplied, and the area from which *kulins* can take brides by selling themselves, has become more and more restricted. But that apart, latitude in respect of caste has become wider and more loose. The hunt for brides in Kathiawad has become more insistent; and I am informed the taking out of brides from the *kulin* fold has been designedly encouraged by these *gols* themselves. There is thus a tendency to democratise castes and this is inevitable when caste organisations insist on spreading education, which is the "sledge hammer of democracy." The caste *punchayat* has thus become the most primary form of representative institutions in India. There is no wonder therefore that the Patidar, by his special insistence on the paramount importance of his interests, has utilised his new opportunities by capturing through the ballot box more than his due share of seats in district boards and other representative bodies, as will be seen from marginal table. Patidars constitute only one-fifth of the population and yet they have secured more than half of the seats. But this has been achieved, it must be added, without much feeling however on the part of the non-represented sections. Brahmans and Vanias have

Name of Prant	No. of electors	No. of elective seats	Number of seats held by		
			Patidars	Brahmans and Vanias	Rest
State	155,021	102	53	26	23
Amreli	13,403	12	6	1	5
Baroda	57,689	27	16	6	5
Mehsana	65,778	34	26	3	5
Navsari	15,562	19	5	10	4
Okhamandal	2,589	10	..	6	4

begun however to feel "raw" on losing their old monopoly in these matters; artisan groups are now resenting the social ascendancy of Patidars in the villages; while the "uppishness" of the so-called untouchable is passing into a proverb:

“ *Dev gaya dūgré, Pir gayā Makké,
Angrajnā Rājman Dhed mare dhākké.* ”

“ The gods have gone to the hills, the saints to Mecca :
Under English rule, the Dhedas knock us and slap us.

415. Caste and Nationality—That brings us to the final question : what will be the reactions of caste in a place like Gujarat where it is still strongly entrenched, on the new opportunities which are unfolding themselves ? In 1921, I wondered, whether in the future, in an era of new opportunities, “ caste will adapt itself to new conditions and be content to remain as it were, the ‘ election agent ’ of the new democracy.”* But since then events have moved rapidly. The press of political stimuli together with the general urge for self-expression has released powerful forces which had hitherto been held in leash by the social discipline of elders. We have mentioned the increasing measure of democracy in caste movements. But the institution itself has been undermined mainly in three ways. The pressure of population on the land has driven multitudes of landless manual workers to herd in towns. This has resulted in enforced mixing of all sorts and classes in industrial groups and under factory conditions. Caste restrictions of commensality and exclusive living have been therefore considerably relaxed in towns. Intermarriage between different castes,—“ a wanton practice”, as one of my correspondents called it with severe austerity—has hitherto been prevented, but restrictions even here are breaking down through love marriages or illicit unions. Secondly, dissatisfaction with the traditional calling has thrown on the market thousands of men and forced them to take to occupations for which they have had no ancestral bent. Thus the Patidar has become a cooly for unloading of cargo in ports and harbours, while the Brahman has taken to tanning. The Vania has become a motor mechanic, while even the Bhangi has contributed his humble quota to the teaching profession. This tendency has become a potent influence for disintegrating caste restrictions. Thirdly the desire of inferior orders to claim kinship, and even adopt, the names of higher castes, has become a very powerful movement within recent years. So many have clamoured for the Rajput name, that it is doubtful whether even high-born Rajputs can now much enthuse over their own traditions. The incursion of Valands, Sutars, Sonars and Luhars into the exclusive Brahman fold can only result in a *reductio ad absurdum* of the caste system and of its immemorial dignity, “ just as the creation of a large number of peers must inevitably reduce the prestige of the House of Lords.”† If these disintegrating influences become still more powerful in the future, as it is inevitable that they will, castes will no longer be the mainspring of the Indian party system. In themselves they will be no more inimical to national fusion than are trade unions. They will simply help to resolve, by adapting new political institutions, Indian society into horizontal divisions, rather more rigid perhaps in the beginning than their prototypes in modern European countries. Judged in that view, the development of caste is decidedly in the direction of nationality, while its anti-social features are being overthrown, or at least controlled, by a genuine movement in social service, literature and art throughout Hinduism, giving definite evidence of its

“ ... ability to rise to the heights which the new political forms will demand. In recent years, the cry ‘ Back to Hinduism ’ has not meant a return to the old *dolce far niente* ; it has meant the extraction from Hinduism of powers latent in it but hitherto dormant. It is the demand for Hinduism to stand on its own legs, the demand for action and positive service. The wonderful results that have already shown themselves in the very short period of active Hindu nationalism leads one to hope that, with the attainment of a self-reliant manhood, Hinduism may have many more good things to give.”‡

Caste has in its possession a richly stored experience, developed through centuries, of organised collective action, of mutual help, social discipline and co-existent tolerance. It is believed that it will bring these qualities to the aid of the new political order, when it begins to function. Even though the future seems dark at the moment of writing, this Report may well end on this note of hope and optimism.

* Baroda Census Report of 1921, page 341.

† G. T. Garratt, *An Indian Commentary*, page 20.

‡ R. N. Gilchrist, *Indian Nationality*, page 137.

ADDITIONAL SUBSIDIARY TABLES

SUBSIDIARY TABLE II

CASTES CLASSIFIED ACCORDING TO THEIR TRADITIONAL OCCUPATIONS

No. of Group	Group and Caste	Strength	No. of Group	Group and Caste	Strength
1	2	3	1	2	3
I	<i>Landholders and cultivators</i> ..	670,543	VIII	<i>Priests and Devotees</i> ..	141,649
		274 *			58
	Anavala Brahman ..	11,818		Audich Brahman ..	45,222
	Anjana Chaudhari ..	38,459		Bava ..	3,358
	Kachhia ..	8,156		Deshastha Brahman ..	5,713
	Kasbati ..	2,852		Fakir ..	6,495
	Kadwa Patidar ..	219,161		Garoda ..	7,796
	Karadia ..	8,745		Gosain ..	14,064
	Lewa Patidar ..	226,871		Mewada Brahman ..	5,075
	Malek ..	11,206		Modh Brahman ..	9,039
	Molesalam (Hindu and Muslim) ..	10,881		Nagar Brahman ..	8,096
	Momna (Hindu and Muslim) ..	16,128		Other Brahman ..	27,201
	Pathan ..	15,884		Saiyad ..	9,590
	Sathawara ..	6,550			6,334
	Shaikh (Hindu and Muslim) ..	26,304			3
	Sindhi ..	4,602			264
	Vohra (Agricultural) ..	16,646			6,070
	Others ..	46,280	IX	<i>Temple servants</i> ..	7
II	<i>Military and Dominant</i> ..	118,014			4,505
		48			10,086
	Kathi ..	3,525			2,611
	Maratha Kshatriya ..	12,164			5,277
	Rajput ..	94,893			2
	Vagher ..	5,175			1,313
	Others ..	2,257			465
		425,826			3,499
		174			36,604
		103,775			15
		8,185			27,614
		6,209			4,902
		20,778			4,088
		59,566			128,439
		190,195			53
		37,118			7,215
III	<i>Labourers (including agricultural)</i> ..	312,181			7,798
		128			13,597
	Baria ..	54,542			8,971
	Chunvalia ..	38,786			7,867
	Gola (Rice-pounders) ..	3,457			34,172
	Patanwadia ..	26,132			11,709
	Talabda ..	12,894			37,110
	Thakarda ..	59,213			1,023
	Others ..	7,952			0
		11,802			1,023
		52,565			29,164
		17,527			12
		27,311			1,129
		71,171			28,035
		29			3,111
		6,537			1
IV	<i>Forest and Hill Tribes</i> ..	12,521			2,672
		5			439
		4,765			
		1,908			
		167			
		5,681			
		35,805			
		15			
		35,805			
V	<i>Graziers and Dairymen</i> ..	71,171			
		29			
		6,537			
		64,378			
		256			
		12,521			
		5			
		4,765			
		1,908			
		167			
		5,681			
		35,805			
		15			
		35,805			
VI	<i>Fishermen, Boatmen and Palkhi Bearers</i> ..	12,521			
		5			
		4,765			
		1,908			
		167			
		5,681			
		35,805			
		15			
		35,805			
VII	<i>Hunters and Fowlers</i> ..	12,521			
		5			
		4,765			
		1,908			
		167			
		5,681			
		35,805			
		15			
		35,805			
VIII	<i>Landholders and cultivators</i> ..	670,543			
		274 *			
	Anavala Brahman ..	11,818			
	Anjana Chaudhari ..	38,459			
	Kachhia ..	8,156			
	Kasbati ..	2,852			
	Kadwa Patidar ..	219,161			
	Karadia ..	8,745			
	Lewa Patidar ..	226,871			
	Malek ..	11,206			
	Molesalam (Hindu and Muslim) ..	10,881			
	Momna (Hindu and Muslim) ..	16,128			
	Pathan ..	15,884			
	Sathawara ..	6,550			
	Shaikh (Hindu and Muslim) ..	26,304			
	Sindhi ..	4,602			
	Vohra (Agricultural) ..	16,646			
	Others ..	46,280			
IX	<i>Military and Dominant</i> ..	118,014			
		48			
		3,525			
		12,164			
		94,893			
		5,175			
		2,257			
		425,826			
		174			
		103,775			
		8,185			
		6,209			
		20,778			
		59,566			
		190,195			
		37,118			
		312,181			
X	<i>Forest and Hill Tribes</i> ..	128			
		128			
		54,542			
		38,786			
		3,457			
		26,132			
		12,894			
		59,213			
		7,952			
		11,802			
		52,565			
		17,527			
		27,311			
		71,171			
		29			
		6,537			
		64,378			
		256			
XI	<i>Graziers and Dairymen</i> ..	12,521			
		5			
		4,765			
		1,908			
		167			
		5,681			
		35,805			
		15			
		35,805			
XII	<i>Fishermen, Boatmen and Palkhi Bearers</i> ..	12,521			
		5			
		4,765			
		1,908			
		167			
		5,681			
		35,805			
		15			
		35,805			
XIII	<i>Hunters and Fowlers</i> ..	12,521			
		5			
		4,765			
		1,908			
		167			
		5,681			
		35,805			
		15			
		35,805			
XIV	<i>Priests and Devotees</i> ..	141,649			
		58			
		45,222			
		3,358			
		5,713			
		6,495			
		7,796			
		14,064			
		5,075			
		9,039			
		8,096			
		27,201			
		9,590			
		6,334			
		3			
		264			
		6,070			
XV	<i>Temple servants</i> ..	7			
		4,505			
		10,086			
		2,611			
		5,277			
		2			
		1,313			
		465			
		3,499			
		36,604			
		15			
		27,614			
		4,902			
		4,088			
		128,439			
		53			
		7,215			
XVI	<i>Traders and Peddlars</i> ..	53			
		7,215			

SUBSIDIARY TABLE II—concl'd.

CASTES CLASSIFIED ACCORDING TO THEIR TRADITIONAL OCCUPATIONS

No. of Group	Group and Caste	Strength	No. of Group	Group and Caste	Strength
1	2	3	1	2	3
XVII	<i>Weavers, Carders and Dyers</i> ..	127,860	XXVI	<i>Oil-Pressers</i>	21,744
		52			9
	Bhavsar	5,876		Ghanchi (Hindu)	14,300
	Pinjara	4,764		Ghanchi (Muslim)	7,426
	Vankar (including Dhed) ..	107,988		Teli	18
	Others	9,232			1,871
XVIII	<i>Tailors</i>	15,763	XXVII	<i>Toddy Draucers and Distillers</i> ..	1
		7			265
	Darji	15,763		Bhandari	1,606
		27,617		Kalal	117
XIX	<i>Carpenters</i>	11	XVIII	<i>Butchers</i>	0
		24,290			117
	Sutar	3,327		Kasai	55,476
	Others	3,027			23
XX	<i>Masons</i>	1	XXIX	<i>Leather Workers</i>	42,802
		1,946			10,598
	Kadia Kumbhar	1,081		Chamar	2,076
	Salat	51,893		Mochi	540
XXI	<i>Potters and Brick Layers</i> ..	21	XXX	<i>Basket and Net Makers</i>	0
		50,996			540
	Kumbhar (Hindu)	897		Burud, etc., Mang ; Pomla ..	8,717
	Kumbhar (Muslim)	21,062	XXXI	<i>Earth Salt, etc., workers and quar-</i>	4
XXII	<i>Blacksmiths</i>	9		<i>riers.</i>	6,699
		21,062		Kharva	2,018
	Luhar	13,326		Od	10,904
XXIII	<i>Goldsmiths and Silversmiths</i> ..	6	XXXII	<i>Village watchmen and menials</i> ..	4
		1,149			9,643
	Sonar	12,177		Shenva	1,261
	Soni	2,159		Others	31,018
XXIV	<i>Brass and Coppermiths</i> ..	1	XXXIII	<i>Sweepers</i>	13
		2,159			31,018
	Kansara	410	XXXIV	<i>The Rest</i>	34,639
XXV	<i>Confectioners and Grain Parchers.</i>	0			14
		410		Christians	7,262
	Bhadbhunja			Zoroastrians	7,127
				Others	20,250

SUBSIDIARY TABLE II-A

Number of Group	Lists of Castes included under "Others"	Number of Group	Lists of Castes included under "Others"
1	2	1	2
I	Brahman—Karhada ; Kanbi—Maratha, Konkani and miscellaneous ; Patidar—Matia, Uda ; Makwana ; Mali ; Tamboli Thakor (Pardeshi) ; Khokhar ; Mughal.	XIII	Bhatia ; Brahman—Khedawal ; Vania—Jharola, Kapol, Khadayata, Mewada, Modh, Nagar, Oswal, Umad, Other Vania ; Dudhwala ; Khoja ; Bhojak (Jain).
II	Arab ; Behlim ; Gurkha and Jat.	XVII	Khatri ; Mahar ; Vanza ; Tai.
III	Bajania ; Gola (Khavas) ; Koli—Gedia and Bhalia ; Khant ; Baloch.	XIX	Kumbhar Sutar ; Sutar—Luhar including Luhar—Sutar.
IV	Bavecha ; Kolgha ; Kotwalia ; Mavechi ; Tadvi ; Kathodia ; Valvi ; Varli ; Raniparaj unspecified and Raniparaj (Hindu Arya).	XXIX	Dabgar ; Khatki.
VIII	Brahman—Gauda Sarswat including Shenvi ; Gugali ; Jambu ; Konkanaatha ; other Brahman.	XXXII	Makrani ; Nadia.
XII	Bharthari ; Grandhrap ; Gurav ; Holar ; Turi ; Vadi ; Dadhi ; Thori.	XXXIV	Hijda ; Kamalia ; Kasar ; Sagar ; Sarania ; Caste—not returned and minor Castes ; Depressed Classes (Aryas) ; Indian (Arya) Pagi (Arya) ; Arya unspecified ; Muslim unspecified.

SUBSIDIARY TABLE III

VARIATION IN MAIN CASTES, TRIBES AND RACES

CASTE.	PERSONS				Percentage variation Increase (+) decrease (—)			Net Variation 1901 to 1931	
	1931	1921	1911	1901	1921 to 1931	1911 to 1921	1901 to 1911	Absolute	Per cent
1	2	3	4	5	6	7	8	9	10
<i>Hindu, Jain and Tribal ..</i>									
Ahr	6,537	5,413	5,182	4,316	+20.8	+ 4.5	+20.1	+2,221	+51.5
Anjana Chaudhari	33,459	32,730	30,920	32,532	+17.4	+ 6.0	— 5.0	+5,927	+18.2
Baria, Khant and Makwana	128,925	99,446	71,013	44,955	+29.6	+40.0	Makwana figures not available for 1901	+17,708	+37.9
Bharwad-Rabari	64,378	58,381	53,405	46,670	+10.3	+ 9.3	+14.4	+1,502	—20.4
Bhavsar	5,876	5,677	5,689	7,378	+ 3.5	— 0.2	—22.9	+ 638	+15.5
Bhol	4,765	3,873	4,079	4,127	+23.0	— 5.0	— 1.2	—15,190	—10.9
<i>Brahman (all)</i>	<i>123,714</i>	<i>113,871</i>	<i>113,245</i>	<i>133,904</i>	<i>+ 8.6</i>	<i>+0.53</i>	<i>—18.4</i>		
Anavala	11,818	10,751	9,916	10,862	+ 9.9	+ 8.4	— 8.7	+ 956	+ 8.8
Andich	45,222	40,475	40,679	41,497	+11.7	— 0.5	— 2.0	+3,725	+ 9.0
Desastha	5,713	4,933	6,464	5,694	+15.8	—23.7	—13.6	+ 19	+ 3
Modh	9,039	8,536	8,800	9,578	+ 5.9	— 3.0	— 8.1	+ 439	+ 4.6
Nagar	8,096	7,713	7,990	8,144	+ 5.0	— 3.5	— 8.1	+ 48	+ 6
Tapodhan	6,070	5,039	4,465	4,740	+20.5	+12.9	— 5.8	+1,330	+28.1
Darji	15,763	14,318	13,277	14,023	+10.1	+ 7.5	— 5.3	+1,740	+12.4
<i>Depressed Classes (all) ..</i>	<i>203,943</i>	<i>176,902</i>	<i>174,450</i>	<i>166,740</i>	<i>+14.7</i>	<i>+ 1.4</i>	<i>+ 4.6</i>	<i>+36,303</i>	<i>+21.7</i>
Bhangl	31,018	27,548	26,397	24,011	+12.7	+ 4.4	+ 9.9	+ 7,027	+20.3
Chamar-Khalpa	42,802	35,147	32,210	29,746	+21.8	+ 9.1	+ 8.3	+13,056	+43.9
Garoda	7,796	6,570	6,281	5,919	+18.7	+ 4.6	+ 6.1	+1,877	+31.7
Shenva	9,643	6,072	7,587	5,209	+58.8	—20.0	+45.7	+4,414	+85.1
Vankar-Dhed	107,988	99,627	99,798	99,527	+ 8.4	— 0.2	— 0.3	+8,461	+ 7.8
Dhimar	167	2,040	5,410	.....	—91.8	—61.3	.....	.....	.....
Ghanchi	14,300	12,338	11,867	12,211	+15.9	+ 4.0	— 2.8	+2,089	+17.1
Gola (Rice pounder)	6,209	5,223	5,210	5,660	+18.9	+ 0.3	— 8.0	+ 549	+ 9.7
Gosain and Bava	17,422	15,728	16,081	15,097	+10.8	+ 2.2	+ 6.5	+2,325	+15.4
Kachhia-Khambar	8,155	7,434	8,029	8,855	+ 9.7	— 7.4	— 9.3	+ 700	— 7.9
Kadwa Patidar	219,161	183,691	172,836	175,694	+16.2	+ 9.2	— 1.6	+43,497	+24.8
Karadia	8,745	7,112	5,974	6,456	+23.0	+19.0	— 7.5	+2,289	+35.5
Koli Patanwadia Thakarda and Allied	238,411	215,395	218,413	234,370	+10.7	— 1.4	— 6.8	+4,041	+ 1.7
Kumbhar	50,996	43,029	41,693	41,395	+18.5	+ 3.2	+ 0.7	+9,601	+23.2
Lewa Patidar	226,871	195,183	184,810	171,223	+16.2	+ 5.6	+ 7.9	+75,638	+44.2
Luhana	13,597	11,833	11,588	10,461	+14.9	+ 2.1	+10.8	+3,136	+30.0
Luhar (Lavar)	21,062	19,169	19,212	19,032	+ 9.9	— 0.3	+ 0.8	+2,001	+10.5
Machhiand Kharva	12,380	8,937	2,542	9,825	+38.5	+251.5	—74.1	+2,555	+26.0
Maratha-Kshatriya Kunbi and Konkani	17,097	16,564	17,813	17,392	+ 2.6	— 7.0	+ 2.4	— 385	— 2.2
Mochi	10,598	8,882	8,715	8,593	+19.3	+ 1.9	+ 1.4	+2,005	+23.3
<i>Primitive and Forest Tribes (all)</i>	<i>312,951</i>	<i>258,447</i>	<i>246,926</i>	<i>190,462</i>	<i>+20.7</i>	<i>+ 4.6</i>	<i>+29.6</i>	<i>+121,539</i>	<i>+63.8</i>
Bhil	54,542	43,667	41,836	37,650	+24.9	+ 4.4	+11.1	+16,892	+50.2
Chodhra	38,786	32,841	31,366	23,324	+18.1	+ 4.7	+34.5	+15,462	+66.3
Dhanka	3,457	7,610	18,667	5,524	—54.6	—59.2	+237.9	—2,067	—37.4
Dhodla	20,132	21,341	20,487	15,861	+22.5	+ 4.2	+29.2	+10,271	+64.8
Dubla	12,894	31,307	40,976	23,492	—58.8	—23.6	+43.8	—15,598	—54.8
Gamit	59,213	51,974	49,615	38,169	+13.9	+ 4.8	+30.0	+21,044	+55.1
Kokna	7,952	6,762	6,451	3,646	+23.3	+ 4.8	+76.9	+4,306	+118.1
Nayakda	11,802	8,672	10,030	6,970	+36.1	+13.6	+43.9	+4,832	+69.3
Nadvi	20,817	14,156	24	8,435	+47.1	+58883.3	—99.7	+12,882	+146.8
Talavia	52,565	20,527	9,647	12,551	+156.1	+112.8	—23.1	+40,014	+318.8
Vasawa	17,527	13,610	10,951	2,383	+28.8	+24.3	+359.6	+15,144	+635.5
Rajput	94,893	79,308	64,228	59,414	+19.7	+23.5	+ 8.1	+35,479	+59.7
Raval (Ravalia)	27,614	28,918	22,484	20,039	+15.5	+ 6.4	+12.2	+7,575	+27.8
Sathwara	6,550	5,771	5,850	5,362	+13.5	— 1.0	+ 8.7	+1,188	+22.2
Soni	12,177	10,933	10,150	10,818	+11.4	—20.0	— 6.4	+1,357	+12.5
Sutar	24,290	22,368	20,719	22,585	+ 8.6	+ 8.0	— 8.3	+1,705	+ 7.6
Talabda	59,566	72,700	91,527	56,229	—18.1	—20.5	+147.1	+23,337	+64.4
Targala and Bhojak	5,242	4,594	4,815	4,817	+14.1	— 4.5	— 0.04	+ 425	+ 8.7
Vaghr	5,175	3,718	4,277	4,306	+39.2	—13.1	— 0.7	+ 869	+20.2
Vaghri	35,895	30,659	28,129	23,264	+17.1	+ 9.0	+20.0	+12,541	+53.9
Valand (including Nayee Brahman)	28,035	25,569	24,838	24,878	+ 9.6	+ 2.9	+ 0.2	+3,157	+12.7
<i>Vania (all)</i>	<i>86,477</i>	<i>78,457</i>	<i>78,618</i>	<i>87,370</i>	<i>+10.2</i>	<i>— 0.2</i>	<i>+10.2</i>	<i>— 893</i>	<i>— 1.0</i>
Dishawal	7,215	6,358	6,145	7,461	+13.5	+ 3.5	—17.6	— 246	— 3.3
Lad	7,798	8,558	8,500	8,556	— 8.9	+ 0.7	— 0.7	— 758	— 8.9
Porwad	7,867	6,296	8,613	9,509	+24.9	—26.9	— 9.3	—1,633	—17.2
Shrimali	34,712	29,085	31,965	27,415	+17.5	— 9.0	+16.6	+6,757	+24.7
<i>Muslim (all)</i>	<i>182,630</i>	<i>162,328</i>	<i>160,887</i>	<i>165,014</i>	<i>+12.5</i>	<i>+ .9</i>	<i>— 2.5</i>	<i>+17,616</i>	<i>+10.6</i>
Fakir	6,495	4,846	4,639	4,725	+34.0	+ 4.5	— 1.8	+1,770	+37.5
Ghanchi	7,426	4,070	4,614	3,929	+82.5	—11.8	+17.4	+3,497	+88.9
Kasabti and Sipahi	2,852	2,049	7,103	.....	+39.2	—71.1	.....	.....	.....
Malek	11,206	7,839	7,519	8,888	+43.0	+ 4.3	—16.3	+2,218	+24.7
Memon	8,971	13,871	13,540	7,607	—35.3	+ 2.5	+78.0	+1,364	+17.9
Molesalam (including Rathod and Parmar)	10,862	10,651	9,116	10,140	+ 1.9	+16.8	—10.0	+ 722	+ 7.1
Momna	13,829	7,092	7,183	12,153	+95.0	—1.3	—40.9	+1,676	+13.8
Pathan	15,884	13,500	16,307	11,402	+17.7	+17.2	+43.0	+4,482	+39.3
Pinjara	4,764	4,473	5,408	4,217	+ 6.5	—17.3	+28.2	+ 547	+13.0
Salyad	6,590	8,915	8,772	7,295	+ 7.6	— 1.6	+20.3	+2,295	+31.5
Shelkh	26,073	26,854	31,510	22,416	— 2.9	—14.8	+40.6	+3,657	+16.3
Vohra (Trading and Agricultural)	28,355	26,455	25,035	25,372	+ 7.2	+ 5.7	— 1.3	+2,983	+11.8
<i>Indian Christian</i>	<i>7,064</i>	<i>7,274</i>	<i>6,562</i>	<i>7,461</i>	<i>— 2.9</i>	<i>+ 4.5</i>	<i>— 6.7</i>	<i>— 397</i>	<i>— 5.3</i>
<i>Parsi</i>	<i>7,127</i>	<i>7,530</i>	<i>7,953</i>	<i>8,409</i>	<i>— 5.4</i>	<i>— 5.3</i>	<i>— 4.2</i>	<i>—1,282</i>	<i>—15.3</i>

APPENDIX IX

A GLOSSARY OF CASTES, TRIBES AND RACES

(Vide IMPERIAL TABLE XVII OF THE CENSUS OF 1931)

NOTE.—(1) Names printed in black capitals as **BHARWAD** are those of the main castes, the distribution of which by districts is given in Imperial Table XVII. The figures entered in brackets after each name show the total strength of the caste or sub-caste. Names printed in black capitals and lower case are those of sub-castes or tribes or sub-classes, *e.g.*, **Abotis**, etc., included under a general head like **ASCETICS, BRAHMANS, DEPRESSED CLASSES**, etc.

(2) When there are Musalman castes like those of Hindus, they are shown separately below the Hindu caste names, and are marked with an asterisk ; but when there are only a few Musalmans or Hindus, following a particular trade, their number only is shown separately in brackets after the name of the Hindu or Musalman main caste, *e.g.*, Dhobi (H. 2656, M. 439).

(3) The sub-castes noted are only those found in the State. Outside the State, some castes have additional sub-castes also.

(4) This glossary was first compiled for the Baroda Census of 1911 by Rao Bahadur Govindbhai H. Desai, from a variety of materials of which the Gujarat Population Volume (Vol. IX) of the Bombay Presidency Gazetteer of 1901 was the chief. Since then, Enthoven's Tribes and Castes of Bombay appeared in three volumes late in 1920. In the Census of 1921, this work was utilised to a small extent in the Caste chapter of the Report of that year. For this census, a thorough revision of the Caste Glossary in the light of these new materials was deemed necessary. This has been done : figures of the latest census have been used. Unimportant entries have been omitted. Where modifications were deemed necessary they have been freely made. The authorities above quoted have been largely drawn upon. The Notes on Brahman, Depressed Classes, etc. are almost entirely based on them. Entries have been rearranged and grouped on a new plan. An attempt has been made to bring the Glossary up-to-date with due regard to economy of space and lucidity of treatment.

ABOTI—See under Brahman—Aboti.

AHIR (6,537)—Cattle-breeders, found chiefly in Kathiawad. According to Manu, they are sprung from a Brahman and an Ambastha or Vaidya woman. According to the Brahman Puran, from a Kshatriya father and a Vaishya mother ; according to the Bhagavat Puran, from Vaishya parents, and according to an old tradition, from a Rajput slave girl and a Vaishya slave.

They claim to be Vaishyas but are regarded by Brahmans as Shudras. They were once a ruling class, and, like the Ahirs of the United Provinces, claim Krishna's birthplace, Mathura, as their first seat. Some of their surnames are the same as Rajput tribe names, *e.g.*, Chavda, Chudasama, Gohel, Gorla, Pithia, Ravalia, Sisodia, etc. The men wear a black and white headress like the Mers, a short puckered jacket and light ankled trousers of hard woven cotton like Bharvads. The women are easily known by their coarse free hanging blanket shawls, pink cotton skirt and smooth flattered anklets. They have given up cattle-breeding and, except a few who are carpenters, live as husbandmen. They reverence *Tulsishyam* (Lakshmi and Krishna) and a number of local goddesses. Their ordinary food is like that of Vantias and Kanbis, millet bread, pulse, milk and vegetable, but they can eat mutton, venison and other game but not beef. Children are betrothed at any age and married between twelve and fifteen. Like Rabaris, they celebrate their marriages every year on one fixed day. Among them it is usual for the younger brother to marry his elder brother's widow. The caste has a headman who, with a committee of the caste, settles all disputes. Breaches of caste rules are punished with fine, and eating with forbidden persons by excommunication.

The name Ahir is a corruption of the Sanskrit Abhira. The Baroda Ahir belonging to the Gujarat section differs from his Deccani congeners. In regard to the Gujarati section, it is necessary to assume that they were originally of one tribe, and are still without exogamous subdivisions, except families bearing the same surname. The endogamous groups are of the territorial type : (i) Machhua from the river Machhu near Morvi, (ii) Pranthalia near Vagad, (iii) Boricha in Kanthi, (iv) Sorathia in South Kathiawad, etc. A further division is according as they live in settled communities in towns, etc., or are nomadic in character migrating from

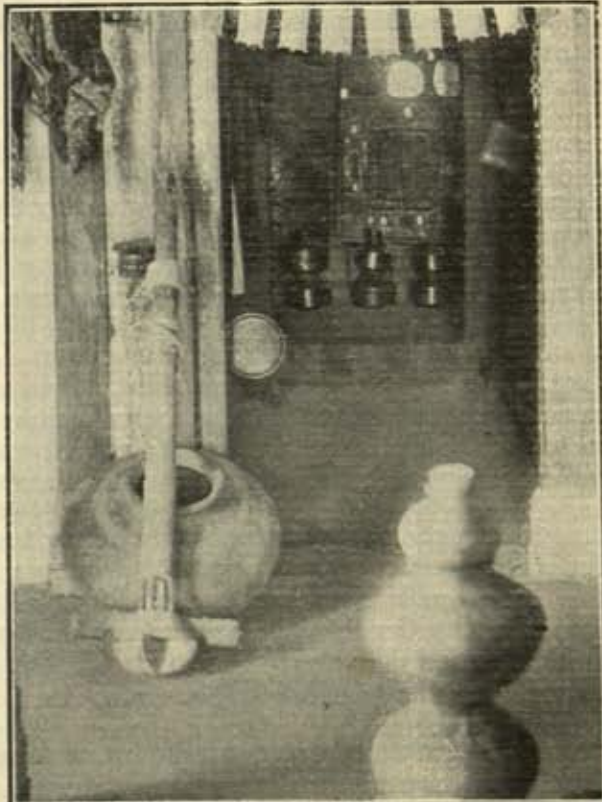
nes to nes (as their temporary hamlets are called). The attempt to connect the Ahirs with the Scythians, like that other attempt to trace the Gujars to Khizars, is now discredited by latest Indian scholarship. The Ahirs belonged to the great pastoral section of the Aryan race.

ANAVALA—See under Brahman—Anavala.

ANJANA CHAUDHARI (38,459)—A caste of cultivators mainly found in the Mehsana district. They are more like Rajputs than Kanbis, and to distinguish themselves from the latter style themselves *Chaudharis* (from Skt. *Chaturdharin*, lord of the four directions). Like Rajputs some of their names end in *sing* as Dansing, Harising, etc. There are among them 23 clans who eat together and intermarry. Some of these clan names are Rathod, Solanki, Chohan and Parmar. Unlike other Kanbis, Anjanas eat flesh of sheep and goats and of the wild boar and hare. They eat opium and drink liquor. Most of the males wear flowing whiskers divided by a narrow parting down the chin. In pre-British days they were martial in their bearing and as ready as Rajputs to use force in defending their cattle and crops. They have now settled down to quiet and orderly ways. But they have not yet taken kindly to education and rank low in literacy. By occupation they are cultivators. Their women help them in the field work. In religion they are Ramanuji, Shaiva and Swaminarayan. Their priests are Audich, Mewada, Modh and Visnagara Nagar Brahmans. Their customs at birth, sixth day, marriage, pregnancy, and death do not differ from those of Lewa Patidars. Besides, they have faith in sorcery and witchcraft and in ordinary omens. Girls are married before 11 years old. Widow marriage and divorce are allowed. They have their headman, who in consultation with a few respectable castemen, settles divorce cases and caste disputes. The type of dwellings in which they live is rural, but characteristic of North Gujarat, with greater regard for seclusion of women and affording more protection against thieves and other criminals. In view of their Rajput affinities, their dwellings approach the pattern of their congeners. In front of the house, the *dehli* or covered entrance is the only shelter of the cattle. Rajput houses contain more furniture than other cultivators. There is the inevitable sword or matchlock. The quadrangle is larger. There is often an enclosing wall. Two illustrations showing the outer and inner portions of an Anjana's house in Kheralu are here given.



Exterior of an Anjana's house, Kheralu



Interior of an Anjana's house, Kheralu

ASCETICS (Vairagi, Bava, etc., 3,352 ; Sansari Gosains, 14,064 ; Fakir, 6,495.)—Under this head are detailed religious orders and classes of mendicants under Hinduism, Jainism and Islam.

A. HINDU

Hindu religious mendicants are of two varieties: (i) Sansari and (ii) Vairagi.

Generally known as Gosains and Bavas, these mendicants when they definitely renounce the world, become known as Sadhus. The Sansāris marry and adopt the normal life of householders.

Gosains—Also called Atit. Those who are not Sansāris are further divided into two classes: *mathdharis*—celibates attached to some recognised *math* or monastery; and *rakhadta*, wandering and unattached mendicants. All Gosains are Shaivas and belong to ten sects—Gir, Parbat, Sagar, Puri, Bhārthi, Van, Aram, Saraswati, Tirth and Ashram. They add the clan name to the personal name as Karangar, Hirapuri, Chanchalbharathi, etc. All of these clans have some of their members householders (Gharbaris) and others monks (Mathdharis). Among the Mathdharis, the *Guru Shishya Sampradaya* or succession from preceptor to disciple obtains. The appointment of a *chela* is made by tonsure (*mundan*) and covering him with *chadar*, which ceremony is followed by a feast to the members of the order, which is called *bhandaro*. Gosains are either entirely or partly clad in brown. Most of them are professional beggars. But among them some are bankers, merchants, state servants and soldiers. They do not wear the sacred tread and allow widow marriage.

The unattached variety are variously known as Bavas, Vairagis, or Sadhus. These are generally celibates. The name Vairagi, derived from *vi* (without) and *rag* (passion) is commonly reserved for Sadhus of the Vaishnavite order.

Sadhu—As a rule, ordinary Hindu Sadhus adopt a life of easy, irresponsible indolence and mendicancy. They know well how to time their wanderings so as to make them fit in with the festal event of each locality within their annual round. They are generally attired most scantily, and for protection from the sun's rays and insect pests, have their skin rubbed over with ashes. Most of them have on their foreheads and noses *tilaks* or neatly painted white or coloured sect marks. Irrespective of sect some called *Juttadharis* have their hair braided and coiled upon the anterior part of the crown of the head; some called *Bhoureahs* wear their hair falling in disorder about the face; while others have shaven pates. Most Sadhus wear strings of beads about their necks or carry rosaries in their hands. From the nature of the beads it is easy to distinguish between the followers of Vishnu or Shiva, according as they favour beads of the holy basil wood (*Ocimum sanctum*) or the rough berries of the *rudraksha* tree (*Elaecarpus ganitrus*). The Shiva rosary or *japmala* consists of 84 *rudraksha* beads and the Vaishnava one of 108 beads of *tulsi* (basil) wood. Some Sadhus wear phallic emblems suspending from the neck by woollen threads; some wear great wood or metal ear-rings; and others wear armlets of iron, brass or copper which are well-known as badges of visits to the lofty Himalayan monasteries of Pasupatinath, Kedarnath and Badrinath. Some have a white conch tied on to their wrist, indicating a pilgrimage to Rameshwar and some have symbolical marks branded conspicuously upon the arm as evidence of a pilgrimage to Dwarka. Most of the Sadhus keep in their hand a pair of big iron fire-tongs. They use a wooden staff, called *bairagun* as a chin-rest or arm-rest and earthen pipes called *chillums* for smoking *ganja*. Some Sadhus keep with them miniature chapels with miniature stone or metal idols or pictorial representations of the deities, which are set up when they make a halt at any place.

As a part of their *tapascharya* or austerities, some Sadhus undergo many inconveniences, pains and sometimes even terrible tortures. Some called *panch dhuni* sit under the open sky girt about with five small fires; sometimes only four fires are lighted, the sun overhead being regarded as the fifth one. Some sit and sleep on a bed of spikes, called *kanak saiya*; some called *tharashri* stand leaning on some kind of rest for days or weeks together. Sadhus known as *urdhvamukhi* hang head downwards suspended from the bough of a tree for half an hour or more. Those known as *urdhvabahu* keep one or both of their arms erect over head till they are reduced to a shrunken and rigid condition. Some practise *ashtangdandvata*, that is, applying the eight parts of the body—the forehead, breast, hands, knees and insteps—to the ground and thus measuring the ground, go on a long pilgrimage by slow and laborious marches. Some called *jalshai* sit a whole night immersed in water. Some called *falahari*, live upon fruits, others called *dudhahari* subsist on milk alone, while those known as *aluna* never eat salt with their food. As aids to meditation, a great number of *asans* or postures, e.g., *padmasan* or lotus posture, have been devised. Some Sadhus perform purificatory rites known as *neti karma*, drawing a thread through the mouth and one of the nostrils with the object of cleansing the nasal fossæ; *dhoti karma* swallowing a long strip of cloth and after it has reached the stomach drawing it out again with the object of cleansing out the stomach; *Brahma datan* cleansing the throat with a long and thin green stick used as a brush; *brajot karma* and *ganesha kriya*, for flushing the colon without instrumental aid.

A Sadhu's anger and displeasure are much dreaded and avoided as far as possible. Some Sadhus are believed to have magic powers by which they can work wonders and cause calamities. Some are believed to be proficient in alchemy by which they can turn the baser metals into

gold; while some affect to be fortune-tellers, palmists, and expert medicine men and conversant with hidden treasures. Many a credulous or greedy devotee has lost his all and come to grief in seeking to become rich with the help of Sadhus.

Shaiva and Vaishnava Sadhus—The Sadhus usually met with in this State are : (1)—Shaiva :—(a) Brahmachari, (b) Sanyasi, (c) Dandi, (d) Yogi and (e) Paramhansa; and (2)—Vaishnava :—(a) Ramanuji or Shri Vaishnava, (b) Ramanandi, (c) Ramasanehi and (d) Swaminarayan. Shaiva Sadhus while paying special honour to Shiva do not, as a rule, reject the other gods of the Hindu Pantheon. In the same way, Vaishnava Sadhus while specially adoring Vishnu in his human incarnations as Ramachandra or Krishna, either with or without their consorts, do not disregard Shiva altogether.

The class distinctions amongst Shaiva Sadhus represent gradations in the degree of asceticism.

Brahmacharis—Brahmacharis or celibates belong to an inferior ministering order. This order is said to have been created by Shankaracharya to serve as helps and companions to Sanyasis and Paramhansas. Brahmacharis also generally serve as worshippers in Mahadev or Mata temples, put on a red fisher-like cap on their head, and a necklace of *rudraksha* beads on their neck.

Sanyasi—All Hindus, even Shudras and out-castes may become Sanyasis. When after a period of probation the postulant wishes to be received as a *chela*, he has to bring an offering including a *tinga* and a *rudraksha* berry to the Sanyasi whose disciple he wishes to become. Four Sanyasis are required for the initiatory ceremony. The chief of the four, the selected *guru*, whispers into his ear the *mantra* of the order; another confers a new name upon him, which generally ends as in respect of Gosains in one of the following ten suffixes :—Giri, Puri, Bharti, Ban, Auran, Parvat, Sagar, Tirth, Ashram and Saraswati; the third rubs him over with ashes, and the fourth breaks his sacred thread if he have one, and cuts off his *shikha* or scalp-lock. After initiation, the *chela* is expected to serve his *guru* for a time in order to learn wisdom from him. When the period of probation is over, more ceremonies are performed including *shraddh* or post-funeral rites of the new *Sanyasi*. When a Sanyasi dies, he is buried in a sitting posture facing east or north-east, with arms supported on a wooden rest called *bairagun*. As the followers of Shankar, though paying special honour to Shiva, do not reject the other gods of the Hindu Pantheon, the order of Sanyasi is a mixed one and has many Vaishnavas and even Tantries among its members. All Sanyasis may eat together and accept food from any Hindu. They rub ashes over their bodies, wear salmon coloured robes and a tiger skin if they can get one. They make sect marks on their forehead, wear a necklace of *rudraksha* berries or at least one such berry. The hair of their head and beard is allowed to grow freely. In their hands they carry a pair of iron tongs. Whenever they are seated they light a fire and smoke *ganja*.

Dandi—The Dandis, so called from the *danda*, or staff, which every member is required to carry, were originally recruited exclusively from the twice-born or sacred thread-bearing castes, but now any Hindu is allowed to join the order. He who wishes to become a Dandi fasts for three days. On the fourth day, there is a *havan* (sacrifice) after which he is shaved, head and all. He is then taken to a river or tank in which he is made to stand waist-deep in water, and take out his sacred thread. While in water, he receives the *mantra* of the order from his *guru* and also a new name which has for its suffix, *ashram*, *tirth*, *bharati* or *swami*, when he steps out of water, he is given the *dand*, a bamboo with six knots, and a piece of salmon coloured cloth attached to it and a gourd and is robed in five pieces of salmon coloured cotton cloth, one piece being wrapped round the head. Rules for his guidance in life are explained to him. They are to the effect that he must not touch fire, must take one meal a day, must get his food from the houses of Brahmans only and so on. He is further enjoined to preach to the people and to practise virtue. Dandis shave their head, upper lip and beard. As a distinctive feature, they bear the Shiva mark on their forehead, viz., the *tripundra*, a triple transverse line made with ashes obtained from the fire of an Agnihotri Brahman. A Dandi is not required to worship any god, but some worship Shiva and also Vishnu as Narayan. They repeat initiatory mantras *Om Namah Shivaya*, salutation to Shiva and *Namo Narayan*, salutation to Narayan. Some Dandis worship the deity *Nirgun Niranjaya*, that is, devoid of attributes or passion. Dandis are either buried or thrown into some river when they die.

Yogi—Yogi or Jogi, as they are called in the vernacular properly means one who practises *Yoga* with the object of uniting his soul with the Divine Spirit. The word *Yoga* means union and *Yoga Vidya* is the complex system of philosophical doctrines and practical exercises for promoting union between the individual soul and the divine spirit. The *Yoga* philosophy founded by Patanjali teaches that by certain practices a man is able to obtain complete mastery over matter. These practices are *pranayams* or long continued suppression of breath and 84

different ways of fixing the eyes on the tip of the nose. It has recently attracted much attention in the west and the United States of America. *Yoga* is not confined at present to Yogis alone, nor is it practised by all who are known as Yogis. Many a religiously-disposed layman and follower of other sects resorts to it when so inclined. Yogis regard one Gorakhnath as the founder of their order. They pay special respect to Shiva, a demi-god called Bhairava and nine *Nathas* or immortal saints. They also hold in special veneration 84 *Siddhas* or perfect Yogis, some of whom are believed to be still living upon the earth. Members of all castes may become Yogis. They are divided into several sub-orders, of which the two more prominent are *Kanfati* and *Oghar*. They wear rosaries of *rudraksha* beads and put on *langotis*, or loin cloth only and sometimes salmon coloured garments. They wear their hair plaited with threads of black wool and coiled on the top of the head. They mark their forehead with a traverse line of ashes and also smear the body with ashes. They live in monasteries and often move about the country in groups or singly. They bury their dead in a sitting posture facing the north. The *Kanfatis* wear huge wooden ear-rings (*mudra*) and their sect names end in *Nath*. The *Oghars* have names ending in *das* and are recruited from the lowest of castes. They do not wear ear-rings but keep a small wooden pipe, called *nath* suspending from the neck by a black thread.

Yogis returned to a wordly life have formed castes in Gujarat which are known as Jogi, Ravalia, or Bharthari. They live as itinerant beggars, common carriers, tape-weavers and day-labourers. Those of them who are beggars carry a small fiddle with them and sing religious songs and verses in the streets.

Paramahansa—Paramahansa, derived from Sanskrit *param*, great, and *hansa*, a swan which can separate water from milk, means one who can distinguish truth from falsehood. The order of *Paramahansa* ranks higher than that of *Sanyasi* or *Dandi*. Only those *Dandis* or *Sanyasis* who have undergone a probation for not less than twelve years can be admitted to it. *Paramahansas* occupy themselves solely with the investigation of the supreme *Brahma*, without regard to pleasure or pain, heat or cold, satiety or want. In proof of their having attained this ideal perfection, they move about in all weathers and sometimes do not speak even to indicate any natural want. Some members of this order even go about naked or affect to live without food, or eat only when fed by others. Some refuse food unless they are fed by a *Kumari* (maiden) with her own hand. *Paramahansas* are buried when dead or floated in a running stream.

Aghori—Shiva ascetics called *Aghori* or *Aghorpanthi* are seldom seen in towns and villages, but a few are said to be living on the Abu, Girnar and Pavagadh hills. The *Aghoris* seem originally to have been worshippers of *Devi* and to have required even human victims for their rites. They are hideous in appearance and their habits are very repulsive. They eat human flesh which they procure secretly from the graves in the villages they pass through. They push in pantheistic doctrines of the Vedant philosophy to its logical conclusion by arguing that if anything in existence is only a manifestation of the Universal soul, nothing can be unclean. *Aghoris* are much dreaded by the people, and sometimes impostors succeed in extracting alms from them by threatening to eat in their presence disgusting offal or foul carrion.

Vaishnav Sadhus—All *Sadhus* of the *Vaishnav* sect devote themselves especially to the worship of *Vishnu* and differ from one another mainly in paying adoration to him in his human incarnations either as *Ramchandra* or as *Krishna*. *Rama* worshippers may or may not associate *Sita* with their God. *Krishna* worshippers usually adore his consorts *Laxmi* and *Radha* or his mistress *Radha* alone along with the deity.

Shri Vaishnava—Ascetics of the *Ramanuji* sect are called *Shri Vaishnavas* because they worship *Laxmi* as the consort of *Vishnu*. They have monasteries in the Deccan, but occasionally reside in the *Ramanuji* temples at Baroda, Dabhoi, Dwarka, Sidhpur and other places in the State. They wear silk or wool garments and are scrupulous in keeping caste distinctions and in the preparation and privacy of their meals. Their necklaces and rosaries are made of *tulsi* wood or of lotus seeds. A novice is initiated with the name of *Narayan* or *Vishnu*. The special marks of the *Ramanuja* sect are a close shaven moustache, and *Jai Sita Rama*, as the salutation phrase; the disc or *chakra* and the conch or *shankh*, emblems of *Vishnu*, and vertical or slanting lines on the forehead of white clay, a perpendicular red streak for *Laxmi* in the middle, with a horizontal white clay line connecting the three across the root of the nose, the whole from one to two inches wide and representing *Vishnu's* throne.

Ramanandi—*Ramanandi* *Sadhus* bear on their foreheads the distinguishing *Vishnu* sect mark, the *trifala*, which consists of three upright lines; the centre one red and the side ones white. They also wear necklaces and rosaries of *tulsi* wood. Marriage is allowed among a division called *sanjogi* but forbidden to the division called *naga* or naked. The head *guru* who resides at Kheda in Jodhpur is enjoined to observe celibacy. The *Nagas* are divided into (1)

Achari, (2) Sanyasi, (3) Khakhi, and (4) Vairagi. The Acharis wear silken and woollen garments, the Sanyasis salmon coloured cotton clothes, the Khakhis only a loin cloth with their bodies besmeared with ashes and their hair and nails unclipped. Some of them perform severe austerities such as standing on the head, sitting amidst fire and smoke, keeping their heads erect for hours together believing that the greater the self-inflicted severity, the greater the salvation.

Ramsanehi—Sadhus of the Ramsanehi sect live in their monasteries in Marwad and in their subordinate establishments in Baroda, Visnagar and other places. Among their rules of conduct, truthfulness, control over the passions, a solitary residence and begging readymade food from lay followers are enjoined. The use of fire or even a lamp at night is strictly forbidden and even the touch of a coin is held sinful. They rise and bathe at early dawn and wear an ochre coloured piece of cloth. Their forehead mark is of white *gopichandan* clay in shape like the flame of a lamp emblematic of divine light. They use a rosary of *ratanjali* or red sandal.

Kabir Panthi—Kabir Panthi Sadhus have no distinctive dress or ceremonies. As far as they affect peculiarities of any kind, they follow those of *bairagis* wearing *tulsi* beads and having the *trifala* painted on their foreheads.

Swaminarayan Ascetics—Swaminarayan ascetics are of three orders: *Brahmachari*, *Sadhu* and *Palas*. Brahmacharis rank the highest, after them come Sadhus, while the Palas who rank the lowest are mere attendants on the Acharya or head *guru* or temple servants.

Brahmachari—A Brahman follower of the sect who is prepared to lead a celibate life and dedicate himself to the service of the faith can be a *Brahmachari* after the probation of about a year. A Brahmachari wears a white *dhoti*, wraps an ochre coloured cloth round the upper part of his body and puts on a red woollen cap or *phenta* on his head. His duty is to read the Purans and other religious books, and to preach to those who visit the temples. Brahmacharis are allowed to use metal vessels for eating and drinking. They can also keep hair on the head and wear moustache and beard.

Sadhu—*Satsangis* or followers of the sect who are lower in rank than Brahmans, but not lower than Kanbis, can be Sadhus. A Sadhu must lead a celibate life and devote his full time to the service of the faith. He is required to shave his head, beard and moustache. He must put on an ochre coloured *dhoti*, wrap round his person another similarly coloured cloth, and put on a *falia* or head-dress of the same colour. Brahmacharis and Sadhus are prohibited from wearing coats, jackets or other tailor-made garments. A Sadhu must use wooden dish (*patra*) and a wooden jug (*kamandal*). He should on no account use metal vessels. Like the Brahmachari, he reads or preaches to the people. Swaminarayan Sadhus and Brahmacharis are not allowed to go out of the temples singly. They always move about in pairs or groups. At the headquarters, they live in monasteries; while moving in the district they live in the temples of the sect which are to be found in almost every village.

Palas—Like Brahmacharis and Sadhus, Palas also must lead a celibate life and devote themselves to the service of the faith. They are recruited from Koli, Rabari and other low castes. They are allowed to put on white garments and also to use shoes, and tailor-made coats. They serve as menials waiting upon the Acharya or as servants and managers of the temples. They are quite necessary in the organisation of the sacerdotal order of the sect, for only they can touch money or make the necessary purchases.

Daily Life—Brahmacharis, Sadhus and Palas rise early, offer prayers and attend the six o'clock meeting where the head Brahmachari or Sadhu delivers a sermon or reads from the Purans. They retire at nine o'clock and read or study till dinner time at eleven. They then meet at the temple, take a recess at two, reassemble at three and hold religious discourses till six in the evening. At night supper is served only to the weak or infirm and to those who wish to have it. The rest read sacred books and retire at eleven o'clock. Brahmacharis and Sadhus are forbidden to indulge in the pleasures of the palate. They are required to mix up the different viands together before eating. A Brahmachari or Sadhu may not even look at a woman. Should he touch one, even accidentally, he has to expiate for the sin by a whole day fast.

The distinguishing forehead mark of this sect is a vertical streak of *gopichandan* clay or sandal paste with a round red powder mark in the middle, and a necklet of sweet basil beads.

Dhed-na Sadhu—A class of ascetics exists amongst the Depressed Classes known as *Dhed-na Sadhu*. They are Vaishnavas by religion and are reckoned as spiritual preceptors of all the untouchable groups except Bhangis. They are mostly found in Dabhoi and Padra talukas. They are classed usually with Dhed (Vankar). Their social exchanges (of brides, etc.) are with the latter. According to their accounts they are found in 32 villages; and their

total strength is about 150 houses. Mostly their occupation is as *gurus*: a few have taken to cultivation. They are better than other untouchables in economic condition. They are not celibates but live normal lives as householders of the Hindu lower classes. They have recently taken actively to education and shown gifts of leadership. A very small section of these call themselves Vairagis and have taken to mendicancy.

B. JAIN

Amongst the Jains there are three classes of ascetics—Sadhus, Sadhwis and Gorjis. Any person may become a Sadhu. The Sadhu wears only two pieces of *bhagva* or ochre coloured cotton cloth but no head-dress. He does not allow the hair of his head, moustaches or beard to grow. Except when enfeebled by age he does not shave, but after allowing his hair to grow for about six months, tears it out with his fingers or gets it clipped. He always carries his staff (*dand*) and (*ogho*) brush, and before he sits down, sweeps the ground to push insects away. He sleeps on a blanket and owns no property. He never kindles fire or cooks food for fear of killing any living thing, but begs cooked food from Shravaks. He enters those houses only whose doors are open, and on entering repeats the words *Dharma Labha* (acquisition of merit). The owner of the house lays before him *bhiksha* or cooked food. When he has gathered enough for a meal from the different houses, the Sadhu returns and eats at home. Drinking water is collected in the same way. During the fair season, Sadhus are forbidden to stay more than five days in the same village and more than a month in the same town. But they are allowed to pass at one place the rainy season, that is, the four months from Ashadh Sudi 14th to Kartik Sudi 14th. The Sadhu's chief duties are to study and teach the Jain Shastras and to keep the *panch maha vratas* or five main vows. They are to refrain from *pranatipat*, life taking; *murkhavad*, lying; *adattadan*, receiving anything without the knowledge of the owner; *maithun*, sexual intercourse; and *parigraha*, taking gifts not allowed by religious rules.

Sadhwis—Sadhwis or nuns are recruited from religious Shravak women. A Sadhwi wears one robe round the waist and another on the upper part of the body. Like the Sadhu, she tears out the hair of her head once in six months, carries *dand* and *ogho* and begs her meal and water.

Gorjis—A Gorji differs from a Sadhu in wearing white instead of red ochre clothes. Gorjis grow the moustache and hair of the head. Unlike Sadhus, Gorjis have no order of female Gorjis. Except a few who break the rules and cook rich food in their monasteries, Gorjis never cook but beg *bhiksha* like Sadhus. Any person may become a Gorji. At present most of them are sons of low-caste Hindus, or illegitimate children, who are brought up by Gorjis. For this reason, they have sunk in estimation. Gorjis practise sorcery and magic and prescribe medicine.

Shripujya—Sadhus and Sadhwis belong to no *gachha*. Gorjis and Shravaks are divided into *gachhas* or bodies. Each *gachha* has a spiritual head, called Shripujya, who is chosen from among the Gorjis of the same *gachha*, provided he was originally a Shravak or a Brahman. Shripujyas wear their hair and dress and beg in the same way as Gorjis, except that a Gorji sometimes brings his food and water for him with his own.

Initiation—There is little difference in the entrance ceremonies for Sadhus, Sadhwis or Gorjis. The person, who wishes to become a Sadhu, goes to a learned Sadhu, and bowing at his feet humbly asks him to take him as his pupil or *chela*. The Sadhu finds out that the parents and relations of the youth are willing that he should become a Sadhu, and that he has sufficient strength of body and mind to stand the fasting and other discipline laid down in the Jain scriptures. A lucky day is chosen for the initiatory ceremony. When the disciple is a man of means, the ceremony is performed at his expense. In other cases, the cost is contributed by the Shravak community, who are always pleased when additions are made to the number of their religious class. The ceremony is celebrated with the same pomp as a marriage. A procession starts from the house of the disciple, who is seated in a palanquin, with a cocoanut in his hand and passing through the principal streets. A female relation of the person to be initiated carries in her hand a *chhab* or bamboo basket with the articles required for the intended Sadhu. The procession passes outside of the town and stops below an *asopalo* (*Polyalthia longifolia*) tree, where the *guru*, who is awaiting the arrival of the procession, performs the initiatory ceremony. The Sadhus form a circle round the novice, and the laity stand behind. The novice puts off his old clothes except the waist cloth. He then plucks out the hair of his head or gets some one to do so, and puts on his new garments as a Sadhu. He is then given a new name, containing at least one letter of his original name. Camphor, musk, sandal, saffron and sugar are applied to his bare head, while the initiator repeats texts calling on him to

observe with care the five prescribed vows, *panch maha vratas*. He is then supplied with the articles allowed to an ascetic by the Jain scriptures. They include five wooden pots or *patra*, in the shape of deep dishes, a *dand*, about five feet long, a *ogho* or brush, which, while walking is carried under the left armpit and is used to sweep the ground. The ceremony is completed by the guru throwing *vas khep* or fragrant powder on the head of the new ascetic as he passes. He does not return to the town, but passes the night in the neighbouring village or in a rest-house outside the town. He comes back next morning and stays in the *apasara* or monastery.

C. MUSLIM

Fakir—Under Islam, come the different tribes or brotherhoods of religious beggars known as Fakirs. Almost all begging communities lead a roving life. Those of Gujarat origin however limit themselves to the province and seldom leave it. Besides non-descript idlers, there are eleven brotherhoods of Muslim religious mendicants, belonging to two main classes: (i) *Bēsharāa*, i.e., those beyond the law, and (ii) *Basharāa*, i.e., those under the law. The first class have no wives or families and are nomadic in their ways of living. They drink, and do not pray or fast, nor rule their passions. The *Basharāa* on the other hand have wives and homes and follow the normal religious routine. Each brotherhood generally has three office bearers. Of these one is the head teacher, chief (*sar guroh*), controlling the whole body and receiving a share in the earnings. The two others are subordinate: the *nakib* (summoner) and *bhandari* (treasurer) looking to the creature comforts of the paternity. The members are further sub-divided into *murshids* (teachers) and *khadims* (or disciples). The disciple brings his day's earnings to the *sar guroh* who taking share and reserving some for the *bhandari*, leaves the rest to be divided between the disciple and his *murshid*. The general mode of initiation of the disciple is as follows:—

The teacher sees that the entrance ceremony is properly performed; that the disciple is shaved and bathed; that he learns the names of the heads of the order; that he promises to reverence them; that he receives certain articles of dress; that he gets a new name; that he learns the new salutation; that he swears not to steal, not to lie, not to commit adultery; to work hard as a beggar or in any other calling and to eat things lawful and finally that the entrance feast is duly given. At the close of each day, the new comer lays his earnings before the head teacher, *sarguroh*. Taking out something for himself and a share to meet the treasurer's charges, the head teacher gives back the rest. This the beggar takes to his teacher who giving him a little as pocket money, keeps the rest for himself. So long as the teacher lives, a beggar continues to be his disciple. When a teacher dies, the oldest disciple succeeds, or if the teacher has a son, the son and the senior disciple share the other disciples between them. The *Abdalis* and the *Nakshabands* are the two orders belonging to the lawful (*basharāa*) group and the rest are *bēsharāas*. The following nine *bēsharāa* orders are met with in this State:—(i) *Benawa*, (ii) *Hijda*, (iii) *Huseini Brahman*, (iv) *Kalandar*, (v) *Madari*, (vi) *Musa Suhag*, (vii) *Rafai*, (viii) *Rasulshahi* and (ix) *Siddi (Habshi)*.

As to their origin, it is sufficient to state that the natural disposition of the Arabs for a solitary and contemplative life led them soon to forget the command of the Prophet "no monks in Islamism." Another expression in the Koran "poverty is my pride" was the argument which, thirty years after the death of the Prophet, was used by his sectarians to found numerous monasteries in imitation of the Hindus and the Greeks; since then the order of Fakirs (poor) and of dervishes (sills of the door) so multiplied in Arabia, Turkey and Persia that they reached the number of seventy-two exclusive of an equal number of heretic sects (Brown's *Dervishes*, p. 76).

Mode of Living—Fakirs in Gujarat include in their ranks men from all parts of India and of every variety of descent. They move from house to house gathering money, grain and cooked food. The money they keep, and the grain and broken food they sell to potters as provender for their asses. Others reciting praises of the generous and abuse of the stingy, ask for a copper in the name of Allah to be repaid tenfold in this world and a hundredfold at the day of judgment.

Abdali also called *Dafali* or *Fadali*, players on the tambourine *daf*, are found wandering in small numbers. They speak Hindustani and beg in the name of Allah, beating their one-end drum, *danka*, and singing religious songs. In North Gujarat, they have a fixed due or tax upon the houses of Musalmans in towns and villages.

Nakshaband—literally mark-makers—are found all over Gujarat. They speak Hindustani, keep the head bare and wear the hair and beard long and well combed. With a

lantern in hand, they move about singly chanting their saint's praises. In return for alms, they mark children on the brow with oil from their lamps. They are quiet and well-behaved and have homes and families.

Benawas are fakirs of the *besbara* order. They are also called Alifshahi from wearing a black Alif-like (first letter of the Persian alphabet) line down the brow and nose. They wear Persian-like woollen hat, sleeveless shirt and round the neck long rosaries of beads of *selis*. They move about in bands of five or ten begging in the name of God. In each town, they have a headman called *bhandari* or treasurer, who receives their earnings and after giving back for expenses, forwards the surplus amount to the *murshid* or spiritual head of the order.

Kalandar, from an Arabic word meaning monk, are fakirs who wander over the country for begging and are troublesome in their demands. They shave the whole body including the eye-brows, and are Sunnis in faith.

Madari fakirs are mostly converted Hindus of the *nat* or tumbler class. They take their name from Badi-ud-din Madar Shah, the celibate saint of Syria, and belong to the *besbara* order of Sunnis. They beg alone or in bands of two or three. Some move about dragging a chain or lashing their legs with a whip to force people to give them alms. Others are snake-charmers, tumblers, monkey dancers and trainers, tricksters and ropes-dancers. They honour Hindu gods and follow Hindu customs. They marry only among themselves and form a separate community with a headman.

Musa Suhag are Musalman fakirs, who are so called after their patron saint Musa, who lived at the close of the 15th century, and used to dress as a woman to indicate that he was devoted to God as a wife to her husband. In memory of their saint, fakirs of this order dress like married women in a red scarf, a gown and trousers. They do not shave the beard, but put on bracelets, anklets and other garments. They are Sunnis in religion and never marry.



Musa Suhag

Rafai fakirs are also called *Munhphoda* or *Munhchira*, that is, face lashers or face splitters. They are found in small numbers all over the State. They hold in their right hand a twelve-inch iron spike called *gurz*, sharp-pointed and having near the top many small iron chains. While begging, they rattle the chains, and if people are slow in giving them alms, strike at their cheek or eye with the sharp iron point, which however causes no wound. They are Sunnis, some are celibates, while some are married.

Rasulshahi fakirs are also known as *mastan* or madmen. They put on only a shirt and a waist cloth. They are Sunnis of the *besbara* or celibate order and beg with a wooden club in their hands.

Sidi or **Habshi** fakirs are the descendants of African negroes brought to India. Their chief object of worship is Babaghor, an Abyssinian saint, whose tomb stands on the hill near Ratanpur in the Rajpipla State. Sidi fakirs move about in small bands. While begging they play upon a peculiarly shaped fiddle ornamented with a bunch of peacock feathers and sing in a peculiar strain in praise of their patron saint.

AUDICH—See under Brahman.

BAROT including **BRAHMA BHATS** (Hindu 14,555; Jain 26; Arya 10) Bards and heralds, they are found in large numbers in the Mehsana and Baroda districts and in small numbers in the Amreli and Navsari districts. Local inquiries seem to show that Gujarat Bhats were originally Brahmans from Allahabad and Marwar, who settled in Kadi and its neighbourhood. That some at least came from North India appears from the existence of Kanojia Bhats, both in Kathiawad and Cutch. There are eleven Phat settlements in North Gujarat. Of these four are in British Ahmedabad district, five in Baroda and Mehsana districts, two in Kaira and one in Cambay. Traces of their Brahman origin survive in their wearing the Brahmanic

thread and in their having such clans or *shakhas* as *Harmani*, *Kashiani* and *Parvatani*. Like Brahmans, Bhats of the same *shakha* do not intermarry. In Central Gujarat Brahman (Brahma) Bhats are found in large numbers. In North Gujarat and Kathiawad, besides Brahma Bhat the principal section, there are six sub-castes, viz., Dashnami, Kankali, Kanojia, Nagari, Pakhia and Vahivancha. Though the members of these sub-divisions neither inter-dine nor intermarry, all eat food cooked by Vanias and Kanbis. Brahma Bhats hold a higher place than any of the six divisions. Their marriage ceremonies do not differ from those of Kanbis. A man may divorce his wife, but the wife is not allowed to divorce her husband. Some sub-castes allow widow remarriage, but Brahma Bhats and those among others, who are considered *kulins* or of good family forbid it. A *kulia* eats with an *akulia*, but does not give him his daughter in marriage. Female infanticide was formerly practised among the *kulias*. Gujarat Bhats are vegetarians living on food-grains.

The honorific title of Rao is applied to Barots. Their main occupation is repeating verses of their own composition or selections from Hindu legends. They chant verses in a style peculiar to themselves and not unpleasant to a stranger, as the modulation of the voice and an energetic graceful action give effect to the poetry which is either to praise some renowned warrior, commemorate a victory, record a tragic event or panegyrisa a present object. The chief patrons of the Bhats are Rajputs, but Kanbis, Kolis and Luhanas also have their Bhats, who visit their patron's house. The Bhat is the genealogist, bard and historian of his patron's family. His *vahi* or book is a record of authority by which questions of consanguinity are determined when a marriage or right to ancestral property is in dispute. An interesting feature in the history of the Bhats was their use as securities. They became guaranties for treaties between rival princes and for the performance of bonds by individuals. No security was deemed so binding or sacred as that of a Bhat; for the reason that on failure he had at his command means of extorting compliance with his demands which were seldom used in vain. Those were the rites of *traga* and *dharna*. *Traga* consisted in shedding his own blood or the blood of some member of his family and in calling down the vengeance of heaven upon the offender, whose obstinacy necessitated the sacrifice. *Dharna* consisted in placing round the dwelling of the recusant a cordon of bards, who fasted and compelled the inhabitants of the house to fast until their demands were complied with. For these services, the Bhats received an annual stipend from the district, village or individual they guaranteed. Under the establishment of British supremacy in Gujarat, these rites became impossible and the custom of employing Bhats as securities fell into disuse. Many Bhats have abandoned their hereditary calling and become husbandmen. Some are well-to-do bankers, money-lenders and traders. Some are grocers and village shop-keepers and some are day-labourers, domestic servants and messengers. A few live by begging. While moving from house to house, the Nagari Bhats beat a *tokri* or drum, the Kankali carry a trident and the Palimanga, a knife.

In Religion, Bhats are Ramanuji, Shaiva and Vaishnava and worshippers of Amba, Bahucharaji and Kalika. Their priests are Audich, Modh or Shrimali Brahmans. Among Brahmabhats, Chamunda and Kalika are tutelary deities.

Bhats have no hereditary headman. Social disputes are settled by a few respectable castemen.

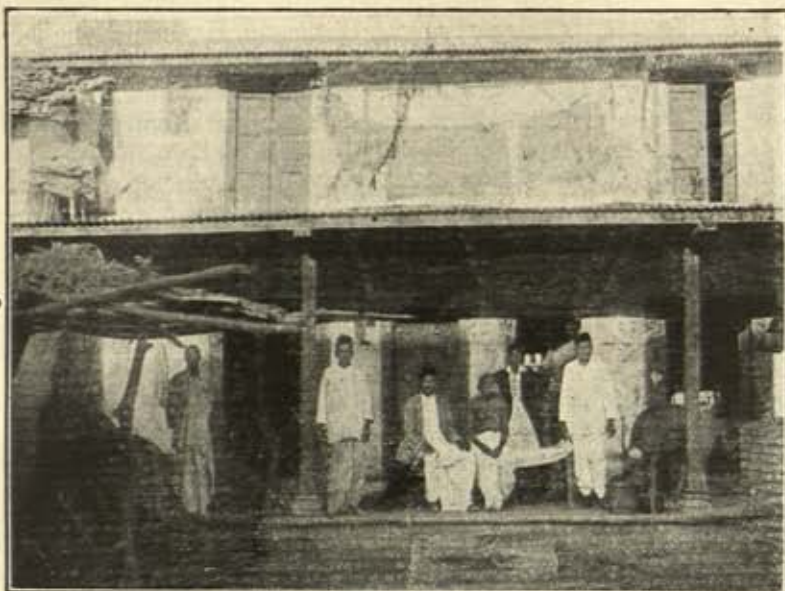
The Brahma Bhats (10,076) who are distinctly the most Brahmanical section of the caste are themselves divided into 10 sub-sections: (1) Devluk, (2) Harmani, (3) Kashiani, (4) Indrani, (5) Kundanpuria, (6) Messava, (7) Parvattani, (8) Rana, (9) Rao and (10) Sodani. Marriages are prohibited within each section or group of allied section like (1) and (3), or (2), (3) and (7), or (9) and (10).

BARIA (Hindu 103,769 ; Jain 5)—A caste of Kolis with a distinct Rajput strain. They are found chiefly in the Baroda district. Their own account makes Baria in Rewakantha, their original home from which, towards the close of the 15th century they were expelled by the Chohan Rajputs, who in turn had been driven out of Champaner by the Mahomedans under Mahmud Begada (A.D. 1484).

Their growing race-consciousness had led Barias, almost *en masse* in the State, to repudiate their Koli origin, and to seek affiliation with the Rajputs, most of whom, however, although they are ready to take girls in marriage from Barias, are not prepared to give them the dignity of their status. Some of the ruling chiefs and thakores however like Jambugorah, Rajpipla and Miyagam have encouraged this group to lift themselves in the social scale.

Barias are smaller and darker than Patanwadias and are remarkable for their wonderful eyesight. In occupation they are landlords, cultivators and labourers.

The Barias in Central Gujarat are of fairly good repute socially; their intermarriages



House of a Charotar Baria (exterior)



House of a Charotar Baria (interior)

with the Rajputs, particularly of the Padhiar clan were frequent enough to warrant their persistent putting forward of their claim to Rajput status. This fact combined with that other well-known circumstance that "Koli" is a vague term, covering a number of tribes of inferior status, but with little relation to one another led the Census of 1931 to treat Baria apart from Kolis as a distinct entity in the Caste Table. The Barias of the socially superior sections are now beginning to discourage widow remarriage. The follow-

ing illustration of a Baria house in Charotar is typical of their social condition and standard of life. Lower roofed and more congested than of the average Patidar, they showed the same fondness for brass utensils and the same type of furniture. There is more herding with the cattle and their stalls are far too near to permit of cleanly living.

BAVCHA—See under Primitive and Forest Tribes.

BEHLIM (1,732)—They are converted Rajputs of the Behlim tribe and are chiefly found in the Mehsana *prant*. They intermarry with other Musalmans. The name Behlim apparently is of Turkish origin. Mahammad Behlim, an Islamised Turk, who held Lahore on behalf of Sultan Atsalan Shah (A. D. 1115 circa) overthrew and subjugated many haughty Hindu chiefs, among whom was the Chief of Marwar. This account, for the muslimisation of many Rajput clans who took the Behlim name. But through frequent intermarriage with other Muslims, the present day Behlim has ceased to be a separate class. The women have given up the Rajput dress and now wear the Musalman scarf

gown and trousers. But there is a great admixture of Hindu religions and social practices amongst them, as amongst other converted Rajputs. They are not strict Musalmans, and at marriages (when the bride is a Hindu), both Brahman and Islamic rituals are combined. They still observe the Rajput custom of sending a sword to the bride's house and bringing her back to the bridegroom's village for the ceremony.

BHADELA (1,908)—A name given to Mussalman sailors known as lascars, found in Amreli district. Originally Musalman settlers from Arabia, they assimilated the converted Vaghers and Kharvas. They are found in Peyt, Div, Dwarka, Jafarabad and the Nawanagar ports. The Vagher element is of undoubted Rajput stock, a fine looking race hardy and enterprising, capable of enduring fatigue. They are long voyage sailors by tradition. Allied to them is another sea-faring class of Muslims, the Kaba Valiyas who are converts from amongst Kharvas.

They owe their conversion to immigrant Kabas (who had settled there coming from Kabatisvan by sea).

BHANGIA—See under Depressed Classes.

BHARWAD (included under **RABARI**)—A caste of shepherds. They claim Gokul Brindavan as their original home and to be of the same Meher caste to which Krishna's foster-father Nand Meher belonged. From Gokul, they are said to have moved to Mewar, and from Mewar to have spread into Gujarat, Kathiawad and Cutch. They are closely related to Rabaris with whom they eat but do not intermarry.

They live on milk and bread, but can also eat the flesh of sheep and goats. They sell goat and ewes' milk and weave and sell woollen blankets. Except a few who are Ramanandi, Bharvads are followers of *Mata*. Like Kadwa Kanbis, Bharvads in Kathiawad and North Gujarat celebrate their marriages only once in twelve, fifteen or twenty-five years, on a day in the month of *Vaishakh*, and all the Bharvads of the neighbourhood hold their marriages in the same place. The richest Bharvad among those who wish to get their daughters married, buys the ground where the marriages are to be celebrated. This is necessary because the ground cannot be used a second time for the same purpose. It is kept as pasture and an ornamental wooden post, called the marriage pillar, is set up on it and preserved to show that the ground has been used for marriages. Among the Bharvads of Central and South Gujarat, marriages are performed with little or no ceremony. A Brahman or a Darji, or in their absence, one of the members of the bride's family officiates at the marriage. Polygamy and widow marriage are allowed. A younger brother of the deceased husband has the first claim on his widow. Divorce is allowed. In some places the mother is not held impure after child-birth and does her household work from the day of delivery; in other places, she remains impure for fifteen days. Bharvads burn the dead. *Shraddha* ceremony is performed with the help of a Kayatia Brahman. Caste people are feasted on the 12th day. Caste disputes are settled at a meeting of the adult castemen. Elopement is punished with excommunication and other breaches of caste rules by fine.

BHAVSAR (Hindu 4,860; Jain 1,006; Arya 10)—A caste of calico printers. Bhavsars are found chiefly in cities and large towns. According to their story they were originally Kshatriyas, who during Parshuram's persecution hid themselves in a Mata's temple and for this act of *bhav* or confidence in the goddess, came to be known as Bhavsar. They have such tribal surnames as Bhatte, Chohan, Gohel, Parmar and Rathod, which support their claim of Rajput descent. The original home of their ancestors was Vraj-Mathura in North India from which they moved to Marwar and thence to Champaner and the country bordering the Mahi and the Narbada. From Central Gujarat some went to Kathiawad and Cutch in the north and some to Surat in the south. Ahmedabadi, Harsolia, Jamnagri, Mesania, Moderia, Prantia, Visnagara and other local surnames bear witness to their early settlements. Their family goddesses are Ambaji and Hingalaj. Besides being divided into Meshri and Jain Bhavsars, who eat together but do not intermarry, Bhavsars have three sub-divisions—Rewakanthia, living on the banks of the Mahi and the Narbada. Ramdeshis, living in Pali and Pratapgad, and Talabda living in North Gujarat. In this State, the last named form the predominant section. The members of these three divisions neither eat together nor intermarry. But Ramdeshis and Rewakanthias eat food cooked by Talabdas. Of the three sub-divisions, the Talabdas alone live on vegetable diet; Ramdeshis and Rewakanthias except those who are Jains have no scruple in eating animal food in South Gujarat. Many Bhavsars have given up calico printing and have become confectioners, tailors, washermen and sellers of cloth and pretty brass-ware. By religion some are Jain and the rest belong to the Kabirpanthi, Radhavallabhi, Ramanandi, Santrampanthi, Swaminarayan and Vallabhachari sects. In their marriage rites they do not differ from Vanias and Shravaks. Girls are married before they are eleven and boys at any time after ten. Marriage is not allowed between people of the same surname. Divorce is allowed and a widow sometimes remarries the younger brother of her deceased husband. They burn their dead, the Jain Bhavsars with the full Shravak Vania rituals, and the Meshri Bhavsars with Meshri Vania rites. Each community has its headman who settles caste disputes at a meeting of all the members of the caste.

BHIL—See under Primitive and Forest Tribes—Bhil.

BHOI (4,765)—Water carriers and palanquin-bearers. They make nets and practise fishing also. According to them they are Rajputs from Lucknow. They have nine sub-divisions—Bakoria, Bathava, Gadhedia, Gudia, Kahar, Machi or Dhimar, Mali, Meta and Purbia. Of these, Mali and Bakoria eat together and intermarry; Mali, Gudia and Kahar eat with one another but do not intermarry; the rest neither eat together nor intermarry. They are strongly built and dark like Kolis. Except the Purbia, whose home speech is Hindustani, they speak Gujarati. Palanquins are now used only on marriage occasions and in carrying about high caste *parda*

ladies or idols. Bhois now also till lands, tend sheep or goats, grow water chestnuts, or work as field labourers. They employ Audich or Modh Brahmans as their priests. Widows are allowed to marry and divorce is easy. They worship *Meldi Mata*; but some of them are Bijmargi, Ramanandi, Shaiva or Vallabhachari.

BRAHMABHAT—See under Barot.

BRAHMAN (123,522, besides 192 Aryas)—The term Brahman is derived from *Brahma*, the supreme Being, and in its earliest sense denoted one who attained to Him. During the Vedic period it came to denote one who knew or repeated the Vedas, and later on, as the rituals became more complicated,—a “priest”. The Purusha Sukta hymn of the Rig Veda is an account of the general cosmogony of the universe and makes the earliest mention of Brāhman as a class name, representing the “mouth of the Supreme Being.” That hymn foreshadowed the later crystallisation of Hindu society in the Manavan Scheme into a fourfold division of caste, based primarily on function and status, and later, through the progress of Aryan dominion, developed on the basis of colour and race. But the present day characteristic of Indian caste, viz., its inflexible hereditary character, did not develop till late. In the Vedic times, instances of Kshatriyas and other non-Brahman’s being raised to Brahmanhood for austerities or learning are numerous. Later even, instances of creation of certain classes of Brahmans, through necessity, or the prerogative of kings, have happened. Differences in Brahman subcastes are therefore primarily due to (i) purity of lineage and (ii) assimilation of other classes in the Brahman status. Secondly through migration, Brahmans tended to differentiate themselves round certain places after which subsections were named; and these later hardened into castes.

Group of Gujarat Brahmans—The Gujarat Brahmans may be roughly formed into three groups, the early, the middle and the modern.

(i) The early Brahmans are in most cases connected by tradition with some holy place chosen in early times by Aryan settlers from Upper India. Most of these early divisions are husbandmen and as a rule darker and sturdier than the more modern immigrants.* Among these are the Bhargavs of Broach who claim descent from the great seer Bhrigu and who still hold a high position among Gujarat Brahmans; the Anavalas, the vigorous skilful class of south Gujarat landholders whose original settlement or *mahasthan* seems to have been at Anaval, near the Unai hot springs, about forty miles south-east of Surat. With them rank the Sajodras, who take their name from Sajod, a place of early sanctity about eight miles south-west of Broach. Further north are the Borsadias of Kaira, who claim descent from an early religious settler named Bhadrāsiddha. Other divisions of earlier settlers seem to have come to Gujarat from the Dakhan. They are the Jambus of Jambusar in Broach, the Kapils from Kavi at the mouth of the Mahi, the Khedavals of the Kaira district, and the Motalas of Mota about fifteen miles west of Surat. These classes have all become so completely Gujaratis in appearance, speech and customs that they must have been long settled in the province. Copperplates show that the Jambus at least were in their present villages as early as the beginning of the fourth century after Christ (A. D. 320).

(ii) The second group of Brahmans represents small bands of immigrants from Upper India whose settlement the kings of Anahilavada (A. D. 961-1242) encouraged by grants of land. These small bands of settlers came from different parts of Northern India, and receiving separate grants in different parts of the province have never associated and have been one of the chief causes of the minute divisions of Gujarat Brahmans. The chief divisions that belong to this group are the Audichya, Harsolas, Kandoliya, Khadayata, Modh, Rayakwal, Shrimali, and Vadadra. The Nagars, the chief division of Gujarat Brahmans, seem to be earlier settlers as copperplates from the fifth to the eighth century mention Nagars at Junagadh, Vadnagar and Vallabhi.

(iii) The middle group includes another set of division of whose arrival no record remains but who seems to have come from Marwar and Rajputana before the times of the Musalmans, driven south, it is believed, by famine. Of this group the chief divisions are the Desaval, Jharola, Mevada, Palival, Shrigaud, Udambara, and Uneval.

* According to local legends some of these early Brahmans belonged to the pre-Aryan tribes and were made Brahmans by early Hindu heroes and demigods. Pre-Aryan tribes may in some cases have been raised to the rank of Aryans in reward for signal services. But such cases are doubtful. The explanation of these local classes of early Brahmans seems to be that they are the descendants of settlers from Upper India who entered Gujarat either by sea or by land from Sindh. These settlers were joined by others of their own class who, marrying with the women of the country as was sanctioned both by the law and the practice of the early Brahmans, founded a local Brahman colony. The process of founding these local Brahman classes is thus described by Megasthenes (B. C. 300). “When Megasthenes wrote the process would seem to have been still going on. “Persons who desire to live the same life as the Brahman hermits cross over and remain with them, never returning to their own country. These also are called Brahmans; they do not follow the same mode of life, for there are women in the country from whom the native inhabitants are sprung and of these women they beget offsprings”. McCrindle’s Megasthenes, 121.

(iv) Of modern Brahmans, i.e., of immigrants since the time of Musalman rule, the chief are Maratha Brahmans of the Deshasth, Konkanasth and Karhada tribes, who in the early part of eighteenth century accompanied and followed the Maratha conquerors of Gujarat. Under British rule no large bodies of immigrants have entered Gujarat. But there has been a slow steady stream of settlers from Marwar. This State has further received recruits from Kanojia and Sarvaria Brahmans from Hindustan to the military, police or other ranks.

List of Gujarat Brahmans—Ordinary accounts and the lists in the *Mirat-i-Ahmedi* (Circa 1760) and in Dayaram's poems give 84 divisions of Gujarat Prahmans. Details however in the lists do not agree and perhaps the number 84 is traditional. The Gujarat Population Volume of the Bombay Gazetteer recognises 79 divisions of Gujarat Brahmans. "The Tribes and Castes of Bombay" (Enthoven) recognises 93 subdivisions, but includes Garodas (priests of the untouchables). It excludes Abotis (who are an independent section, but are wrongly included as a sub-section of Shrimali). It further mentions Bhojaks as a Brahman subsection of Shrimalis, but they are now Jains and are no longer Brahmans. The list is given below :—

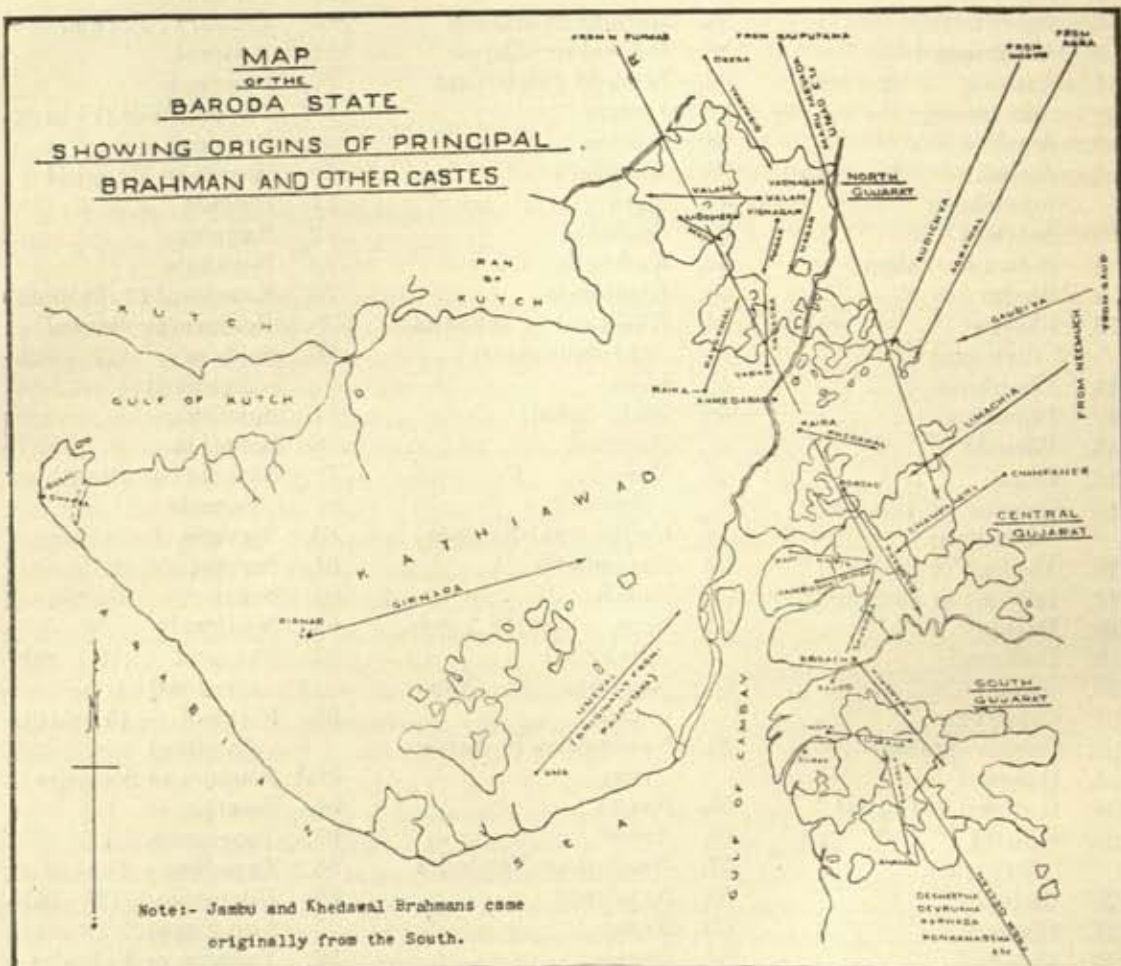
1. Agarwal	33. Guru	64. Parsolia
2. Agarsindhwal	34. Harsolia or Harsola	65. Porwal or Porwad
3. Akshmangal	35. Indhval or Idhaval	66. Preteval
4. Anavala (2 sub-divisions)	36. Jamu or Jambuvant	67. Pundwal
5. Anodhia	37. Jharola	68. Pushkarna or Pokharna
6. Audich (29 sub-divisions)	38. Kalinga	69. Puwawal
7. Ashpura	39. Khandolia	70. Rajwal or Rangwal
8. Balam or Valam	40. Kapil	71. Raikula
9. Bhalvi	41. Karbelia	72. Raipura
10. Bhargav (4 sub-divisions)	42. Karkhelia	73. Raisthala
11. Bharthana	43. Khadayata	74. Rayakwal (2 divisions)
12. Bhukania	44. Khedawal or Khedwal (3 subdivisions)	75. Rodhwal or Rotwal
13. Borsada	45. Lalat	76. Sachora (2 sub-divisions)
14. Chaun	46. Madhyachal	77. Sajodra
15. Chovisa or Chorisa (2 divisions)	47. Malikwal	78. Sanothia
16. Dadhich or Dadhichi	48. Mewada (5 sub-divisions)	79. Sanodia or Sanath or Sanaola
17. Dahema or Dayama	49. Modh (9 subdivisions)	80. Sarvaria
18. Dareda	50. Madhmaitra	81. Sarsvat
19. Deshawal	51. Motala	82. Sevak
20. Gadiali	52. Nagar (18 sub-divisions)	83. Sindhwal
21. Gangaputra	53. Nandrana or Nand-raina	84. Shrigaud (10 sub-divisions)
22. Garoda (priests)	54. Narsingpura or Narsig-pura	85. Shrimali (5 sub-divisions)
23. Gayawal	55. Nardik	85A. Sonpura or Sompura
24. Godhwal or Gorwal	56. Namal	86. Sorathia
25. Girnara (5 sub-divisions)	57. Nandora or Nandodra	87. Tangmodia
26. Godmalvi	58. Nandhana	88. Tapodhan
27. Ghogari	59. Napal	89. Udambara (3 sub-divisions)
28. Gomitra	60. Oswal	90. Vadadra or Valandra
29. Gomtiwal	61. Paliwal or Palewal	91. Vainsh Vadhra
30. Gujali	62. Panjora or Pangora	92. Vayada
31. Gurjar	63. Parja or Parasar (2 subdivisions)	93. Yajnikval
32. Gurjar Gauda or Ghoda		

Names occurring in the State—Of these, 42 names occur in the Paroda Census. The marginally noted names found in the State are not included in the above list. Most of these Brahmans are from the Deccan, a few from the North speaking Hindustani. A few like Kayatia are Gujarati speaking but do not occur in the list. Vyas is probably a fusion of sub-castes. The name is given to descendants from 108 Brahmans of several sub-castes who conducted a penance ceremony performed by a Prahman jester in the court of a Musalman king of Ahmedabad. The families who took part in this ceremony were excommunicated and formed a separate caste. Vyas Brahmans allow widow remarriage and in dress resemble Vanias and Patidars. They are husband-men, cloth sellers and money-lenders and some have taken to begging. A later section find employ as strolling players and have joined with the Targalas and Bhavaiyas. Unevals are a curious omission from the list, as they are found chiefly in Baroda and Kathiawad and take their name from Una

Bardai
Deshastha
Devrukha
Golak
Kanyakubja
Karhada
Kayatia
Maithil
Rajgor
Raval
Tailangi
Uneval
Vanza gor
Vidur
Vyas
Yajurvedi

(in South Kathiawad). They originally came from Rajputana. Vanza Gors are priests of the caste of weavers of that name found in Kathiawad, and for that reason are degraded. Vanzas are distinct from Salvis and regard themselves as superior to them. They have gradually left off weaving and taken to other occupations, such as tailoring, calico printing, etc.

Territorial origins—Most of the subsections of these sub-castes of Brahmans derive their names from territories or places denoting their origin. A few of these names of territorial signification enter into other castes as well: e.g., Agarwal, Deshawal, Harsola, Jharola, Khadaya, Nagar, Nandora, Oswal, Palival and Vayad occurring in both Prahman and Vania groups. Shrimali occurs not only amongst Brahmans and Vanias but with Sonis as well. So also Mewada, but with Suthar in addition. Sorathia occurs with Brahman, Vania, Kumbhar and Luhar. In two subdivisions, Audich and Nagar, there is a section called Barad, which definitely points to *varnasankar* or assimilation with other subdivisions or even perhaps other castes. A map is attached, showing the origins of some of these territorial names.



Function of Brahman groups—Except Anavalas, who are all theoretically laymen or *grihasthas*, each of the Brahman subdivisions is either entirely priestly, i.e., *bhikshuka*, or contains two classes, one priestly, and the other, lay. Except Bhargavas, Nagars and a few other Brahmans who have among them families believing in one or other of the Vedas, Gujarat Brahmans are generally followers of the Yajurveda. Each division includes from 5 to 25 exogamous *gotras* or family stocks, each stock claiming descent on the male side from one of the *rishis* or seers. Except among Nagars, religious and lay families, if not of the same stock, can intermarry. A man's position as priest or layman is hereditary and is not affected by his actual business or profession.

Their features—Except the fair and regular featured Nagars and Bhargavs, most Gujarat Brahmans, compared with the trading and other high caste Hindus, are somewhat dark, rough-featured and strongly made. Except in Cutch, where some men wear long flowing Rajput-like whiskers, and except some who in fulfilment of a vow allow the hair on the head and face to remain uncut for a few months or a year, Brahmans as a rule retain the hair of the head only over a space that could be covered by a cow's hoof. This hair is generally long and tied in a knot from behind, especially when engaged in religious worship. Women have their

forehead marked with a circular *kanku* (red powder) dot; the men's forehead is marked with sandal or *kanku* circle or two or three horizontal lines.*

Dress—Unlike Vaniyas who are always amply and cleanly clad, the everyday dress of most Brahmans is little more than a turban and a waist and shoulder cloth, and the everyday dress of most of the women is simple and cheap. Still all have some store of good clothes; the men, a rich turban and silk dining dress, the women at least two good robes, one of them of silk. Compared with other high caste Hindus, the men have few ornaments. But the women have nearly as large a store of jewels as the women of any other caste.

Sects of Brahmans—All Gujarat Brahmans, except a few who belong to the Svaminarayan sect, are followers of Shiva. Their social and religious customs are chiefly ruled by the Mayukh, the Mitakshara and the Dharma and Nirṇaya Sindhu. Of the sixteen† Vedic *sanskars* or sacraments, Gujarat Brahmans observe only four at their proper time: *Simanta* ‡ or parting of the hair at pregnancy, *Upanayana* or thread girding, *Vivaha* or marriage, and *Svargarohana* or funeral ceremonies, literally "heaven-climbing," some of the remaining being observed along with one or other of these, some being not performed at all.

Marriage—Marriages are prohibited between *sapindas* and between members belonging to the same *gotra* and *pravara*. *Sapindas* ¶ are those who are within five degrees of affinity on the side of the mother and seven on that of father. The person himself constitutes one of these degrees; that is to say, two persons stand to each other in the *sapinda* relationship if their common ancestor, being a male, is not further removed from either of them than six degrees, or, being a female, four degrees. The *pravara*, also called *arsheya*, are those sacrificial fires which several *gotras* § had in common. So persons of these *gotras* which had a common *pravara* cannot intermarry. Marriage with a father's sister's, mother's sister's and brother's daughter is not allowed. A man may marry his deceased wife's sister. Except among Nagars whose girls are seldom married before they are thirteen, Gujarat Brahmans generally marry their girls between seven and eleven irrespective of the bridegroom's age. Besides a dowry the bridegroom receives presents with his wife. In regard to the dowry, the practice among most divisions of Brahmans is fixed. Except among some degraded Brahmans, widow marriage is not allowed. Divorce is strictly prohibited. Polygamy is permissible, but polyandry is unknown.

Notes on individual Brahman groups—The following brief notes are attached to some of the principal Brahman sub-castes occurring within the State. For more detailed accounts, the reader is referred to the Gujarat Population Volume and Enthoven's *Tribes and Castes of Bombay*, from which the above account is condensed:—

Aboti (264)—A caste of Brahmans, found mainly in the Okhamandal taluka of the Amreli district. They trace their origin to the younger son of sage Valmiki. Other Brahmans do not eat food cooked by them. As a class, they are poor and live as temple servants, beggars, confectioners and cultivators. The suggestion made in Enthoven's *Tribes and Castes of Bombay* that they are a subdivision of Shrimali Brahmans does not seem to be borne out by local enquiry.

Anavala (11,818)—A Brahman caste taking its name from Anaval, a village in the Mahuva taluka of the Navsari district and found in that district and in the neighbouring Surat district. The tradition that Rama, on his return from the conquest of Ceylon, wishing to perform a sacrifice near Patarwada (in Bansda State) where he had halted, and not finding enough Brahmans locally, had created 18,000 of the local hill tribes into Brahmans is naturally denied by the Anavalas themselves, and probably it is a creation of newer Brahman settlers who invented it to assert their superiority over earlier Brahman arrivals. But it is undoubted that the Anavalas represent the earliest Aryan wave of immigration into South Gujarat, and it was under their management that it was redeemed from forest and brought under cultivation. The terms *Mastan* and *Bhathela* applied to them are variously explained. "*Mastan*" as overbearing and proud may seem appropriate enough for Anavalas have been lords of the soil for centuries. According to another account *Mastan* is short for *Mahasthan* (great place) in reference to some supposed origin of the Anaval people. But probably it is of social

* Generally speaking worshippers of Shiva use horizontal and worshippers of Vishnu vertical marks.

† Some authorities make 12 only; others 40.

‡ Also *Simantak* or *Simantonayana*.

¶ *Sapinda*, literally having the same *pinda*. The *pinda* was the ball of flour or rice offered to the Manes in the *shraddha* ceremony.

§ *Gotra* means literally a cow-pen, and hence any enclosure; *pravara* excellent chief and hence a founder of a race; *arsheya* of or belonging to a *rishi*. The sense of sacrificial fire is not classical.

significance (as a socially select sept) and as such it forms a subsection of other communities (e.g., Soni *mastans*). Bhatela is either from *bhat* (rice) a name well deserved of these people, as they are the most successful rice growers in this area ; or from *bhrasthela* (fallen)—a derivation of opprobrious intent, evidently favoured by Brahmans of other names. Anavala Brahmans are *grihasthas*. There are no priests or mendicants among them. Socially they are divided into an upper or *Desai* class, the revenue farmers, and a lower or Bhatela class, the ordinary cultivators. The Desais eat with Bhatelas, but object to marry their daughters into any except Desai families. On the other hand Bhatelas, anxious to improve their social position, try hard to marry their daughters into Desai families. This rivalry for bridegrooms of good family has, as among the Patidars of Charotar, led to some unusual practices. Polygamy is not uncommon. A Desai, who finds himself in difficulty, marries another wife and receives from his bride's father money to pay off his debts. Expenses consequent upon marriages, such as dowry, sending the bride to her husband's house, pregnancy, birth of a child, etc., are incurred not by the husband but by the wife's father. Even the expenses incurred by the mother of the bridegroom at the time of her delivery have to be paid by the father of the bride at the time of marriage. Some Desai families with many daughters have fallen into debts and have been forced to mortgage their lands. During the last twenty years reforms in marriage customs have been inaugurated by the educated in the community, which have resulted in the reduction of marriage expenses, diminishing polygamy and marrying of girls without reference to *kul* or family. Caste organisation is however notoriously loose amongst this caste—Anavils generally are enterprising—many having gone to Europe or Africa for education or industrial pursuits, without any dire social consequences on their return. As a result, there is little of mutual help or of collective co-operative effort towards caste welfare. But they are friends to education, hospitable and liberal. Almost all Anavils are *Shaiva* in religion, but they are as lax on ceremonial observance as they are careless in enforcing caste rules.

Audich (45,222)—A Brahman caste so called, because they entered Gujarat from the North (*Udicha*). According to their caste tradition, they were invited to Gujarat by King Mulraj (A.D. 961-996) from the north, to help him in holding a sacrifice. When the sacrifice was over, the King offered them money and grants of land to induce them to stay in his country. About a thousand (*sahasra*), who readily agreed, came to be known as *Audich Sahasra* (36,754), while the rest, who formed a *tol*i (band) and refused till they were persuaded by further grants, came to be known as *Audich Tolakia* (3,925). The *Sahasras* are superior in social rank to the *Tolakias*. The *Sahasras* are again divided into *Sihoras* and *Sidhpurias* from the towns of Sihor in the Bhavnagar State and Sidhpur in the Baroda State, which are said to have been bestowed on their ancestors. Audich Brahmans live on alms ; a few are cultivators, the rest are cooks or family or village priests. Those of them who are priests of Darjis (tailors), Gandhraps (musicians), Hajams (barbers), Kolis and Mochis (shoemakers), are looked upon as degraded. Ex-communications for serving low caste people have given rise to several subdivisions, such as Darjigor, who serve tailors, Hajamgor, who serve barbers, Gandhrapgor, who serve Gandhraps or musicians, Koligor, who serve Kolis, Mochigor, who serve shoemakers, etc. Those Audichas who have settled in Vagad are held degraded and are treated as out-castes, because they smoke the *hukka*, allow widow marriage and carry cooked food to the fields. They are, however, allowed to give their daughters in marriage to Audichas of Halawad in Kathiawad, whose daughters marry Dhangadra Audichas, and the daughters of Dhangadra Audichas are married to Viramgam, Ahmedabad and Sidhpur Audichas, who hold the highest social rank in the caste. The Sidhpuria Audichas are regarded as superior to other Audichas, and it is considered honourable to give a daughter in marriage to a Sidhpuria Audich. It is this competition for bridegrooms from Sidhpur, which has given rise to polygamy in the caste. Rodhval, Napal, Borsada and Harsola Brahman castes have emanated from the Audich Brahmans, owing to some members of them emigrating from their home to other places ; and Koligor, Rajgor, Kayatia, Kriyagor, Vyas and Targala castes have emanated from the same original caste owing to their taking to degrading occupations.

Deshastha (5,713)—Immigrant Maharashtra Brahmans from the Deccan, mainly for State service. It is said that a Maharashtra King who wanted to perform a sacrifice invited them to the Deccan from the North. After the ceremony was completed, he gave them rich gifts and settled them there. Hence they were known as *Deshastha*, i.e., those settled in the country (*desh*).

Gugali (1,513)—A Brahman caste, so called from *gugal* (aloe incense). Another derivation is from Gokul, the birthplace of Shri Krishna, and appears more likely as connecting Shri Krishna with Kathiawad. They are numerous in Beyt and Dwarka where they are Vaishnav temple *pujaris* or priests ; they act as *purohit* and pilgrim conductors, and are also shop-keepers. They are not much respected by other Brahmans. Though not returned in the census, there is a small sub-caste *Bodha* among the Gugalis. Bodhas are neither allowed to intermarry nor

interdine with other Gugalis. The cause of the split is said to be due to a gentleman of the caste inviting all the individuals of the caste to attend a sacrificial ceremony and saying that those who did not come in time would be excommunicated. It so happened that some nephews of the man happened to come late. He was naturally angry and called them *bodha*, i.e., fools, and excommunicated them.

Jambu (2,412)—A Brahman caste, also called Jambusaria, found in the Baroda district. They derive their name from the town of Jambusar in the Broach district. They are said to be descended from the sage Yajnavalkya and according to tradition were the first colonists of the town of Jambusar. Copper-plate grants show that they were settled there as early as the beginning of the fourth century. They were once a large and learned community but are now mostly family priests in villages and cultivators. The rest are traders, money-lenders, village headmen and cultivators. Along with the Anavalas and Bharagavas, they represent a very early Aryan settlement. But like the Khedawals, they hailed from the South.

Karhada (1,224)—A caste of Brahmans from the Deccan. They are so called from their originally settling in the Karhat country, i.e., the tract between Ratnagiri and Savantwadi State, called *Karahatta desh*. There is also another tradition about their origin, viz., that they were made by Parashuram from camel's bones. The Karhadas were until recently supposed to be human sacrificers and even now, there are people especially some Tailangi Brahmans who have scruples to take their meals at the house of a Karhada. Karhadas are invariably Rigvedi.

Khedaval (3,992)—A Brahman caste which takes its name from Kheda or Kaira, the headquarters of the British Kaira district. Their chief settlements are at Umreth in the Kaira district and Sojitra in the Baroda district. According to their tradition they are descended from a band of *Tripravari* and *Panchpravari* Brahmans who under the leadership of Shankar Joshi and Dave came from Shrirangapattam in Mysore and settled in Kaira during the reign of a certain Mordhvaj, a Rajput of the lunar stock. The truth of the story is supported by the fact that Khedavals are still connected with Shrirangapattam. Their females wear a necklace called *chitak* and ear-rings called *kap* of the same shape as those worn by Deccani Brahman women and like them their widows dress in white. Many Khedavals, some from Sojitra in the Baroda district and others from towns in the Kaira district, have settled in Madras, Bengal, the Central and the United Provinces. Most of them are jewellers and traders, and some have attained to great wealth through money lending. They are divided into *Baj* "outsiders" (2,493) and *Bhitra* "insiders" (798). It is said that the Kaira chief, anxious to have a son, once offered them cows of gold as gift. The greater number refusing the gift secretly scaled the walls of the city, and came therefore to be known as *bahya*, corrupted into *baj*. Those who accepted the gift remained within the walls and came to be called as *bhitra* or insiders. Even to this day, the Baj Khedavals look upon the non-acceptance of gifts by their ancestors with feelings of pride. The Mahikantha Khedavals trace their origin from Brahma Khed in Idar, but according to tradition they are of the same stock as other Khedavals.

Konkanastha (3,539)—Also called Chitpavan. A Brahman caste, the members of which have immigrated from the Deccan mainly for the purpose of State service. The tradition about their origin is as under:—

When Parshuram, the sixth incarnation of Vishnu, had destroyed the Kshatriyas, he, to atone for that sin, granted the whole earth to the Brahmans in gift and brought out a strip of land for his own use from the sea. Having settled there, he once wanted to have some Brahmans for the performance of a *shradha* and a sacrifice, and sent emissaries in search of them; but none came. This enraged him so much that he wished to create new Brahmans. With this idea uppermost in his mind, he went to the sea-shore for his morning bath and there found some fishermen standing near a funeral pyre (*chita*). He asked them who they were; they replied they were *kaivartas* and lived on fishing. On this he granted them Brahmanhood and said that they would be known to the world as the Chitpavan Brahmans, since they had been purified near a funeral pyre.

They are also supposed by some to have migrated from the north-west of India, or from Egypt, and this supposition is based upon their colour. The celebrated family of the Peshwas belonged to this caste. Konkanastha Brahmans are among the Maharashtra Brahmans what the Nagars are among the Gujarati Brahmans. Konkanasthas are either *Rigvedi* or *Apasthamba*.

Mewada (5,075)—A Brahman caste which, as its name indicates, originally came from Mewad in Rajputana. Mewadas are divided into three classes, Bhat, Chorasi, and Trivedi. The last-named section is the most numerous in the State. These three interdine, but do not intermarry. They are mostly religious mendicants, family priests and peasants. There is a

curious custom among the Trivedi Mewadas. Before marriage, the bridegroom reposes on a cot and the bride applies molasses to his navel. After this, the bridegroom goes to the marriage hall.

Modh (9,039)—A Brahman caste, so called from Modhera, once an important place in the Chansma taluka, Kadi district. They are divided into five classes—Agiarasana (1,171), Chaturvedi (6,394), Dhinoja (759), Jethimal (48), and Trivedi (70). These neither interdine nor intermarry. There is a great difficulty in obtaining wives in this caste, in consequence of the large amount to be paid to the bride's father. All the five sub-divisions are to be found in the State, the Chaturvedi who are proficient in the four Vedas, the Trivedi, who know three, the Jethi who are wrestlers, the Dhinoja, who live at Dhinoj in the Chansma taluka and the Agiarasana, who are found in Baroda and Amreli districts. The Dhinojas were till the last century professional thieves and murderers and their depredations spread far and wide.

Nagar (8,096)—Nagars claim to be the highest among the Brahman castes of Gujarat. As a rule Gujarati Brahmans do not intermarry, but they have no objection to interdine, except with those Brahmans who are considered as degraded. But Nagars neither intermarry nor interdine with other Brahmans. They rank themselves above all other Brahmans and are undoubtedly a shrewd and intelligent people. They have an engaging address and their women are comely. By their tact, skill and intelligence, they always advance themselves into power in government service, which is their main occupation. Their motto is "*Kalam, kadchhi ane barchhi*" (pen, laddle and spear) which means that writing, cooking or fighting is the only work which a Nagar will do.

There are several traditions current among the Nagars about their origin. One tradition says that they were created to officiate at Shiva's marriage. According to another they were created to officiate at Shiva's sacrifice. A third tradition is that they are the descendants of a Nag, who pursued by some enraged snake charmers, assumed the form of a Brahman, fled to Vadnagar, married a Brahman girl and had several children by her, who came to be known as Nagars. Vadnagar was no doubt the place of their original settlement, and has given to them the name Vadnagara Nagars. Nagar is a Sanskrit word meaning belonging to or residing in a *nagar* or city. Nagars were probably so called either from their residence in the city or from their descent from the Nag tribe of people, who appear to have followed the Indo-Scythian king Kanaksen, intermarried with local Brahmans and settled in Vadnagar. Even at the present day Nagars say that their women are *Nag kanyas* or Nag maidens.

There are seven main sub-divisions of Nagars—Vadnagara (2,368), Chitroda (85), Krashnora, Prashnora (157), Sathodra (223), Dungarpura and Visnagara (4,963). None of the divisions intermarry or dine together except that food cooked by Vadnagaras or Dungarpuras is eaten by all other classes except Prashnoras. The split in the community is attributed to Shiva's wrath whose temple (Hatkeshwar) was excluded from Vadnagar when the town wall was built. It is said that from that day Nagars commenced leaving Vadnagar and the town now contains but one Vadnagara Nagar family. Another tradition attributes the Nagar migration to certain Nagars taking presents from Vishaldev, the Chohan king of Patan. When Vishaldev founded Visnagar, he caused a sacrifice to be made at which he invited many Vadnagara Nagar Brahmans and offered them *dakshina*, but they refused to accept it. The king then wrote upon pieces of paper the grant of certain villages and wrapped them in betel leaves which the unsuspecting Brahmans accepted. The grantees however were excommunicated by their caste men, who had remained behind at Vadnagar; whereupon they went and settled in the villages granted to them, and formed a separate caste as Vishalnagara Nagars. In addition to the seven main divisions, there is an eighth sub-division of Nagars called Barad among the Vishnagaras and Sathodras. They are those who, unable to have wives from their own community, married girls from other castes and lived apart. The rest of the sub-divisions are named after the places of their settlements subsequent to the split into Vadnagaras and Visnagaras. The Chitrodas take their name from their town of Chitrod, which is believed to be near Bhavnagar. They are a small body and are found in Bhavnagar and Baroda. The Sathodras take their name from Sathod, a village near Dabhoi. They are found in Dabhoi, in this State and in Nadiad, Ahmdabad and other places in British Gujarat. The Prashnoras take their name from Pushkar near Ajmer and are found mainly in Baroda district and Kathiawad. They are *vaidyas* and readers of *Purans*. The Krashnoras take their name from Krishnanagar or Krishnasagar. They are found in Gujarat.

Of the seven divisions, Vadnagara, Visnagara and Sathodra are again sub-divided in *grihastha* (laymen) and *bhikshuka* (priests). There are no intermarriages between the *Grihastha* and *Bhikshuka* sections among the Vadnagara Nagars.

Among Nagars marriage is a very expensive thing. The bridegroom has to present to the bride money for gold and silver ornaments and this has given rise to the proverb *Rupiya hoi gargardi, to male Nagardi* (a Nagar can marry if he has a potful of rupees).

The Vadnagara Nagars are strictly monogamous, and marry their daughters late, i.e. at the age of fifteen or even later.

Tapodhan (6,070)—A Brahman caste also contemptuously called Bharda. It is found in all the districts of the State. Tapodhans are *pujaris* of Mahadev, Mata and Shravak temples. Those who are not engaged in temple service are husbandmen, labourers and bricklayers. Other Brahmans are apt to consider them lower than themselves as they accept food and other articles offered to Mahadev and allow widow marriage. As a result, Tapodhans, who are educated and have become socially affluent, have begun to discourage the remarriage of widows permitting it only in the case of child-widows.

BURUD—See under Depressed Classes—Vansfoda.

CHARAN (Hindu 2,610; Arya 1)—Found in Baroda, Meshana and Amreli districts. According to a bardic account, Charans are the descendants of a son born to an unmarried girl of the Dhadhi clan of the Rajputs. To hide her shame, the girl threw the boy as soon as he was born behind a *gadh* (fortress). The boy was saved and called Gadhivi by which name Charans are still known in Gujarat. Gujarat Charans include four distinct sections:—Gujjar, Kachhela or Kachh Charan, also called Parajia or outsiders, Maru or Marwar Charan and Tumer probably from Sindh. The Kachhelas are the largest division of Gujarat Charans. Besides Cutch, they are found all over Kathiawad and form the bulk of the Charan population, both in North and Central Gujarat. Kachhela Charans are closely allied to the Kathis and the Ahirs, who are their great patrons.

CHAMADIA, CHAMAR, CHAMBHAR—See under Depressed Classes—Khalpa.

CHODHRA—See under Primitive and Forest Tribes.

CHUNVALIA—See under Koli.

DARJI (Hindu 15,723; Jain 15; Arya 25)—They are also called Merai or Sui, from *Sui*, a needle, and live chiefly in towns and large villages. They are of twelve divisions, Dhandhaya, Doshi, Dungarpuri, Gujjar (3,545), Maru Ramdeshi (11), Champaneri, Charotaria, Kathiawadi (46), Pepavanshi, Surati (448) and Vakalia (169), none of whom either eat together or intermarry. The Pepavanshi or Rajkali, who are found in the Kadi and Baroda districts, seem to be of Rajput origin of which a trace remains in the surnames Chavda, Chohan, Gohel, Dabhi, Makvana, Parmar, Rathod, Solanki and Sonora. The Ramdeshis, who are found in the Baroda district, were originally Marwadi Girasias. Darjis hold a middle position in society. In South Gujarat in the absence of Brahmans, a Darji officiates at Bharvad marriage. Besides tailoring, Darjis blow trumpets at marriage and other processions. Nowadays they look upon this occupation as humiliating and in most places have resolved not to perform it. In religion, they belong to the Madhavachari, Parnamipanthi, Radhavallabhi, Ramanandi, Swaminarayan and Vallabhachari sects. Their widows are allowed to remarry. Husband and wife are free to divorce each other in some places, and in others like Kadi, a husband can divorce his wife but a wife cannot divorce her husband. Caste disputes are settled by a few leading men at a caste meeting.

There are a few Muslim converts from amongst Darjis, but in this census, they were not compiled separately.

DEPRESSED CLASSES (Hindu 202,777; Arya 266; Christian 1,719)—In the body of the Report a standard list of castes definitely known to be untouchable is given. Of these, the marginally noted castes are Gujarati speaking. The remaining untouchable castes that are recorded in the State—Burud, Holar, Mahar and Mang—are from the Deccan. The uncleanness which attaches to these castes would seem to have its origin in the type of occupations in which they engage themselves, rather than in the character of these people themselves. Three causes are assigned why these castes first came to undertake their degrading duties: one is that they were of shameful birth, children of a Brahman woman and a Sudra man. The second is that their race of origin is alien, the remains of a tribe who had long refused to submit to their conquerors. The third, their own reason, and from the almost entire sameness of look, language and customs, it appears to be the true reason, is that they are fallen Rajputs, forced by the pressure of want or through misfortunes in wars to agree to undertake meanest callings. Fairer, larger and less active than the Bhil or other aboriginal, these castes are hardly to be distinguished from the lower ranks of artisans and

Bhangi
Chamar or Khalpa
Garoda
Nadia
Shenva
Thori
Turi
Vankar (including Dhed)
Vansfoda

cultivators. Their accent however distinguishes the bulk of these people readily from higher class Hindus, although educated persons amongst them in meetings and conferences are now able to speak with the purest accent. Their houses generally are in a quarter by themselves. Most of these huts are one-roomed but the walls made of mud or brick and the peaked roofs covered with thatch or tiles are larger and better built than those of the Raniparaj. Orderly and more sober than the aboriginals, they are freer than these from the dread of witches and spirits. They honour most of the Brahmanic gods, but chiefly Hanuman, Ganpati, Ram, and Devi, and above all they reverence the sacred basil or *tulsi* plant. A few among them belong to the Swaminarayan and a good many to the Kabirpanthi sects. These are more careful than the rest of their class-fellows in what they eat and with whom they associate. As they are not allowed to enter them, people of these classes seldom worship at the regular village temples or shrines. In some hut near their dwellings they have an image of Hanuman or of Ganpati, where on holidays they light a lamp or offer flowers. In front of their houses most of them keep a plant of basil or *tulsi*, and inside some of them have an image of Mata, Hanuman or Ganpati. Those who can afford it, are fond of going on pilgrimage, worshipping Krishna at Dakor and Devi at Pavagadh and Ambaji. They do not pass into the building, but standing in the portico, bow as they catch a glimpse of the image and present a few coppers to the temple servant.

Asceticism amongst the Depressed—Compared with artisans, many of these castes devote themselves to a religious life. Two of the best known and most respected religious teachers of Gujarat are Rohidas the Chamar and Haridas the Dhed. These religious men or *bhagats* differ in the extent to which they hold themselves aloof from the ordinary duties of life. Some of them continue with their families working for their support. Others without family ties live more strictly as ascetics, contenting themselves with what they receive in alms. Some are popular for their knowledge of charms. But, as a rule, they claim no special power over ghosts and spirits. They are sober and strict in their lives, spending most of their time in reciting hymns and prayers taught them by other holy men of their own class.

Religion—Except a half-Musalman section of the scavenger or Bhangia caste, the members of all these castes respect Brahmans and follow closely the ceremonies practised by the higher classes of Hindus. Except among Bhangias, the name is given by a Hindu priest, and, among all of the castes, betrothal is sealed by the red brow-mark or *chandlo* and children are married at any age up to sixteen. At marriages the priest chooses the lucky day, the god Ganesh is worshipped, the bride and bridegroom are rubbed with turmeric powder, and a booth with a central square or *chori* is built in front of the bride's house. On arrival the bride's mother meets the bridegroom, and, presenting him with the grain-pestle and other articles leads him to his seat and places the bride opposite him, separated only by a cloth; the priest recites verses, the hems of the bride and bridegroom's robes are tied, and, together they walk three to nine times round the central square.

Death ceremonies—When no hope of recovery remains the dying is laid on a freshly cleaned floor and a copper piece or some leaves of the basil or *tulsi* are placed in his mouth. Women come to the house to mourn and beat the breast. The body is carried on a rough bier, the bearers, except among the Dheds, calling Ram Ram as they go. Some of them burn; others bury their dead. But all observe the regular rites on the third, fourth and twelfth days after death. Except the Bhangias, the people of the depressed classes have a set of Charans who visit them, note the names of their children, and attend at marriages. According to their own story, the forefathers of these Bhangia Charans failed to pay the government demand due by certain Bharvads or shepherds, for whom they had stood security, and in punishment were forced to drink water from a Dheda's cup. They still visit Bharwads, but dine with Garodas, Dheds and Chamars.*

Social organisation—In every village with more than one family each of these castes has its headman or *patel*, and in social matters each of them has its caste rules, and, according to the decision of the council, visits with fine or expulsion such offences as adultery, abortion, and eating with or marrying persons of a lower caste. Though the bulk of them are poor and few have begun to send their children to school, under British rule the position and prospects of the depressed castes have much improved. The same rights are conceded to them as to the higher classes, and they are freed from the burden of forced labour and from other indignities. Their progress has gone on remarkably in recent decades. The Chapter on Literacy shows the strides made by some of these castes in education. The last decade marked certain distinct stages in the development of a new sense of dignity and consciousness amongst these people.

* In Northern Gujarat the headman of these castes has the social title of *mehtar* or prince.

Bhangi or Bhangia (Hindu 31,018; Christian 8)—Scavengers. They are so-called because they split bamboos for making them into baskets. They are also called Olgana, from their living on scrapmeat. They are said to be the descendants of a Brahman sage who carried away and buried a dog that died in a Brahman assembly. They have for their surnames such names as Chohan, Chudasma, Dafda, Jethva, Makvana, Solanki, Vaghela, Vadher and Vadhiya, which point to a Rajput origin. They have also Dhevda, Maru, Purbiya and such other names as surnames which suggest a mixture of castes. They are scavengers and night-soil carriers and are viewed with kindlier feelings than Dheds partly because they are more subservient and also because their presence is so essential in rural economy. The cloth that covers the dead and the pot in which fire is carried before the corpse are given to the Bhangis. Presents of grain, clothes, and money are made to Bhangis on an eclipse day, as Rahu the "tormentor and eclipser" of the Sun and Moon, is a Bhangia and by pleasing them, he is pacified. Like Dheds, Bhangis are Hindus and honour all Brahman divinities. As they are not allowed to enter Hindu temples they bow to the idol from a distance. They are worshippers of Hanuman, Meldi, Sikotri and the basil plant. Many Bhangis are followers of the sects of Kabir, Ramanand and Nanak. Polygamy, divorce and widow re-marriage are allowed. A younger brother generally marries the widow of his elder brother. Priests of their own castes or Garodas (Dhed Brahmins) officiate at all their ceremonies. They eat flesh of every kind except in Surat, where the flesh of animals which die a natural death is not taken. They eat food cooked by Musalmans. Caste disputes are settled by the headman of the caste either alone or with the help of some elders. Breaches of caste rules are punished by forbidding the offenders the use of water or fire, and they are re-admitted into the caste on paying a fine. There is no half-Musalmán section amongst Gujarati speaking Bhangis. Deccani Bhangis have six sections, of which Lal Begi is half-Muslim and Shaikh is completely so. The Lal Begis are a totemistic section who refuse to eat the flesh of a hare, because Lalbeg, their religious head or *guru*, was suckled by a female hare. The strength of Lalbegism is in the United Provinces, from which many immigrants have come and become later assimilated with the Gujarat Bhangis. The Gujarat Bhangi is fond of pilgrimages and is deeply religious. Besides Lal Beg, some Bhangis pay respect to other Musalmán saints. In South Gujarat, their great day is the *chaddi*, or the dark ninth of Sravan (in August). The caste has given to the religious history of Hinduism many devout saints like Chiko, Dhiro, Harkho, Manor, Valo, etc.

Burud—See under Depressed Classes—Vansfoda.

Chamadia, Chamar, Chambhar—See under Depressed Classes—Khalpa.

Dhed—See under Depressed Classes—Vankar.

Garoda (7,796)—Priests of the unclean castes, including Bhangis in Central Gujarat, but except Bhangis in South Gujarat. Their surnames —Dave, Joshi and Shukal—point to a Brahman origin, but a few bear Rajput surnames such as Gohel, Parmar, etc. They keep the Brahman fasts and holidays, understand Sanskrit and recite hymns and passages from the Purans. They are called Brahmins by Dheds, Bhangis, Chamars, etc., and officiate at their marriages and deaths. As among Brahmins, a few men called Shukals act as priests of Garoda. They draw up and use horoscopes. Some Garodas till, others weave and a few act as tailors and barbers to Dheds. Their dead are buried and they perform *shraddhas*. Divorce and widow marriage are allowed. They have no headman but a council of their caste punishes breaches of caste rules by fines or expulsion.

Holar (54).—A Deccani untouchable caste. They are musicians and ballad singers. Immigrants from the Deccan.

Khalpa (Hindu 42,802; Christian 82)—The name is derived from *Khal*, outer skin. They are also known as Chamars or Chamadias from *charma*, skin. They are tanners and skin-dressers and are found all over Gujarat. They bear Rajput surnames and appear to be descendants of Rajputs, degraded for following their unclean profession. In Northern Gujarat, they rank below and in Southern Gujarat above Dheds. Their work is the tanning and colouring of leather, the making of leather buckets, bags and ropes, and the repairing of old shoes. The leather is chiefly made from the skins of buffaloes, bullocks and cows. With goat and sheep skins they have nothing to do. They bury their dead. They eat coarse grain, but have no scruples to eat flesh. Their priests are Garodas. They have a headman or *patel* in each village and settle all caste disputes by calling together five of their own body.

Mahar (572)—Deccani Dheds. The term denotes properly speaking an assembly of tribal units, found throughout the Marathi speaking area. At least 50 sections are comprised in it, but they do not intermarry. Some of the Mahar sections are now the broken residue of many former aboriginal tribes who had owned the country and were now degraded to their present lowly position. Kolis, Bhois, Khatkis, etc., have much in common with them. Mahars

like their Gujarat confreres live apart from "caste" groups in the village site, but they have lower grades of untouchables with whom they will not consort. A popular derivation of the term Mahar is from *mahahari* (great eater) in support of which certain traditions exist. According to another tradition, Mahars were originally night rovers (*nishachar*) whom the god Brahma turned to men for the benefit of the whole creation. Mahars are usually strong, tall and dark but with regular features and intelligent countenances. Their Marathi is incorrect and oddly pronounced. Their men carry a long staff and dress in a loin cloth, blanket coat or smock with a dirty Maratha turban. The Mahars have 53 endogamous divisions: Somavanshis being the most numerous and socially superior. Their exogamous surnames are based on *devaks* (or totems) not unlike the Marathas. The remarriage of widows is permitted, so also is divorce. The caste follows the Hindu law of inheritance. Mahars profess Hinduism, of both Shaiva and Vaishnava forms. Many are followers of Kabir, Giri and Nath. The favourite deities of the Deccani section are Bhavani, Mahadeva, Chokhoba, Dnyanoba, Khandoba and Vithoba. The religious teachers and priests of the caste are from themselves, *gurus*, *sadhaks*, etc. A class of Mahar *thakurs* (probably degraded Bhats) acts as their priests in Khandesh. The dead are generally buried. A few with means burn. Mahars are hereditary village servants and are authorities in all boundary matters. Their duties are to cut firewood, carry letters, sweep and clean the yards in front of the villagers' houses, carry cowdung cakes to the burning ground and to dig graves. They are paid in cash and have a monopoly of dead village animals. The more skilful go in for domestic service with Europeans, a few have done well as chauffeurs, and have become money lenders or contractors. As unskilled labourers, Mahars have a good repute. The more ambitious section has taken keenly to education and have led the depressed classes generally in agitation for greater recognition of their rights. The usual village organisation of the caste is through Pandwars and Mehters who are hereditary office holders. Usually the most sensible son or other heir is chosen for the job. Caste disputes are settled by the men of the village with or without the help of the headman. In some places they have caste councils. Usual social penalties are expulsion, excommunication and fine.

The Mahars in the State are mostly to be found in Baroda City, where there are about 100 families. They were employed by the Marathas in their armies before in Kadi and Patan. Some of the Mahars are still in the Huzurat Paga (Irregular Horse). Some have taken to private service as *mukadam*, groom or even chauffeur. They have a temple built for religious worships.

Mang (37)—A wandering criminal tribe, found mainly in the Baroda and Navsari districts. They make baskets and winnowing fans. Some are nomad snake charmers and jugglers. Socially they are the lowest. They never make use of a Brahman's services nor pay him any respect. Among them, is a class of men called *Bhats* who claim to be of Brahman descent and act as their priests. Except the dog, cat and ass, they eat all animals. The Mangs bury the dead. A silver image of the dead is kept in the house and in front of the image, every seven or eight days, a lamp is lighted. Some men with the title of *patel* are chosen to settle social disputes. A man guilty of breaking caste rules is fined and money spent in drink. The caste has two kinds of leaders: (a) religious (*mehetaria*) who settle caste disputes, etc., and (b) *sarnaiks* who lead them in action, criminal expeditions, etc.

The tribe is described in Sanskrit literature by the name of *Matang*. It has three territorial divisions: (i) Maratha, (ii) Kanarese (or Madig) and (iii) Gujarat Mang (or Mangela). None of the sections interdine or intermarry.

As a class, Mangs are tall, dark, coarse featured, with blood shot eyes and lank and thick hair. Women tie the hair in the Kunbi fashion. Their hands and arms are profusely tattooed.

The caste has no less than 25 endogamous septs, some of which have a bastard (*akkarmashe*) division. The Assal Mangs have the highest social rank. Remarriage of widows is permitted except amongst Poona Mangs with Maratha surnames. Polygamy is allowed. Mangs profess Hinduism. Most of them are Shaivas, but their favourite goddess is Mariai and their family deities are Bahiroba, Khandoba, etc.

Nadia (622)—An "untouchable" class, Gujarati-speaking, mostly found in the City and the Mehsana *prant* (Kalol taluka). Lower than Chamars or Shenvas, they are higher than Bhangis, whom they will not touch or consort with. They deal in bones and skins of dead animals (particularly horses in cities or towns where they dwell). Also they are rag-pickers and disposers of discarded glass. They are quite distinct from other untouchables and marry amongst themselves. They eat food from the hands of all other untouchables except the Bhangis. They bury their dead and allow remarriage of widows. Garodas serve as their priests on supply of food from them.

Shenva (Hindu 9,643 ; Christian 82).—Also called Sindhva from plaiting the leaves of *Shendi* or wild date and Tirgar from making *tir* or arrows. They bear such Rajput

names as Rathod, Solanki, Vaghela and Makvana. Most of them earn their livelihood by making mats and brooms from date trees and ropes of *bhendi* fibre. A few also serve as village servants. They rank between Dheds and Bhangis. Dheds do not touch them and they do not touch Bhangis. Their priests are Garodas. Their food is coarse grain, but they also eat flesh when they can get it. They are Bijmargi, Ramanandi and worshippers of *Ramde Pir* and *Bhildi Mata*. They observe the ordinary Hindu fasts and feasts, but the followers of *Ramde Pir* fast on new moon days and do not work on Fridays. Some of them go on pilgrimage to Ambaji, Behcharaji, Dakor and Dwarka. They do not enter the temple, but worship standing near the door. Among them divorce and widow-marriage are allowed. The widow of a man marries his younger brother. Social disputes are settled by a few of the elders.

Thori (56)—A wandering tribe living upon the sale of *katharot* (wooden plates), *chatva* (wooden ladders) and plaited reed baskets. They are divided into Garasia and Makwana who differ in no way except that intermarriage is not allowed. They appear partly at least to be of Rajput descent, but are looked upon as untouchable like Dheds, etc. They are reputed to be cattlifiers. Their headquarters are in Kapadvanj under Kaira and Mandva near Chandod, where they stay during the monsoon. During the rest of the year they travel from place to place in bands of ten to fifteen for the sale of their wares. Their home language is Gujarati but they understand Hindustani also. All social disputes are settled by a *panch* whose decision is final. Widow marriage is allowed. Those dying of small-pox or without ever having small-pox, are buried. All others are burnt. Flesh of any kind except pork and beef is eaten. Brahmans are not employed.

Turi (Hindu 1,711 ; Christian 22)—A caste found chiefly in the Kadi district. They take their name from *tur* (drum). They are said to be the descendants of a Bhangi and a Musalman dancing girl. According to their own story they are the descendants of a Bhat. They are probably degraded Rajputs as among their surnames are Dabhi, Makvana and Parmar. In appearance, dress and language, they do not differ from Vankars. In position they rank between Dheds and Bhangis. Besides grain of all kinds, they eat fish and flesh of animals that die a natural death. They eat the flesh of goats, sheep, fowls, deer, bears, hares and porcupines, but do not eat dogs, cats, horses, asses, jackals, camels, cows, vultures, owls, serpents, cranes, or iguanas. They cultivate during the rains and wander about in the fair season playing on *tur* and singing tales, half-prose, half-verse to the accompaniment of a *sarangi*. Widow remarriage and divorce are allowed. The younger brother of the deceased husband has the first claim to his widow. The dead are buried. They have a headman who with the majority of the men present at a caste meeting, settles all disputes. Breaches of caste rules are punished with fines which are spent in caste feasts.

In spite of their degraded position they have still retained traces of their bardic origin, in that they are the custodians of the Vankars' and Garodas' genealogies (*vahivancha*).

Vankar (Dhed) (Hindu 107,988 ; Arya 266 ; Christian 1,519)—Said to be the descendants of Kshatriyas, who during Parshuram's persecution, passed themselves off as belonging to the impure castes. Chavda, Chohan, Chudasma, Dabhi, Gohel, Makvana, Parmar, Rathod, Solanki, Vaghela and other surnames which they have, show that they must have Rajput blood in them.

Dheds from Marwad are called Marvadi or Maru and those from the Konkan and the Deccan are called Mahar. Besides these, there are ten local divisions named either from the tract of the country in which they live or from their callings. Patania (of Patan), Bhalia (of Cambay), Charotaria or Talabda (of Petlad and Kaira), Chorasias or Mahikanthia (of Baroda and Mahikantha), Kahanamia (of Kahanam tract in Baroda and Broach) and Surtis (of Surat) are the six place names. Hadas (bonemen), Megwans (rain-men) and Vankars (weavers) are the three craft names. Only one, Gujjar, is race-name and is adopted by the Dheds of Broach. None of these divisions intermarry but all except the Marus dine with each other. They live chiefly on grains, but have no scruple about eating flesh.



Vankar.

They have their own priests called *Garodas*. They worship *Hanuman*, *Ganpati* and *Mata*. Many belong to Bijmargi, Ramanandi, Kabirpanthi and Swaminarayan sects. Some of them have recently embraced Christianity. Polygamy, divorce and widow remarriage are allowed. The widow of a man generally marries his younger brother. Except a few, who are well-to-do, Dheds bury their dead. Death pollution is observed for 11 days. *Shradha* ceremony is performed by the chief mourner on the twelfth day or four days from the tenth to the thirteenth. Dheds believe that a high future is in store for their tribe. A king will marry a Dhed woman and will raise the whole caste to the position of Brahmans. Each village has its headman called *Mehtar* in North Gujarat, and *Patel* in South Gujarat. Along with three or four other members of the caste, he settles all caste and other social disputes. Dheds are strict in punishing breaches of caste rules and show more respect than other artisan castes to the opinion of their headman.

Large numbers of Vankars have gone over to Christianity. 1,519 Indian Christians owned to being Vankars (Dheds) in this census.

Vansfoda—Found in the Baroda City. So called from their occupation of splitting bamboos and making baskets, *chiks*, etc. They are also called Ghancha. The Deccani section of bamboo splitters is known as *Burud*. Together the two sections numbered 478 in this census.

DESHASHTHA—See under Brahman.

DESHAVAL or DISAVAL—See under Vania.

DHANKA—See under Primitive and Forest Tribes.

DHED—See under Depressed classes—Vankar.

DHIMAR (167)—Deccani fishermen who settled in South Gujarat. They have the peculiar North Konkan custom of naming their children from the week-day of their birth, e.g., Mangli (born on Tuesday), Budhio (born on Wednesday), etc. A Brahman officiates at their marriage.

DHODIA—See under Primitive and Forest Tribes.

DUBLA—See under Primitive and Forest Tribes.

FAKIR—See under Ascetics—C. Muslim.

GAMATADA }
GAMIT } —See under Primitive and Forest Tribes.

GANDHRAP—A caste of musicians from "Gandharva," the mythological musician of the gods. They are found in Kadi and Baroda *prants*. They have entered the provinces from the north and say that they were originally Chitroda Nagar Brahmans. Traces of a northern origin remain in the men's long and flowing turbans and in the coverlets with which the women swathe themselves when they go out of doors. They play on various musical instruments and accompany dancing girls in all their performances. They wear the Brahmanic thread and their priests are Audich Brahmans. They are vegetarians. Divorce and widow marriage are not allowed, but owing to the smallness of their number, marriage among the children of brothers and sisters is allowed and practised. Some of them are Shaiva and others Vaishnav. They have no headman and all social disputes are settled at a mass meeting of the male members of the caste.

Musalman Gandhraps—Musalman Gandhraps number 617. They are mostly found in the Patan mahal (Balisana village). These converts are Sunni in religion. In the dry season, they move about the country and in the rainy months, return to their homes and cultivate. As their girls become professional dancers and prostitutes, the men never marry in their own caste. They seek wives from among the poor Musalmans and sometimes Kolis. The parents live on their daughter's earnings. They have a union and a headman, and during the rainy season generally meet together at marriages.

Jagari—An allied caste to these—Hindu in religion—is a small section known as Jagari (17 males and 15 females) found in Harij taluka. The caste is professedly devoted to prostitution without reserve. Gandhraps at least have the excuse of art in their calling. As soon as a female child is born, if she happens to be good looking, she is destined for prostitution. She is never betrothed, but when she is about 14 years of age, she is married to a sword. An auspicious hour is found and after, a regular ceremony of marriage with the *pratishtha* of Ganesh, songs appropriate to the occasion sung by women for four to eight days, the inevitable Brahman who performs the rites duly joins the child to the sword. From a hundred to four hundred rupees are spent by the father of the bride on the occasion. She is thereupon

allowed to ply her trade openly with the approval of her elders. But before the formal ceremony of the sword marriage happens, the girl is offered also the option of being chosen by anyone belonging to any Hindu caste, except the depressed, who is prepared to contribute towards the wedding expenses, as his partner. No formal marriage happens, but the partner so chosen has to live with her in her father's home (somewhat like the *Khandadiyo* of *Bhil* tribes), work for her and pay for her living, without any legal right as a husband. But he is free to leave her whenever he wills, although she is not free to accompany him. Even while this man continues to live with her, she is free to continue her trade as a prostitute; and her earnings go to the upkeep of the whole household, including her father's. Very few fathers dare to keep their good looking daughters from this calling. Other daughters, less favoured take to the usual course of marriage. The caste lives mainly on prostitution of its girls, but a few Jagaris have taken to agriculture. The caste is found also in Palanpur agency, and then Thar Parkar district in Sind and numbers over a hundred and fifty families all told.

GARODA—See under Depressed Classes.

GEDIA—See under Koli.

GHANCHI (Hindu 14,300 ; Muslim 7,426)—Oilmen, found chiefly in towns and large villages. They are of 8 divisions:—Ahmedabadi (652), Champaneria (145), Modh (8,909), Patani (168), Sidhpuria (164), Surati (58), Khambhati (5) and Pancholi (210). They have Rajput tribal surnames such as Gohel, Jhala, Parmar and Solanki. Of the eight divisions, the Modhs and Sidhpurias rank highest, the other divisions eating food cooked by them, while they do not eat food cooked by the other six. None of the eight divisions intermarry. Though they hold almost as good a position as Bhavsars and Sutars, the common Gujarati expression Ghanchi-Gola is used in the sense of low caste Hindus, just as Brahman-Vania is used for high caste Hindus. Ghanchis are fairly religious and belong to Kabirpanthi, Ramanandi, Swaminarayan, and Vallabhachari sects. They are also great worshippers of the *Kalka* and *Bahuchara Matas*. Marriage ceremonies do not differ from those performed by Kanbis, except in the fact that *Hanuman* is worshipped by the bride and bridegroom immediately after marriage. Polygamy and widow remarriage are allowed, but divorce is rarely granted. The widow of a man sometimes marries his younger brother. Each sub-caste has its own headman who settles caste disputes at a meeting of all the men of the caste. The Hindu Ghanchis have advanced rapidly in elementary education. Some of the Modh Ghanchis are now putting forward claims to be treated as Vanias and a few also returned themselves as Vanias in this census.

The Musalman section of Ghanchis are also called Ghanchi-Vohra. They are the descendants of Hindus of the Pinjara and Ghanchi castes. In their homes, they speak the Gujarati language. Their females dress like Hindu and have such Hindu names as Dhanbai, Jivi, Mankor, etc. Males put on Hindu-like turbans. At marriage, their women go singing like the Hindus with the bridegrooms to the bride's house, and in their feasts they have Hindu dishes of *ladu*, *kansar*, etc. At death women wail and beat the breast. They are Sunni in faith. They marry only among themselves and the Pinjaras. They have a *jamat*, with a headman chosen by the members.

GOLA (6,209)—Rice pounders, found in most of the towns. According to their story, they were originally Rajputs of Chitor in Mewad who called themselves slaves or *golas* to protect themselves from the persecution of Parshuram. In token of Rajput strain, the word *Rana* is always added to the name Gola. Their tribal surnames are Chohan, Chodhavada, Daladia, Divadia, Hirvana, Katakia, Manhora, Nagareth, Panchshahdia, Pat, Parmar, Pasia, Samalia, Sitpuri, Solanki, Takoria, Vaghela, Vaghmar, Varaskia and Vehiriji. They eat besides coarse food-grains, fish, fowl and the flesh of the goat, deer, hare and antelope. They drink liquor to excess especially at their feasts and caste dinners. This leads to abusing each other and sometimes coming to blows, and has passed into a proverb. A quarrel ending in abuse with a certain amount of gentle slapping is called *gola ladhāi* or gola brawl. When employed in pounding rice, they have to be closely watched as they frequently carry rice away. Some Golas have given up rice-pounding and work as sawyers, *gumastas* to grocers and cloth-dealers, as sellers of salt and carriers of goods either on their shoulders or on donkey-back. The Gola is held in little respect. A slovenly Vania is called a Gola in contempt. The Golas and Ghanchis are the first on the other side of the boundary line between high and low caste Hindus. As a class they are religious and are either Bijpanthi, Kabirpanthi, Ramanandi or Swaminarayan. Some belong to the Pirana sect, who, while they worship their saint's tomb, also respect Hindu gods. Marriages are not allowed among near relations or between people bearing the same surname. Except that they are less detailed, their marriage ceremonies do not differ from those performed by Kanbis. Widow remarriage is allowed—the widow sometimes marrying a younger brother of her deceased husband. Caste disputes are settled by a headman with the help of five leading men.

GOSAIN—See under Ascetics—Hindu.

GUGLI—See under Brahman.

HOLAR—See under Depressed Classes.

JAMBU—See under Brahman.

KACHHIA (Hindu 8,143 ; Jain 11)—The caste of market growers, from *katchha*, a vegetable garden. They are said to be originally Kanbi or Koli cultivators who took to the growing of garden produce and formed a separate caste. They are of three divisions in North Gujarat and four divisions in South Gujarat. The three North Gujarat divisions are Ajvalia, the most numerous section in the State, Andharia and Khambhati of which the Andharias are the lowest in social rank. Ajvalia and Khambhati eat together, but do not intermarry. The four South Gujarat divisions are Ahmedabadi, Khambhar, Khatri and Mali, of which Ahmedabadi rank the highest. The four divisions neither eat together nor intermarry. In addition to growing garden produce, Kachhias are also bricklayers, hand-loom weavers, carpenters, sawyers and shopkeepers. In religion, they are Bijpanthi, Swaminarayan or Vallabhachari. The Andharia and Khatri Kachchias are like the Matia Kambis, followers of Imam Shah and observe half-Hindu, half-Mahomedan rites. They fast on *Ramjan* and visit Pirana instead of Hindu places of pilgrimage. Children are married before they are ten years old. Marriage ceremonies do not differ from those of Lewa Kanbis. Marriages are not allowed among relations on father's or mother's side. Widow marriage and divorce are allowed. The dead are burnt and *shradha* ceremonies are performed. They have a *patel* who settles caste disputes in a meeting of the caste.

KADWA PATIDAR (Hindu 219,086 ; Jain 21 ; Arya 54)—A caste of cultivators. They are found in all the districts of the State but are most numerous in the Mehsana district, which is their original home. They dine but do not intermarry with Lewa Patidars. About their origin it is said that when Shankar went to perform austerities on Mount Kailasa, his consort Parvati to beguile the tedium of solitude, thought of creating some human beings. She thereupon created 52 males and females from the perspiration on her waist. Shiva being apprised of this by the sage Narad, returned from Kailasa and seeing these human beings enquired of Parvati as to how they came to be there. She told him plainly what she had done. This pleased Shiva so much that he allowed these beings to go to the earth and settle there under the name of Kadwa, as they had been created from the perspiration of the *ked* or waist. At the same time he gave them *kana* (grain) and *bij* (seeds) to maintain themselves ; and so they came to be called Kadwa Kanbis. There is a temple of their patron goddess *Umia Mata* at Unjha in the Mehsana district. A curious marriage custom prevails among the Kadwa Kanbis. Once in every 9, 10 or 11 years, priests and astrologers connected with the temple of Umia Mata, fix a day on which marriages take place in the whole caste. Children about a year old and even unborn children are married. In the latter case the pregnant women walk round the *chori* on an understanding that, if their children are a boy and a girl, the couple will marry. If a suitable husband cannot be secured for a girl, she is married to a bunch of flowers. The flowers are afterwards thrown into a well or a river, and the girl, now a widow, can at any time be married according to the simple *natra* form. Sometimes a married man is induced, for a money consideration, to go through the form of marriage with a girl, and to divorce her as soon as the ceremony is over. The girl can then be married according to the *natra* form. Widows marry, but not necessarily to the brother of the deceased husband. A husband can divorce his wife, but a wife cannot divorce her husband without his consent or after she has become a mother. Certain families of good birth hold the position of *shethia* or *patel*, which is a hereditary distinction and manage the affairs of the caste. For the betterment of the caste, a reform movement under the leadership of the enlightened Patdi chief started nearly 20 years ago. Their main efforts were at first directed in the first place to abolish their *en masse* marriage system, and secondly to spread education amongst the people. In the first matter, the State helped them by their legislation preventing child-marriage, so much so that these Umia Mata unions, so it is reported, are now limited to a minority of the community. The Kadwa Patidar Kelvani Uttejak Mandal has been established for the last ten years at Kadi and has to its credit a number of useful activities some of which have been already detailed in the chapter.

KANBI—See under respective titles—Lewa and Kadwa Patidars.

KANSARA (Hindu 2,038 ; Jain 1 ; Arya 120)—Coppersmiths deriving their names from *Kansu* (bell-metal). They are found in most of the large towns except Sidhpur in the Mehsana district, where there are no coppersmiths. The saying is "Copper will not melt in Sidhpur." They say that their original home was Pavaghad, twenty-nine miles east of Baroda. According to their story, five brothers lived at Pavaghad and were warm devotees of *Kalika Mata*, whom

they worshipped by beating bell-metal symbols. The goddess was so pleased with their devotion that she told them to make a living by "beating" metal. From beating brass they advanced to making brass, copper and bell-metal vessels. Their surnames are Bagaya, Barmeya, Bhatti, Gohel, Karkasariya, Parmar and Solanki. The tribal surnames of Bhatti, Gohel and Parmar show that Kansaras have some strain of Rajput blood. Kansaras belong to five divisions:—Champaneri, Maru, Shihora, Ahmedabadi and Visnagara of whom the lastnamed are the most numerous. None of the five divisions eat together or intermarry. Of the five divisions, the Maru or Marwari wear the sacred thread. In their look, dress and speech, Kansaras do not differ from Vanias and Kanbis. Kansaras hold a respectable position like Vanias and call themselves *Mahajan*. In religion they are Ramanandi, Shaiva and Vallabhachari, but hold their family goddess Kalika Mata in high reverence. Their great holiday is the bright ninth of Aso, on which day they perform in some of their settlements a sacrifice and at midnight dance and leap, holding a wreath of *karena* (oleander) flowers in one hand and a lighted torch in the other, and shouting Palai! Palai! Palai! One of the revellers, inspired by the goddess, professes to cut off his tongue with a sword. They visit the shrines of Ambaji, Becharaji and Kalika. Their priests belong to many divisions of Brahmans—Audich, Mewada, Shrigod and Shrimali. Except among Visanagaras, widow remarriage is allowed. They have their own trade guild. In South Gujarat, an outsider who sets up a coppersmith's shop, pays Rs. 7 to the guild fund, Rs. 11, if he starts a pedlar's business and Rs. 150 if he wishes to work in brass.

KAPOL—See under Vania.

KARADIA (8,745)—A caste of semi-Rajput cultivators found in the Kodinar taluka of the Amreli district. They are said to be originally Rajputs, and have such surnames as Zala, Vaghela, Rathod, Chohan, Parmar, Jadhav, etc. They have acquired their present name from their having paid *kar* or taxes to Government. They are agriculturists. Their females appear in public. They dine with Rajputs but marry among themselves. Widow marriage is allowed.

KARHADA See under Brahman.

KASBATI (2,852) Literally dwellers in towns. Some of them are the descendants of Baloch or Pathan mercenaries and others of Rajput converts. Their home language is Urdu mixed with Gujarati or Urdu only. Some of them hold grants of land and the rest are agriculturists or employed in government service as sepoy, police constables, etc. Their women do not appear in public. They are Sunni in faith. The males have Pathan names as Jafarkhan, Sirdarkhan; and the females have such names as Laduibibi or Dulabibi.



Exterior of a Karadia's house, Kodinar



Interior of a Karadia's house, Kodinar

They give their daughters only to Musalmans but occasionally marry Hindu wives of the Rajput or Koli caste. At such marriages, the bride's friends occasionally call in a Brahman. In other cases the ceremony is entirely Musalman. They have no headman and do not form a distinct community.

KATHI (3,525)—A curious and interesting race found in Kathiawad. The cradle of this race is unknown, but it appears to have come from Central Asia, driven by the tide of Mahomedan invasion, through Sindh and Cutch in the 14th century. A party of them, under the leadership of Umro, came to Dhank, ruled by a Vala Rajput. Umro had a beautiful daughter named Umarbai with whom the Dhank chieftain Dhan Vala fell in love. Umro agreed to marry her with him on the condition that they should eat together. To this Dhan agreed, but his brethren considering him degraded, drove him out. He became the leader of the Kathis, and had by her three sons, Vala, Khuman and Khachar, whose descendants bear their names and are considered the three noble tribes of Kathis. They are called *Shakhayats*, while the descendants of the original Kathis are called *Avartias* or inferior. Kathis worship the Sun and use it as a symbol on all their documents. Owing to contact with Hindus, they worship Hindu gods and respect Brahmans. At funeral ceremonies, instead of feeding crows, they feed plovers and have a strong friendly feeling for them. They have adopted the Hindu feeling about the sacredness of the cow. They eat food cooked by any Hindu except the unclean ones and drink liquor. Widow marriage is allowed, but is seldom practised, except in the case of the deceased husband having a younger brother. In such a case, the rule is peremptory that he should marry with his widow. They do not observe *sutak* like Hindus. Similarly women are not segregated as among the Hindus at particular seasons.



Kathi



House of a Kathi: Exterior

are a wild and high spirited tribe. They resent the name of Koli applied to them, but in appearance, they differ little from Bhils. Their chiefs who are known as Mers are descended from a Bhati Rajput. Their most famous leader was Jesa, who helped Emperor Mahmud Taghlak in the conquest of Junagadh from Rakhengar. The Khants owe their ascendancy in Sorath to this help as they got Girnar and 24 villages in Bilkha Chovishi as a reward. Their chiefs are good looking having intermarried Gohels and Jhalas. They are giving up their criminal propensities and settling down to agriculture. Except the cow, they eat all animals

KATHODIA—See under Primitive and Forest Tribes.

KHADAYATA—See under Vania.

KHALPA—See under Depressed Classes.

KHANT (4,427)—A caste intermediate between the Rajput and the Koli, found mostly in Mehsana and Amreli *prants*. The term means a borderer. As their name implies, they

including the pig. They practise *diyar vatu*, i.e. marriage of the widow with her late husband's younger brother.

KHEDAWAL—See under Brahman.

KHOJA (2,167)—Literally meaning "honourable converts" are the descendants of Luhanas who were converted to Islam by the preaching of a Shiah preacher called Nur Satagur or Nur-ud-Din in the 12th century. Nur Satagur is said to have made a number of converts in Gujarat by ordering the idols of a Hindu temple to speak and bear testimony to the truth of his mission. In addition to adopting the name of Nur Satagur (teacher of pure light), he practised the Hindu abstraction or *samadhi*, which shows the process by which the first Ismalia preachers succeeded in converting the Hindus. The Luhanas were the first to be converted, and they who were Kshatriyas were called Khavaja (lord) after their conversion. A late element of strength in the Khoja community was the conversion of a race of Sun worshippers called *Chak* and other tribes in the Punjab and Kashmir. One of Nur Satagur's successors Rande, originally a Tuwar Rajput, sowed the seed of Ismalia faith in Cutch and Kathiawad. On their first settlement in the towns of Gujarat, the Khojas were parched grain-sellers, fuel sellers and bricklayers. They now enjoy powerful position in all the trades. They are scattered all over Gujarat and are to be found in all important trade centres within and outside of India. Khojas have many observances and customs differing from those of regular Mussalmans. They observe the *chhathi* or sixth day ceremony after birth. Their marriage keeps a relic of the marriage by purchase, which they believe once obtained among them. The father of the bridegroom pays Rs. 5½ to the father of the bride which he hands over to the *jamat*. Like Hindus, they follow the Hindu law of inheritance. The religion of the Khojas is "Shiah Ismailism." In order to present the Ismalia faith in an inviting form to the *Shakti* worshipping Luhanas, the first Ismalia-missionary made some modifications in its doctrines. The *Mahdi* or unrevealed Imam of Alamut was preached to the Shaktipanthis as they looked for the tenth incarnation, the *Nikalanki* or stainless *avatar*. The five Pandavas were the first five Ismalia pontiffs. The first Ismalia missionary Nur Satagur (A.D. 1161) was the incarnation of Brahma that appeared on earth next after Buddha. Among the Matapanthis, each of the four *yugas* has its own preacher or *bhakta*. The first epoch is assigned to *Bhakta* Pralhad, to the second, Harischandra and to the third, Uddhisthir. Instead of the fourth Balibhadra, Pir Sadruddin, the third Khoja missionary, added his own name. The four sacrifices of the four *yugas* were confirmed, as were also confirmed the Ghat-Path Mantra or prayer and ritual of the Shaktipanthis. Instead of Shaktipanth, Sadruddin adopted the name of Satpanth or "True Doctrine" for his new faith. Sadruddin was not connected with the family of Aga Khan, the present religious head of the Khoja community by lineal descent, but is alleged to have been a disciple of his ancestor Shah Nazir. He said to Shah Nazir that on his return to India, he would declare Hazarat Ali, the first Imam, to be *Nikalanki* or the tenth *avatar* and Shah Nazir his descendant. When Aga Khan's ancestors came and settled in India, the Khojas transferred their allegiance to them, they being believed to be the proper religious heads of their community and discarded the descendants of Saiyad Sadruddin Shah. Originally the Khojas were a single body. But for about twenty years, they have split up into two factions called Panjaibhai and Pirai. The Panjaibhai section is the most orthodox body and look upon Aga Khan as the representative of the Prophet or the incarnation of God himself. The Pirai, which is a very small division, consider Aga Khan merely a *pir* or religious head of their community and nothing more. A Khoja has to pay his Imam the *dassonth* or tithe and the *petondh*, a smaller contribution and about sixteen other minor contributions, varying from a few annas to Rs. 1,000. Besides this when pressed for money the Imam sends the *jholi* demanding an extraordinary levy of the *dassonth* and *petondh*. The regular *dassonth*, tenth part of income, is levied on each new moon day, each Khoja dropping in the *jholi*, kept in the *jamatkhana* for the purpose, as much as he is inclined to pay.

KOKNA—See under Primitive and Forest Tribes.

KOLGHA—See under Primitive and Forest Tribes.

KOLI—A term applied loosely to tribes that differ widely from each other. Some writers speak of them as aboriginals of the plain or civilized Bhils; others find them so little unlike Rajputs as to lead to the conclusion that Kolis and Rajputs are in the main of the same stock. Bhils and Kolis of Eastern Gujarat are as hard to distinguish as are the Kolis and Rajputs of Western Gujarat. According to the author of the "Bombay Gazetteer" volume on Gujarat Population, the explanation of this difference seems to be that the Mihiras or Gujjars, coming into Gujarat from the west, north-west and north-east, found the plain country held by Bhils. In central parts, the new comers so dominated the earlier race that the result was a Koli hardly to be known from a Rajput. In the eastern parts, on the other hand, the new comer's element was small and intermixture produced a Koli or half-blood who

can hardly be known from a Bhil. Similarly the Kolis in the south had a later element so weak as to have but little affected the Dubla, Dhodia and other stocks with whom it mixed. Again in the north and west, when the struggles with the Musalmans set in, new comers, classed under the general head of Rajputs, joining with the earlier settlements of Kolis, were in some cases absorbed by them and in others succeeded in raising the Kolis to their own level. Even now intermarriage goes on between the daughters of Talabda Kolis and the sons of Rajputs and the distinction between a Rajput and a Koli is one of rank than of race. In view of this reason and also because of the fact that the term "Koli" is of very indeterminate signification, loosely including widely dissimilar castes and tribes, merely because of their superficial resemblance in status and occupation, it has been determined in this census to limit its application to tribes who are content to be included in it, and to show other castes like Talabda, Khant, Makwana and Baria separately as distinct entities, especially as these represent undoubtedly the Koli aristocracy in Gujarat. Talabda is undoubtedly the highest in rank. Khant and Baria have obvious Rajput affinities. The highest families in the social sense prohibit widow remarriage in imitation of the Rajputs; and the same is true of the Khants and Barias in the north of Central Gujarat and of the Patelias of the Panch Mahals and Rewa Kantha. The above named castes have given brides to Rajputs, and failing them, to Molesalam husbands. In Central Gujarat, all except Patanwadias are known as "Dharalas,"—a term which includes Khant and Baria, but is more applicable to Talabdas. Over the border of the Sabarmati towards the east of North Gujarat, the term Dharala is unknown and the Koli aristocracy is represented by the Koli Patelia and Talabda, while the Thakarda or Pagi, holding a distinctly inferior position, proclaims his baser blood in every line of his features. The "Thakarda" or more properly "Thakore" name is also appropriated by the higher families amongst the Chunvalias (*q.v.*). Other place names include Bhalia (belonging to the Bhal country, west of Charotar).

Units of Exogamous groups—Exogamous groups have been reported from Palanpur, Mahi Kantha, the Panch Mahals and Cutch, but it is doubtful whether marriages are regulated in practice by a consideration of these clan or family names, and careful enquiry has disclosed that the important group with most Kolis of the present day is the village. In no case is marriage within the village permitted and in some cases, a regular cycle of villages has been found to exist, brides being given from village A to village B, from village B to village C and so on.

Interrelation of castes in Koli group—These classes, *e.g.* Talabda, Baria, Chunvalia, Patanwadia, etc. are distinct and, as a rule, do not intermarry. Each class is divided into a number of sub-divisions or families and members of the same sub-division or family do not intermarry. Kolis used to live as robbers. Though they have now taken to husbandry and other callings, the love of thieving has not disappeared and they contribute the largest number of convicts in the State Jails. As husbandmen, they are inferior only to Kanbis. Kolis eat fish and flesh, but owing to poverty they are generally vegetarians. They worship all Hindu gods and goddesses, but specially *Khodiyar*, *Meladi* and *Vera Matas*. The Mahikantha Kolis regard the Mahi river as their family goddess. Some Kolis in the Navsari taluka are *Matia*, *i.e.* followers of the Pirana sect. Many Kolis are followers of Bijpanth and some follow the Swaminarayan, Kabir and Ramsanehi sects. At the beginning of the present century, the Swaminarayan Acharyas are said to have reclaimed many Kolis from lives of violence and crime. In recent years a Koli *guru* called Daduram acquired great respect. Brahmans are respected by them and also used as priests; their priests mostly belong to Shrimali or Audich castes of Brahmans. Kolis are superstitious and have a firm belief in spirits and spirit possession. They employ a *bhuvo* to exorcise spirits.

Boys and girls are married after their twelfth year. The Rajput practice of marrying out of the clan is closely followed. Polygamy and widow marriage are allowed. Preference is given by a widow to her deceased husband's younger brother. A Koli can divorce his wife merely by a formal declaration to that effect in writing. A Koli woman can also abandon her husband, but in that case, she must return the *palla* or dowry settled on her at the time of marriage. As a rule, Kolis burn their dead, but children under eighteen months are buried. All questions relating to marriage are settled by a *panch* or committee of *agevans* or leaders of the caste.

Chunvalia (8,185)—A caste of Kolis. They take their name from Chunval, a tract of country near Kadi, so called from its originally containing *chunvalis* or 44 villages. They are mostly found in the Mehsana district. Fifty years ago, they were the terror of North Gujarat. Led by their chiefs or *Thakardas* of partly Rajput descent, they lived in villages protected by impassable thorn fences and levied contributions from the districts round, planning, if refused, regular night attacks and dividing the booty according to recognised rules, under which live-stock and coin belonged to the chief, and cloth, grain and such articles belonged to the captors. There are still among them men of criminal habits, but as a class they have settled

as cultivators and labourers. They have twenty-one principal sub-divisions: Abasania, Adhgama, Baroga, Basukia, Dabhi, Dhamodia, Dhandhukia, Gohel, Jandaria, Jhenjuwadia, Kanaja, Lilapara, Makvana, Palegia, Parmar, Piplia, Babaria, Sadria, Solanki, Vadhlakhia and Vaghela. They intermarry among their own class alone, but not among members of the same sub-division.

Gedia—A caste of Kolis found in the Amreli district. They are so called from Ged, the name of the tract between Porebunder and Madhavpur, in which they originally lived. They are more respectable than other Kolis, live chiefly by tillage and have given up their predatory habits. They are a good looking race and live in houses, not in *kubas* or huts like others of the labouring class. They eat no flesh, but live on fish, vegetables, millets and fruits. Their women invariably wear a coin or two as ornaments. They marry only amongst themselves and consider themselves higher than other Kolis. Together with Bhalias, they number 27,437. They numbered 3,635 in 1921, on a 20 per cent increase, they ought to be about 4,422 now.

Patanwadia (20,777)—A caste of Kolis, so called from Patan, their original home. They are also called Kohoda. They freely partake of animal food and are the only class of Kolis who eat the flesh of the buffalo. They are lower in social rank to other Kolis. Most of them have Rajput surnames such as Chavda, Dabhi, Vaghela, etc. No Talabda or any other Koli or semi-Koli caste would intrude on a Patanwadia's land or beat. But a Patanwadia would not hesitate to commit depredations on the property of other Kolis. They are strong, active and hardy. Their houses are generally small single-roomed huts with sides of wattle and daub and high peaked roof of thatch. Their farm stock sometimes includes a cow or a pair of bullocks, but almost never goats, sheep or hens. Their tools are a hoe and a plough or sometimes a cart. Of late the caste has taken some advantage of education: and in evidence can show one or two matriculates and even a graduate.

Thakarda (Hindu 190,177; Jain 8)—A caste of Kolis mainly found in the Mehsana district. They are so called from their half-Rajput descent. The bulk are low type, half aboriginal, and thriftless. These are known as Pagis. But the term "Thakarda" is of somewhat vague significance; including as it does the low typed *pagi* of the northern talukas of Mehsana *prant*, it is applied also to the Koli aristocracy amongst the Chunvalias. There is a section found in Palanpur. These Palanpur Thakardas are a distinct and prosperous group like the Talabdas of South Gujarat.

KONKANASTHA—See under Brahman.

KOTWALIA—See under Primitive and Forest Tribes.

KUMBHAR (Hindu 50,996; Muslim 897)—Potters; the name is derived from *kumbhakar* (*kumbh* a water pot and *kar*, maker); they are generally found in all cities and villages. In some places, they are called *ojhas* and are also known as *prajapatis* (creators). Some of them have Rajput surnames, such as Chavda, Rathod, Gohel, Solanki, etc., and show the usual pretensions to Rajput descent. They are divided into nine sub-castes as follows:—Gujar, Lad, Maru, Ajmeri, Banda, Khambhati, Sami, Varia and Vatalia. The first named is the predominant section in the State. Besides working as potters, many of this caste are employed in villages as domestic servants and in towns have become carpenters or bricklayers. Those who have taken to carpentry or bricklaying call themselves Sutar-Kumbhar or Kadia-Kumbhar and claim superiority over others. Marriage between near relations is prohibited. Widows remarry, the younger brother of a deceased husband has no particular claim. They live mostly on vegetable food but some in South Gujarat take liquor and even eat flesh. Brahmans officiate at their ceremonies, and are treated on equal terms by other Brahmans. They burn their dead and perform *shradha*. Each division has its headman and settles social disputes at the meeting of all the men of the caste.

The Musalman section are descendants of Hindu converts from the Kumbhar caste. They are also called Karatia. They speak Gujarati. The men dress like poor Musalmans and women like Hindus, except that they wear silver bracelets of the Musalman pattern. They sell but do not make pots. The men work as labourers and servants. They marry among themselves and with Kathiaras or wood-cutters. With the Kathiaras, they form a *jamat*, (union) and have a headman to settle disputes.

LAD—See under Vania.

LAVAR—See under Luhar.

LEWA PATIDAR (Hindu 224,298; Jain 1,485; Arya 1,088)—A caste of landlords and cultivators. They are found all over the State, but are most numerous in the Baroda district. Kanbi is a descriptive term for the big functional group of husbandmen. Gujarat

Kanbis claim to be of Kshatriya stock. There is now no doubt that they are Gujjars and came from the Punjab. Socially they are divided into Patidars or shareholders in the village lands and Kanbis or cultivators. As a general rule, Kanbis allow widow marriage, but Patidars, in imitation of the Brahmans and Varnias, do not allow it. Patidars eat with Kanbis and even take their daughters in marriage, if endowed with a good dowry. Patidars of 13 villages in the Charotar (7 under Baroda, 5 under Kaira and 1 under Cambay) are considered *kulin* and are hypergamous to the rest. They do not give their girls in marriage outside these villages, but take as wives girls from any village. They not only exact large dowries from other Patidars wishing to give them their daughters in marriage, but also practise polygamy. Within the last twenty years, there has been a change in the general attitude of the caste towards *kulin* Patidars, and in most of the villages *ekda* or solemn agreements have been made to eschew the *kulins* and to give and take in marriage only in their own social circle. For instance, the Vakal circle containing villages of Baroda and Padra mahals and some villages of Jambusar, have framed rules, providing for heavy fines for giving a daughter in marriage outside the circle. The Kahnani circle of 24 villages has similarly penalised against giving brides to Charotar. The Dhavat circle (16 villages of Karjan and southern portion of Baroda mahal) derives a large

income from such fines and distributes *lahnis* (domestic utensils for eating or carrying food) to its members. The Lewa Kanbis of South Gujarat have two divisions—*Charotaria* and *Japti*—the cause of fission being the relative recency of their arrival from their original homes in Charotar. These two sections interdine, but do not intermarry. A curious set of prohibitions is met with in the Broach circle, which prohibits daughters from being given in marriage within the same village, or the *natra* ceremony form being performed within the precincts of

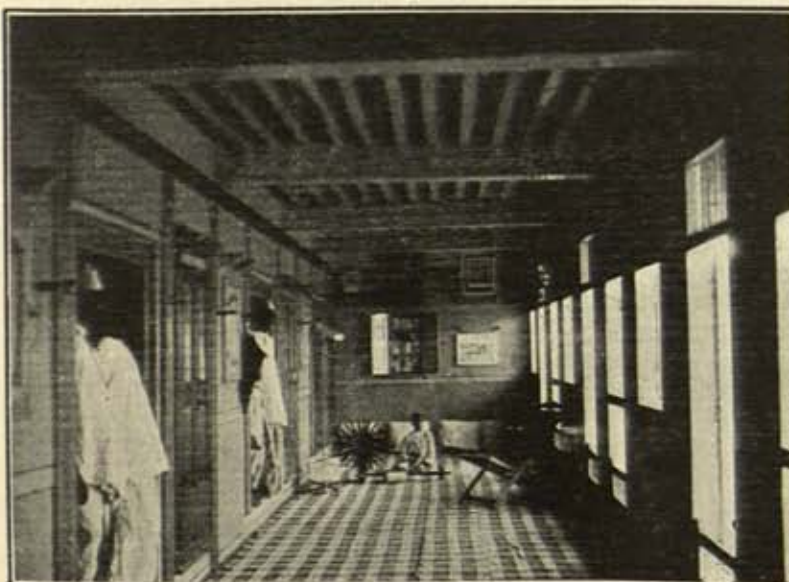


Exterior of a Patidar's House, Charotar

the village where the widow's former husband resided. There is no headman and no caste government, except among the Kanbis and Lewa Patidars of some villages.

The Patidar name has now practically lost its tenurial significance and is generally affected by all Lewas, especially the socially conscious section in Central Gujarat. In South Gujarat

and Kathiawad, the Lewas residing there are content to call themselves Kanbis. North and South Gujarat Kanbis are considered inferior, and even daughters are not taken from them by the hypergamous Patidar section, except surreptitiously or driven by want.



Interior of a Patidar's House, Charotar

Owing to minute sub-divisions of ancestral land many of the Charotar Patidars have left off their original calling and taken to education. Many of them are now govern-

ment servants in all its departments, there are some traders also. They are very enterprising and have gone to Africa in search of employment.

LUHANA (Hindu 13,570; Arya 27)—A corruption of Lohana. They are said to derive their name from Lohanpur or Lohokat in Multan and were originally Rathod Rajputs. They were driven by the Musalmans from the Punjab into Sindh and afterwards in the 13th century, found their way to Cutch, Kathiawad and Gujarat. In Sindh they eat flesh, are addicted to spirituous liquors, do not object to eat fish and onions and drink water from the hands of their inferiors as well as superiors in caste. Tod (Annals of Rajasthan, 292) says:—"Of the Lohanas the proverb runs—'except cats and cows they will eat anything.' " In Cutch they still use animal food, but in Kathiawad and Gujarat they neither eat flesh nor drink spirits. Gujarat and Kathiawad Luhanas do not therefore regard those of Cutch and Sindh as belonging to their caste. Luhanas are Vaishnava of Vallabhachari and Ramanuji sects. Their family goddess is *Randel Mata*, and they are devout worshippers of Darya Pir, the spirit of the Indus, who is said to have saved them when they fled from Multan. They wear the sacred thread and allow polygamy and widow marriage. Their customs do not differ from those of the Bhatias. Their family priests are Saraswat Brahmans who dine with them. They have a headman (*patel*) but give him no personal authority. Social disputes are settled according to the opinion of the majority of the members.

They are mostly traders and are found in almost all towns and villages. This caste has many charitable, educational institutions in Bombay as well as in this State, which have large endowments.

LUHAR (Hindu 21,026; Arya 27)—Blacksmiths, from Sanskrit *lohar*. They are found in cities and large villages. According to their account they are the descendants of one Pithvo, who was created by Parvati out of the dust clinging to Shiva's back, to prepare weapons in Shiva's war against the demons Andhkar and Dhundhakar. They have such surnames as Chavda, Chohan, Dodia, Sirohia, etc., which show that some Rajputs also must have taken to their calling. There are 13 main divisions in this caste, who neither eat together nor intermarry. They are Gujjar (12,177), Bhavnagari (266), Panchal (1,173), Sirohia (107), Surati (176), Chokia (51), Dali (30), Khambhati (1,350), Lodhaghada (47), Rupaghada (43), Pithva (2,910) and Parajia (332). Panchal Luhars claim to be Brahmans, who were degraded owing to their taking to the blacksmiths' profession, and in the present census some returned themselves as Panchal Brahmans. Luhars are strict vegetarians, except in South Gujarat, where they privately eat flesh and fish and drink liquor. In blowing the bellows and in the lighter part of the work, the Luhar is helped by the woman of his family. The competition of European ironware has forced Luhars to give up their original calling and become silversmiths, carpenters, watch repairers, etc., and in some cases field-labourers. In return for mending field tools, the villagers pay a Luhar in grain at harvest time. Marriage between near relations is avoided. Divorce and widow remarriage are allowed. Luhars belong to many religious sects, such as Kabirpanthi, Swaminarayan, Ramanandi, etc. Their priests belong to many divisions of Brahmans who are known as *Luhar Gors* and are despised by other Brahmans.

A small section of Luhar has become converted to Islam. These Muslim Luhars are mostly emigrants from Sindh. The men dress like Memons with a Musalman turban, coat and trousers. The women dress like Hindus. They make knives, nut-crackers, spear-heads and daggers. They are Sunnis in religion. They marry with other Musalmans and have no separate headman or union.

MAHAR—See under Depressed Classes.

MALEK (11,206)—They are converted Hindus. Their home tongue is Gujarati in North Gujarat and Hindustani in South Gujarat. They are landlords, cultivators and constables. In their marriage and other customs, they do not differ from other converted Rajputs. As a class they are tall and fair with good features. Of men, some dress like Kathis with big turbans, tight jackets, trousers and waist cloth. Others wear the common Muslim dress. The women dress in the north like Hindus and in the south like ordinary Musalmans. The women spin but do not work in the fields. Maleks are clean, but idle and thriftless in their habits. They are poor, many of them heavily in debt. Sunnis in name, they are not however religious, few of them knowing the Koran or saying their prayers. Traditions of Mahmud of Ghazni (A.D. 1025) converting Rajputs of North Gujarat still linger in the country. To distinguish converts from the armed Rajput and Koli castes, the Musalman governors coined such names as Molesalam, Malek and Sipahi.

MANG—See under Depressed Classes.

MARATHA (KANBI AND KSHATRIYA)—An immigrant caste from the Deccan. It has two divisions, Maratha Kshatriya (Hindu 12,155; Arya 9) and Maratha Kanbi, of which the former is hypergamous to the latter, but was not originally distinct. Maratha Kshatriyas support their claim to social superiority over Maratha Kanbis, by favouring infant marriages, forbidding the remarriage of widows and wearing the sacred thread. The Kanbi on the other hand does not claim to be a Kshatriya, allows both adult marriage and the remarriage of widows and wears no thread to indicate the twice-born status. The dividing line between the Kanbi and the Maratha is not of the nature of a permanent barrier, such for instance as that which exists between the Shenvi and Deshastha Brahmans. The Marathas proper are allowed to marry the daughters of the Kanbis. The latter would not ordinarily secure a daughter in marriage from their social superiors. The difficulty however is frequently surmounted by a well-to-do Kanbi, who rises to the higher rank as his means increase, and if common report is to be believed, adopts the title of Kshatriya with the sacred thread and its restrictions on adult and widow marriage. The superior division is supposed to consist of ninety-six families or *kula* such, as Surve, Bhonsle, Ghorpade, Salunke, Sitole, Chavan, etc. The bearers of the best names among the ninety-six *kulas* are undoubtedly of Rajput origin. In 1836, the Raja of Satara sent a Shastri to the Rana of Udaipur to make inquiries regarding the origin of the Bhonsles, a leading Maratha family. The Rana sent word that the Bhonsles and his family were one, and despatched with a messenger, Raghunathsing Zala, a letter to the same effect written by Raja Shahu in A. D. 1726 to Vaghaji Sisode of Pimple in Mewar (Udaipur). Raghunathsing is reported to have satisfied himself by inquiry at Satara of the purity of blood of certain Maratha families, viz., Bhonsle, Savant, Khanvilkar, Ghorpade, Chavan, Mohite, Nimbalkar, Shirke, Mane, Jadhav, and several others. At the same time, it has to be borne in mind that several Maratha families have *kuldevak* or totems which cannot be reconciled with a pure Rajput origin. Sun flower, *kadam* tree, the mango, the conch shell and the peacock's feather are examples of these totems which are rapidly falling into disuse but are still worshipped on the occasion of marriages and when a new house is occupied for the first time. The Maratha and Kokani Kanbis together numbered 4,834 (besides 9 Aryas) in this census.

MATIA (Hindu 3,530; Arya 28)—A caste of Kanbis mostly found in the Baroda and Navsari districts. They were originally Lewa Kanbis, who came to be called *matia*, because they followed the *mat* or doctrine of *Pir*. About 300 years ago, a company of Lewa Kanbis on their way to Benares, put up at Pirana, where the saint Imamshah prevailed upon them to abstain from the hardships of a journey saying that he would show Benares to them there. This miracle he is said to have performed, and then these Kanbis looked upon him and accepted him as their holy saint. They thus acquired many Musalman customs and observances and had to separate from the Lewa Kanbis. They are strict vegetarians eating neither fish nor flesh and drink no spirits. They also do not use asafoetida, garlic and onions. They follow the Atharva Veda and call themselves *Satpanthi*. They worship the tombs of Musalman saints whose mausoleums are at Pirana, Navsari, Ahmedabad and Burhanpur. Their sacred book is a collection of religious precepts called *Shaiksha Patri* made by Imamshah, the saint of Pirana. Some of them learn this book by heart and are called *Kaka* or devotee. A family of the *Kakas* officiates at a temple at Kukas in the Sinore taluka. Matias have three religious divisions, *Panchia* or followers of Surabhai's mausoleum, originally managed by five devotees; *Satia* or followers of Baba Mahomed's Mausoleum, originally managed by seven devotees; and *Athia* or followers of Bakr Ali's mausoleum, originally managed by eight devotees. Except in being called by different saints, these divisions do not differ in belief or in practice. Matias keep *Ramjan* fast and observe as holiday the *Uras* or saint's day. Besides Musalman holidays, they observe as days of fasting, *Holi*, *Akshatrij*, *Divaso*, *Balev* and *Divali*. Their chief places of pilgrimage are Navsari, Vemar, Pirana and Burhanpur. Widow marriage is allowed, the widow of a man marrying his younger brother. Divorce is lawful. A bachelor cannot marry a widow or a divorced woman without first undergoing a mock marriage with the *shami* tree (*Prosopis Spicigera*). Matias bury their dead. They have no headman. Caste disputes are settled by the leading men. Fines inflicted on the offenders are used in purchasing vessels for the caste's use or are sent as presents to the saint's shrines.

From 1880 there has been a split among the Matias. Through the preaching of an ascetic called Nirmaldas, who told them of their Lewa Kanbi origin, some 200 families calling themselves Vaishnava Matias formed themselves into a separate caste as distinguished from the Pirana Matias. The seceding or Vaishnava Matias have joined the Ramanandi and Dadupanthi sects. They worship images of *Ranchhodji* or *Dwarkanathji* and go on pilgrimage to Benares, Mathura, etc. Vaishnav and Pirana Matias do not eat together. The Vaishnav Matias have abandoned all Musalman customs, call Brahmans to officiate on marriage and other occasions and in all respects live like Lewa Kanbis. But Lewa Kanbis do not dine with them.

MAVCHI—See under Primitive and Forest Tribes.

MEMON (8,971)—A corruption of *muamin* or believers, a name given to the descendants of Musalman converts from the Hindu castes of Luhanas and Kachhias. The conversion first took place in the middle of the 15th century in Sindh under the persuasion of one Saiyad Eusuf ud-Din Kadri, a descendant of a saint in Bagdad. At that time, Manekji, the head of the eighty-four *mukhs* of the Luhana community, was in favour at Nagarthatha in the court of a Samma ruler named Markat Khan. Markat Khan became a follower of the Saiyad and Manekji, his two sons and 700 other Luhana families followed their ruler's example. On conversion, the saint changed the name of the community to Muamin or believers. Before leaving Sindh, he blessed his people,—a blessing to which the Memons trace their fruitfulness and success in trade. From Sindh, the Memons spread to Cutch and Kathiawad and are now to be found in all important towns in India and also in Burma, Siam, Singapur, Java and East Africa. They wear the moustaches short, according to the *sunnal* (practice) of the Prophet and the beard about six inches long at the most. Most of them shave the head. Both males and females blacken their eyelids with collyrium. Memon women redden their palms, fingers and finger nails and their soles and toes with henna. Memons are fond of costly clothes. The men are fond of gold embroidery and the women of gay colours. They are great eaters and fond of good cheer. They have two divisions, Kachchhi and Halai. The Kachchhis are the descendants of market gardening Luhanas of Sindh and the Halai from Halar. From Halai, there have been three offshoots called *Dhoka* (belonging to Dholka), *Bhavnagari* (from Bhavnagar) and *Vervada* (from Veraval). The Halai Memons are darker and smaller than the Kachchhi Memons, with whom they never intermarry. In spite of the Sindh strain in the Kachchhi and the Kathiawadi strain in the Halai, the speech of both the divisions is fundamentally the same. Contact with Urdu-speaking Musalmans has given all Memons colloquial knowledge of Urdu. Both are Sunnis of the Hanafi School. As a class, they are religious, though some of them, especially the Kachchhi, keep to their former non-Islamic social usages. The most notable of these is their refusal to allow their daughters and widows any inheritance. They are very fond of performing pilgrimage to Mecca and about 50 per cent of them have the honourable prefix of *Haji* or pilgrim. They believe in astrology and consult astrologers, a practice condemned by the Prophet. The religious head of the Kachchhi Memons lives at Mundra in Cutch. He pays his followers a yearly or two-yearly visit when a money subscription called *kheda*, from Rs. 2 to Rs. 200, is gathered from every Memon family and is paid to the *Pir*. Besides having a high priest in Sarhind in the Punjab, who visits his Gujarat followers every five years, the Halai Memons have a provincial head or *Mukhi* at Dhoraji in Kathiawad. He hears and passes orders in marriage and divorce matters and sometimes in inheritance cases.

MEVADA—See under Brahman.

MOCHI (Hindu 10,520 ; Jain 52)—Leather workers. They are found in towns and in most of the villages. According to their own account, they were Rajputs living near Champaner, who got their present name, because one of them made a pair of stockings or *moju* out of a tiger's skin. Traces of their Rajput descent appear in their tribal surnames: Chohan, Chudasma, Dabhi, Gohel, Jhala, Makvana, Maru, Parmar, Rathod, Solanki and Vaghela. Their local divisions are Ahmedabadi, Khambhati, and Surati, who eat together but do not intermarry. Besides being divided according to their settlement, they have split up into many sections, according to their callings. The chief of these craft sections are Chandlagara or makers of lac spangles, Rasania or electro-platers, Chitara or painters, Minagara or workers in enamel, Panagara or gold and silver foil makers, Pakhari or makers of ornamental horse hangings, Netragara or makers of idols' eyes, Jingara or saddlers, Dhalgar or shield-makers and Sikligara or grinders. The Jingari is the largest, the Chandlagara comes next; the other sections are hardly met with in the State. The different sub-divisions eat together, but those Mochis who have left off working on leather, and especially the Chandlagaras, Chitaras and Rasanias have, of late, separated into separate castes and raised themselves to the level of bricklayers, carpenters, masons and other artisans. The Mochi holds a low position in social scale, and though he does not touch Khals, Dheds or other depressed classes, a high caste Hindu formerly considered the touch of a Mochi a pollution. Mochis used to eat fish and flesh, but of late years, owing to many of them becoming followers of Swaminarayan, the use of flesh and liquor has grown less and in some places has ceased. For this reason, and also on account of the advance of the caste in education, the Mochi has lost his "untouchable" character in Gujarat, unlike other provinces and is freely admitted to schools, etc., and mingle without restraint with other classes. In all their ceremonies, they employ Brahman priests, who are called Mochi Gors and are despised by other Brahmans. Girls are married before ten and boys at any age after eight. Polygamy is allowed and divorce is granted. Widow remarriage is allowed. The off-putting of a Mochi has passed in a proverb "*Saini sanj ane Mochinu vahanu*" (the tailor's to-night and the shoe-maker's to-morrow morning). As a caste, Mochis are generally unambitious. The proverb "*Mel Karvat Mochina Mochi*" (Even if sawn in two, a Mochi remains a Mochi) illustrates that they are quite satisfied with their lot. The proverb has its origin in the following tradition:—It is said to have been the belief in olden times, that if a man got himself sawn in

two at Benares, he would get the position he wishes at his next birth. Accordingly a Mochi went to Benares and desired to be sawn in two. The person in charge of the sacred saw asked him what caste he would like to have at his next birth. He pondered for a while and came to the conclusion that the caste of Mochi was preferable to all others, and openly declared "*Mel Karvat Mochina Mochi*." The moral usually deduced from this is that each generally likes his own caste. Each sub-division of the caste has its headman. Social disputes are settled at a meeting of all men of the caste. There is a small section of Mochis, converted to Islam. Mochis observe every new moon day as a non-working day.

MODH BRAHMAN—See under Brahman.

MODH VANIA—See under Vania.

MOLESALAM (10,862)—Converts to Islam, made from among the Rajputs, chiefly in the reign of Mahamad Begda (A. D. 1459-1513). The name is derived from *Maula-Islam*, meaning masters in Islam. When an infidel was converted to Islam, it was the custom to call him *Maula*. Molesalams dine with other Musalmans, and though they sometimes take flesh, ordinarily they eat vegetables like Hindus. A Molesalam will marry his daughter to a Shaikh Saiyad, Mughal or Babi, but not, as a rule, to Musalmans of the lower order. The son of a chief may get a Rajput girl in marriage. But other Molesalams marry either among their own people or the poorer classes of Musalmans. They employ *kazis* and *maulvis*, but also maintain their old Brahman family priests and support Bhats and Charans, whom the rich engage to while away their leisure by reciting poetry and the poor to serve as priests at marriages. Indoors, a Molesalam wears a waistcloth; out of doors a turban, coat and trousers, with a cloth wound round the waist or thrown over the shoulders like a Rajput. The women wear a *salla*, a bodice and a petticoat.

MUGHAL (1,008)—They are of two distinct classes, the Persian and the Indian Mughals. Persian Mughals are the descendants of Persian political refugees and merchants. They form a distinct community and generally marry among themselves. They are chiefly found in cities. The second or Indian Mughals are the descendants of the Mughal conquerors of India and are found in all parts of the State. Like the Persian Mughals, the men place the title of *Mirza* (born of a great man) before their names and add *Beg* (lord) after them, as Mirza Mahomed Beg. The women add *Khanam* to their names, as Hussaini Khanam. In appearance they do not differ from ordinary Musalmans. In religion, they are Sunnis. They are occupied as cultivators, constables and sepoys.

MUMNA (13,829)—From *momin* (believers) they are the descendants of Hindus of many castes converted to the Shiah form of the faith by different members of the Ismailiya Saiyads, of whom Imamshah of Pirana was the most distinguished. Most of them on Palanpur side shave the head and wear the beard, but those in the vicinity of Ahmedabad keep the *choti*, shave the face and look like Kanbis. They put on their old Kanbi turbans. Their females dress like Hindus. Almost all eat flesh, but those living in the Kahnām tract of the Baroda district are strict vegetarians. Instead of the *Koran*, they read Imamshah's book of religious rules and also worship Hindu gods. Circumcision is practised and the dead are buried. Both males and females have Hindu names. In addition to Musalman marriage, the Kahnām Mumnas call in a Brahman and go through the Hindu ceremony. Like Hindus, women wail and beat the breast at deaths. Palanpur and Baroda Mumnas do not intermarry. Each settlement has its union, headman and code of rules, which are generally well-kept. The Kahnām Mumnas are far more Hinduised than those found in North Gujarat.

There is a movement in the caste for reform, and a tendency on the part of some towards Hinduism. This has resulted in fission into two factors; the feelings are so intense that married girls are not sent to their husbands if belonging to the opposite faction. In this State they are found mostly in Sidhpur and Patan mahals of the Mehsana district. They are agriculturists but some of them are hackvictoria drivers in Bombay. The agriculturists have begun to call themselves Mumna Patidars.

NADIA—See under Depressed Classes.

NAGAR BRAHMAN—See under Brahman.

NAGAR VANIA—See under Vania.

NAYAKDA—See under Primitive and Forest Tribes.

OD (Hindu 2,018)—Chiefly found in Baroda and Mehsana *prants*, and to a smaller extent in Navsari. They are a caste of earth diggers,—by tradition Sidhraj Jayasing is credited with bringing them to dig the Sahasralinga tank at Patan. The bulk of the tribe are residents of the Karnatak. From the name, they appear to be connected with Odra *desh* or Orissa, but they claim a Kshatriya origin and state that they are descendants of Bhagirath, son of Sagar. According to the *Ras mala*, Sidhraj brought these Ods from Malwa and fell in love with a beautiful woman of their number, named Jasma, who declined his favours and when pursued by him, committed suicide. She cursed the king, while dying, and declared that the tank would not hold water. She further announced that in future no *Odani* (Od woman) should be beautiful. Whatever the reason, it is true that the Od women are not comely. The skill of the caste in earth work and masonry is well known all over India; but originally of the same ethnic stock, the tribe must have recruited itself from other castes and even now accepts applications for admission (in Karnatak) from Lingayats, Kurubs and such like. The applicant is received into the caste with ceremony, his head and moustaches are shaved and the tip of his tongue is branded with a burning *nim* stick and he is made to drink of holy water. If the applicant is a female, she is spared the shaving but is stripped of her bodice and glass bangles. There are four territorial divisions: Maratha and Kanarese, Gujarati, Sindhi and Pardeshi, each differing from the rest in details of ceremonial. Gujarati Ods state they are Deccani immigrants and some are followers of the Ramdasi sect. Gujarat Ods have two endogamous sections: proper and *navabhai*, which dine together but do not intermarry. Exogamous sections exist like Bhatti, Chuhan, Solanki, allying each to the Rajput clan of the same name. Marriage of widows is permitted: so also the levirate or *dijarvatu* (which is even compulsory in Kathiawad). Divorce is allowed. The ceremony consists in calling the wife publicly mother or sister, which frees the husband. They are Hindus, the bulk worshipping Shiva, but many are Swaminarayanis or Ramdasis. Their religious teacher is Baba Gorakhnath. Their priests are village Brahmans, who do not however eat with them. The Ods bury their dead with the head pointing to the North. They eat flesh of goats, sheep, deer, and fish and drink liquor. Their dialect is a *patois* which is discussed in the Chapter on Language.

OSWAL—See under Vania.

PARSI (7,127)—The name means the people of Pars or Fars, the south-west province of Persia, the capital of which is now Shiraz. The present Parsis of India are the descendants of those who were forced out of their country more than 1,280 years ago by the Arabs, who conquered and well-nigh annihilated them. They landed first at Diu, then at Cambay and subsequently near Sanjan, a little to the north of modern Daman, where they kindled the sacred fire called *Iranshah* which now burns at Udwarda, in thanksgiving of their safe arrival; but the traditional belief is that they brought it unextinguished from Persia. The Hindu king of Sanjan allowed them free liberty to follow their own religion, while they had import certain ceremonies and customs of the Hindus. Very little is known of them for over 800 years after this settlement. But they still follow their own religion in laborious rituals, which have been handed down to the present day. Among the Parsis, there is a sort of hierarchy, though not on the rigid method of the Hindus, but there are no castes. The Mobeds are to them what the Brahmans are to the Hindus. The stronghold of Mobeds is the Baroda town of Navsari, because the Parsis migrated to it from Sanjan and Bahrot and have thrived and flourished there ever since. No religious ceremony can be performed, no marriage tie can be knit, no prayers after the dead be recited and no funeral services can be held except by the Mobeds. When a child is seven years old, the ceremony of investing it with the *kasti* or sacred thread is performed. The *Kasti* is made by the intertwinings of 72 strong threads out of wool and woven in a special way on a sort of loom. It is sufficiently long to go thrice round the waist and to allow of its being knotted up in certain ways, which every child is taught to do. Mobed (priests) and Behdin (laymen) could not intermarry 50 years before. But the restriction is not much observed.

Parsis are divided into two divisions, called Shehenshahi and Kadami. This division arose in A.D. 1745 from a dispute regarding the reckoning of the year. Shehenshahis are those who kept to the Indian reckoning and the Kadamis, those who adopted the Persian practice. Formerly intermarriage was shunned but it is now common. Conversions from one division into another are rare.

Parsis speak the Gujarati language and put on a head-dress peculiar to them. The priests dress wholly in white. Parsi women wind a white piece of muslin round the head.

Fire is the chief object of Parsi veneration and the Fire temple is the public place of Parsi worship. Besides the leading rites and ceremonies called *jashan*, *gambhar* and *muktad*, Parsis have many minor practices and observances to which more or less a religious sanction is attached. A Parsi must always keep his head and feet covered, he must never be without the sacred shirt and cord, must never smoke and must wash his hands, if he puts his fingers in his mouth. After shaving his face, a Parsi bathes before touching anything.

Parsis followed many of the practices and beliefs of Hindus and Musalmans. They made offerings to the Hindu *Holi*, offered vows and sacrificed goats and fowls to *Shitala Devi*, and some offered oil to *Hanuman*. They offered vows and made presents to *Tabuts* and at the tombs of Musalman *Pirs*. Their women had great faith in amulets which they bought from sorcerers and wore round their neck or in their hair to win the favour of their husbands. Most of these superstitious practices have now died out of the community as a whole on account of the spread of education.

PATANWADIA—See under Koli.

PATHAN (15,884)—One of the four classes into which the regular Musalmans are divided. They are of Afghan origin. The men add *Khan* to their names and women *Khatun* or *Khatu*. The name probably means people of the Uplands. Burton derives it from the Arabic to mean "victorious." Afghan traditions trace the name to Batan (rudder) said to have been given by the Prophet of Islam to their great ancestor, Abdur Rashid. It is now however generally agreed that the name Pathan is the Indian form of the name "Pushtun" (plural Pushtanah), derived from an old Iranian word *Parshiti* ("hill"). The name first appears in Indian Literature through Varaha Mihira (A. D. 550) who mentions the race as Avgana (*vide Brihat Samhita*, Chapter XIV).

Pathans came originally to Gujarat as soldiers and merchants and are of two classes—old settlers and *vilaitis* (newcomers). The descendants of the first have by intermixture lost their original character. The new settlers are tall, with a ruddy olive complexion. They have a bad name locally for greed and are relentless as creditors. A few are merchants and horse dealers. The bulk are soldiers. All are *sunnis* by religion. The unlettered among them carry their fervour to fanaticism. But the State Pathans have taken kindly to education, sending their children to schools and universities. Many have taken to service, a few have risen in the service of Indian States.

PINJARA (4,764)—Cotton-cleaners. A term applied to Hindu converts who follow the profession of cotton cleaning. A pinjara is a cotton scutcher, who striking a bow with a heavy wooden plectrum, uses the vibrations of the bow-string to separate the fibres of the cotton, to arrange them side by side and to part them from dirt and other impurities. Some of them have left their traditional occupation after the introduction of cotton mills and are now shop-keepers, bricklayers, pedlars, oil-pressers, etc. They are ashamed of their old name of Pinjara and call themselves Vohra or Dhunak Pathans. In villages they put on Kanbi-like turbans and in towns *fentas*. Their women dress like Hindu females.

POMLA (25)—A curious caste found in the City of Baroda. Its members spoke a dialect which resembled the Telugu. Both males and females have now adopted Gujarati names, such as Haribhai, Narshi, Jamni, Kashi, etc. They live upon making and selling toys, brooms and baskets of palm leaves and seem to have migrated into Gujarat from the Madras Presidency about two hundred years ago. They had the custom prevalent among other primitive peoples in different parts of the world, requiring that the husband should be doctored while the wife gives birth to a child. This has given rise to the proverb :—" *Pomli jane are Pomlo khai*," which is applied when one enjoys the fruit while another undergoes the labour for earning it. Immediately after delivery the female was made to drink the juice of the bark of the nimb tree, and a quantity of oil. She was then taken out of the house and was not allowed to enter it for five days during which time the male lay confined taking the usual medicines. The Pomlas used to say that they did not lie confined merely to observe a custom ; that they actually felt indisposed during the period and that the indisposition was but a mark of favour of the Mata or goddess and that immoral ones among them being outside the Mata's protection were not allowed by the Mata to lie confined. They have small settlements in Nadiad, Ahmedabad, Broach and Surat also. At every twelve years, a gathering of this caste takes place at Dumral Bhagol in Nadiad in honour of the Mata, when those who are specially favoured of the goddess perform various miraculous feats such as walking on fire, etc. In the 1921 Census, they were not returned at all. In 1931, only eight families were recorded.

Remarriage is not common among the Pomlas, the belief being that their tutelary goddess *Lakshmi Mata* does not favour those who perform it.

Special enquiries were made on this occasion as to whether their total number was recorded. It was found that the enumeration was complete. The community has one literate, and only one old man who could remember anything about the traditions of their origin. The caste is now completely Gujarati speaking, its Madras origin being entirely forgotten. The curious custom at birth recorded above does not now exist and the so-called analogy with *couvade* no longer holds good.

PORWAD—See under Vania.

PRABHU (Hindu 3,490; Arya 9)—A caste of the Kshatriya class, originally immigrants from the Deccan. Prabhus are found in all the divisions of the State. Their main occupation is government service. They are divided into Chandraseniya Kayastha and Pathare who neither interdine nor intermarry. There are no sub-divisions amongst them. At one time, *Davné* Prabhus were considered a sub-division of Chandraseni Kayastha Prabhus, who took food with them, but did not allow marriage relations. But now that *Davné* Prabhus were found to be true Chandraseni Kayastha Prabhus and were so called simply on account of their residence in the District of Daman and that 'Damni' was changed into 'Davne,' the two sections are now treated as one without any distinction, and intermarriage is now allowed.

PRIMITIVE AND FOREST TRIBES (Hindu 267,161; Tribal 44,890; Arya 130; Christian 538)—Under this term are included all tribes of whose coming to Gujarat no traditions remain, and who at one time holding the plain country were ousted from their towns and strongholds by the Kolis, cultivating Brahmans, Kanbis, Rajputs and other waves of northern settlers, and except a few, who were kept near villages as servants or bondsmen, were driven by their conquerors mainly into the country of hill and forest that borders Gujarat on the east. With many minor clans and family divisions this section of the people is divided mainly into thirteen sections of which the Bhil, the Chodhra, the Dhodia (or Dhulia), the Dubla, the Gamit and the Nayakda are the chief. From the Bhil and Dubla sections there have been other offshoots, who have cut away from their parental stock and formed themselves into distinct tribes. The Vasawa, Mavchi, and Tadvi are thus tribes caused by fission from the great Bhil tribe. Similarly, Talavias have cut away from their Dubla congeners. In Central Gujarat, near Mahi Kantha and where the Panch Mahals stretch into the uplands of Malwa, Bhils and Nayakdas muster strong; and among the spurs of the Rajpipla hills in the forest-clad uplands of

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|----|----------|
| 1 | Bavcha |
| 2 | Bhil |
| 3 | Chodhra |
| 4 | Dhanka |
| 5 | Dhodia |
| 6 | Dubla |
| 7 | Gamit |
| 8 | Kathodia |
| 9 | Kolgha |
| 10 | Kokna |
| 11 | Kotwalia |
| 12 | Mavchi |
| 13 | Nayakda |
| 14 | Tadvi |
| 15 | Talavia |
| 16 | Valvi |
| 17 | Varli |
| 18 | Vasawa |

Vajpur, Umarpada and South Songadh, there is a concentration of Bhils, Chodhras, Dhodias, Dublas, Nayakdas and Varlis. The margin gives a complete list of these forest and hill tribes met within this State; in all they number 18. Of the origin of these tribes, though nothing certain is known, their names, their languages and their customs show that they reached Gujarat, some from the north, others from the east, and a third section from the south. With most of them, two influences have for ages been at work blotting out what was individual in their character and manners. The evergrowing pressure of stronger tribes, driving them back to wilder and more unhealthy lands, kept lowering them to a uniform level of poverty and ignorance and the intermixture of higher class Hindus especially of Rajputs, on the other hand served as a medium of contact with higher and more civilised communities and the introduction of better blood and more spiritual rites and observances. Though showing considerable varieties of feature, colour, and size, the aborigines are, on the whole, smaller and darker than the rest of the Hindu population.

Housing, Furniture and Social Condition—It would be of interest here to give a brief description of a Raniparaj dwelling. It is generally a hut sometimes with mud walls but oftener of wattled bamboos or sticks smeared with cowdung or mud. The roof is peaked or conical and has deep overhanging eaves; it is either covered with large flat tiles or thatched with grass or teak and palm leaves. It is generally situated by itself in a large cleanly kept enclosure. Of the household goods the stock is small. In the hut, besides the sleeping mat or a rough bedstead, the stone handmill, a pestle and mortar and a roll of blanket or torn coverlet, there is nothing but a few pots and cups, most of them of clay. Some own brass and copper dishes but a few have more than a scanty stock of cattle, some goats and fowls and a few field tools. On the next page are given two photographs showing the outside and the interior of a Dhodia house in Navsari taluka which very well illustrate the above description. Their store of goods is of the scantiest particularly in the wilder regions where modern influences have so far not penetrated. Of farm stock a few have ploughing cattle and a cow or she-buffalo, but most have only goats, cocks and hens. Their field tools are a hoe, a pick and an axe, and in the case of those who have cattle, a plough. Except in South Gujarat where the men of good families wear short cotton trousers, cotton jackets and a cap or turban, their dress is of the cheapest and scantiest. The men wear two coarse pieces of white cloth wound the one round the head, the other round the middle. The women wear the shortest robes, tucked almost to the top of the leg and worn with or without bodice. Of ornaments the men wear in their ears and on their fingers a few rings of tin or silver. The women, besides the strings of shells and beads with which many of them used to be laden, wear broad plain bands of brass, bone or wood, two or three at a time and sometimes rising in tiers on their legs from the ankle to near the knee, and on the arm from the wrist to the elbow. Under recent modern influences, the



Exterior of a Dhodia's House



Interior of a Dhodia's House

practice of covering their arms and hands with such decorations is being practically given up, particularly in the settled villages of Vyara and Mahuva talukas, where under the influence of teachers and state schools, the more decorous and comely habiliments of their Gujarat neighbours have come to be adopted.

Food—The bulk of the aboriginal classes eat the coarsest grain boiled in water. Want of thrift and love of drink compel most of them, during several months in a year, to live on borrowed grain, on wild fruits, berries and roots, on game and on liquor. Though all eat animal food, most of them refuse the flesh of the cow or of any animal found dead. Only a few eat the ass, the monkey or the rat. All have passionate craving for strong drink, and for their draught of toddy palm or beer or their glass of 'mahuda' (*bassia latifolia*) spirit they will recklessly barter away their whole stock of grain.

Occupation—Except a few police

messengers and village watchmen, the aboriginal tribes are peasants, wood-cutters, basket-makers and labourers. In the Rasti talukas of Navsari or in Baroda, many among the Dublas and Talavias have shown themselves to be hardworking and successful farmers and in parts also of Central Navsari, Chodhras, Dublas and Dhulias have been able, under the influence of Anavala Brahmans and Kanbis, to grow rich crops of rice and garden produce; but for the most part their tillage is slovenly—yielding only a scanty harvest of the coarsest grains. Along the eastern frontier, especially in the southern forests of the Rani mahals they are still unsettled, moving from place to place, burning brushwood and tree-lopings and sowing seed in the ashes.

Religion—Most of these forest tribes which have forsaken aboriginal belief can be considered as Hindus. The *Bombay Gazetteer* of 1901, Volume IX-Part I, remarks that there are no Musalman Bhils in Gujarat. Mr. Enthoven regards Tadvīs as half Musalmans being the descendants of Bhil women and Musalman men and tracing their origin at about the time of Aurangzeb but he presumably refers to the section of that name of Khandeshi Bhils. The Tadvīs of this State who are found only in Baroda *prant* are all Hindus. Most extensive enquiries were made in all the villages, where they reside; and there is not the least trace of Muslim influence. They do not keep beards nor do they circumcise; they generally bury their dead, but so do other Hindu tribes, for burning is a matter of expense which only the well-to-do among them can afford. As the Rev. Enoch Hedberg, D. Litt, points out (*vide* Appendix N, page 23, in the Bombay Census Report of 1921), "all Bhils even the most wild and backward, with the exception of a small number which has turned Muhammedans or Christians, declare themselves to be Hindus. And as such they are accepted by Native Christians, Muslims and Hindus alike. In a tract

where there are Christian or Muhammedan converts from among the Bhils, those who stick to their ancestral religion are everywhere and by everyone called Hindu-Bhils. This is the case, to give only one instance, even among the very wild Bhils of the Akrani. And to tell them that they are not Hindus would be an insult.

"As to their conformity to the main points in Hinduism it is sufficient to mention:—

- (1) that they observe caste,
- (2) celebrate the Hindu festivals, and
- (3) worship Hindu gods and goddesses.

"It is true that their caste feelings on the whole are not so strong as among the Hindus in general. But caste is there; and its spirit manifests itself strongly enough at certain occasions. The Mahars, Chamars, Mangs, Holars and other low caste Hindus are looked down upon by all respectable Bhils to whatever tribe or class they may belong. They would never take food from their hands or accept them by marriage into their caste. Even to touch them is defiling.

"The religious festivals or holy days kept by the Bhils are the same as those kept by the Hindus—*holi*, *dasera*, *divali*. Even the petty Hindu festivals are more and more being observed by them. The Hindu Pantheon of gods, goddesses, *avatars*, apotheosis, etc., has been taken over by the Bhils. They bring them their sacrifices and worship them. Admittedly they have their tribal or local deities too. But so have other Hindus all over India. A good deal of Animism and even Animatism is still practised among them. This is however more or less the case not only in the lower strata of Hinduism, but to a great extent among Buddhists, Jews and even Muslims, not to speak of such Christians as uneducated Copts and Russian farmers. There may still in most cases be noted a difference between a common Bhil and an ordinary Hindu. But the difference is more of a racial or ethnological nature than a religious one, and is rapidly disappearing.

"To conclude, the Bhils should in this respect be accorded the same rights as are given to other Indians and professors of other religions the whole world over—to be taken at their word in religious matters. They are as good Hindus as many other low class people of this country. When they profess themselves to be Hindus they ought to be classified as such."

Apart from the above testimony, there is ample evidence, as shown in the Chapter on Religion, that since the Mata movement of 1921, there is a genuine Hinduising wave amongst these tribes. Many have become regular Kabirpanthis or Ramanandi Vaishnavas. Some have joined the Kaivalya Panth. (Group V of Hindu Sects, *q.v.* in Chapter on Religion.)

Social Organisation—These tribes appoint a headman from amongst them but there is no rule as to who should be appointed. Any respectable man who is trustworthy and well conditioned is appointed as a *patel*, but if the parents do not belong to the same clan, this fact works as a disability for appointment.

The constitution of the *panch* differs in the various tribes. These *panch* committees give their decisions in matters of marriage and social disputes, which are binding on the whole community. Amongst the Bhils, however, the *nayak* (leader) and the *karbhari* together pronounce in caste matters. With the Gamits, again, the *patel*, *karbhari* and *pradhan* (minister?) form a committee to decide social matters. The *pradhan's* duty is to bring all people together.

With the Dublas, the leaders of two or three villages form the *panch*. People are ex-communicated but on payment of fine, they are taken back to the castes.

With the Chodhras, those of Naldhara (in the Mahuva taluka) are considered to be chief and all important matters are decided with their consent. Petty questions are disposed by the village leaders. Dhodias and Nayakas have looser territorial consciousness: leaders of their respective groups in each village work as *panchas*. Amongst the Vasawas, those with *nayak* as surname used to be chosen as *patils*, but now the distinction is done away with. Any adult man, taking a forward part in the community is appointed *patel*, and he is assisted by a *karbhari* and a *pradhan*. With Valvis, Kotwalias and Kathodias, the caste *agewans* act as *panchas*. In Baroda district particularly in Vaghodia taluka caste organisation is more in evidence—the Bhils there have not only *panchas* but a *sarpanch* and have regularly drawn up caste rules. In Sankheda and Tilakwada, leaders of each caste arbitrate for its members.

From the above it will be plain that there is only a small residuum of belief which can be called Animistic or rather Animetistic as distinguished from Hinduism. Animism of the unalloyed type which worships inanimate objects as spirits or gods hardly exists amongst the

aborigines of to-day. The greater deities worshipped by these tribes are the *Gohamayamadi*, the *Devalimadi*, the *Vira Mayamadi*, the *Kavadia Dev* and the *Kalo Kakad*. The first three are female deities and their sex seems to indicate that worship of purely inanimate nature has given place to anthropomorphism. In addition, the preponderance in aboriginal worship of the female principle as shown in these and the other *Matas* like the *Khodiar Mata* of the Bhil, the *Mori Mata* and the *Kalka Mata* of the Dublas and the *Bhavani* of the Dhodia and the *Nayakda*, are traces of a primitive, perhaps matriarchal social organisation which existed long before Vedic Aryanism. But in spite of these excrescences, the characteristic attitude of tribal belief is different from Hinduism. The worship of the *magar* (alligator) and the *vagh* (tiger) is reminiscent of this characteristic attitude. There is indeed some dim notion of the supreme spirit, but aboriginal worship is wholly indifferent towards it. It is interesting to see how the sun, the moon and the great stellar constellations are considered differently from Hindu mythology amongst these tribes. Thus the sun and the moon are considered male gods generally amongst these tribes, but in Songadh, the Dhodias consider the sun as male and the moon as female. The Orion's belt is known as the *haran* (deer), the Heides as *govalia* (cowherd); the Great Bear in Mahuva, a more sophisticated area, is picturesquely described as *Bhagwan no khatlo* (God's bedstead). The Milky Way is variously represented: in Mahuva it is the "Way to Heaven" (*swarga no rasto*); in Songadh it becomes the "Ghost's Pathway" (*bhut wat*); in Tilakwada, most picturesque of all it is the way frequented by mothers-in-law and the daughters-in-law (*sasu vahu ni wat*). The dark spot on the face of the moon is said to be the banyan tree on which the witches are hanged; in Tilakwada amongst the Tadvis, the spot is called the mark or brand of the *bhabhi* (brother's wife). The rainbow has a curious explanation in Tilakwada, where it is said that when snakes are breathing it comes into existence; in Songadh and Vyara, the rainbow is believed to be Ram's or Indra's bow. If it appears in the East, rain is prophesied, but if on the West, the reverse, i.e., a drought is bound to happen. Thunder amongst the tribes is caused by the sons of the Rain god playing at balls. No definite beliefs in the soul's resting place after death seem to be entertained by any of the tribes. In Songadh and Mahuva the belief is that the soul goes out somewhere, to the firmament or at any rate out of the world. In Vyara a witch is supposed to swallow all souls after death.

Bavcha (1,186)—An early tribe mostly found in the Songhad taluka of the Navsari district. They accompanied the Gaekwads as grooms, and have settled in Baroda, Patan and other places. Their women still dress like the women of the early tribes. They are occupied as grooms, grass-sellers, bricklayers and day-labourers. All Bavchas are Hindus.

A special appendix is devoted to their language Bavchi and its affinities to Mavchi (*Vide* Appendix VIII).

Bhil (Hindu 53,235; Tribal 1,307)—An aboriginal tribe, generally very dark in colour and very wild in appearance. The men are muscular, well-built and of a medium height. The women are well-made, but have coarse irregular features. Among the men, the hair of the head is, as a rule, worn long. The women fasten their hair in braids or plaits brought low down near each temple. Formerly they used to live in huts in their own fields. But now-a-days they live in groups of houses on the village side.

The Bhil's usual dress is a cloth wound round the loin and long strip twisted round the head. The women commonly dress in a large *ghagra* (petticoat), a bodice and a *sari* wrapped round the body and brought over the head. They tattoo their faces and pierce their ears and noses for wearing ornaments. Bracelets of tin or brass cover the arm from the wrist to the elbow. Glass and lac bangles are also worn.

Bhils eat all animals except the ass, horse, camel, rat, snake and monkey. Formerly they were always changing their houses and lands, but most of them have settled in villages and till regularly though roughly, the same fields. Fifty years ago there were almost daily complaints of their daring robberies. And though they are even now considered a criminal class, most of them are gradually becoming quiet and law-abiding cultivators. Though not considered one of the classes whose touch defiles, Bhils hold a very low place in the social scale and no high caste Hindu will take water from their hands.

They worship *Mata* or *Devi*, reverence the moon and believe in witches. Their chief objects of worship are spirits and ghosts. To these they offer clay horses, jars and beehive-shaped vessels.

As a rule, marriage seldom takes place before a boy is twenty and a girl fifteen. A man may marry a second or third wife in the life-time of the first. A woman marries again not only when her husband dies, but even when she gets tired of him. Her new husband pays her old husband his marriage expenses. The children, if any, stay with their father.

The Bhils of Central Gujarat claim descent from sage Valmiki, author of the epic of Ramayan, and insist on being classed as Hindus. There is a great awakening among them now, chiefly by the efforts of Mr. Amritlal Thakkar, who has made the uplift of the tribe his life's sole aim. There are schools, boarding houses and temples of Ram specially built for the community.

Chodhra (Hindus 29,736 ; Tribal 9,050)—A tribe found chiefly in the Rani mahals of the Navsari district. It has several divisions of which only two,—Chokapuri and Valvada were recorded in 1911. Chokapuris were found to be more than double the strength of the latter. Of these, the highest in social rank are the Chokapuris, who are also called Pavagadia. They claim partly to be of Rajput descent and to have lived as carriers in the Rajput kingdoms of North Gujarat and fled south on their overthrow by the Musalmans. This appears very probable, as the Anjana Kanbis of Kheralu are very similar to them in their appearance, manners and customs and may be the descendants of those of them who remained in North Gujarat. The men are stronger and fairer and the women are better looking than those of the other early tribes. The men dress in a turban, coat and waist cloth. The women keep their hair very tidy and wear a coloured cloth over the head, a bodice and a cloth round the waist. The men's ornaments are silver, brass and tin ear and finger rings, and if well-to-do, bands of silver at the elbow and wrist. Women wear round the neck coils of white glass beads and, if well-to-do, a silver necklace, brass brooch on the arm and tin brass anklets. Except the cow, buffalo, horse, donkey, jackal, rat, snake, dog and cat, they eat most animals. Their chief worship is paid to the spirits of their forefathers. They set apart near each village a plot of ground as the *devasthan* or spirit-yard. They honour Rama, but the objects of their special worship are *palio* and *simadio devs* (boundary-gods and village guardians). They pay no special respect to Brahmans and never make use of their services. On the sixth day after a birth, they worship the goddess *chhatthi*, feasting their friends on liquor and *val*. A boy is considered fit to marry after 18, and a girl after 16. A man anxious to marry his son, goes to the girl's house, and if the father is willing, entertains her parents and relations with liquor. One or two days before marriage, the bride and bridegroom are rubbed with yellow powder. On the marriage day, the bridegroom goes to the girl's house, and after the boy's father has paid the girl's father Rs. 32½ as dowry, and presented the bride with a *salla*, a bodice and a silver necklace worth about Rs. 13, the bride and the bridegroom are seated in the marriage-booth. Their skirts are tied by the women of the house and together they walk four times round the pole of the booth. Dancing, in which the bride and the bridegroom join, and a feast of rice and pulse complete the ceremony. When the bride leaves her father's house, the father, according to his means, gives a few buffaloes or a little money as present. The practice of winning a bride by taking service with her father, *khandhadio* is common among the Chodhras. Their dead are burned. Before lighting the funeral pyre, Chodhras place cooked rice and pulse in the corpse's mouth and consider it lucky, if a crow comes and takes it away. On the fourth day, after a death, a spirit medium (*bahadar havria*), accompanied by the friends of the deceased, takes a stone and groaning and shaking, as if possessed, sets it in the spirit yard. He kills a fowl, letting some of the blood fall on the stone. Next, he adds butter, grain and liquor and making the stone red, consecrates it to the spirit of the deceased. Near the stone, the friends place a small clay cow or she-buffalo for a woman, or a horse for a man. Three times a year on *akhatrij*, *divaso*, and *divali*, Chodhras in a body visit these shrines. They offer fowls, goats and sheep, drink freely and men and women dance together and close the feast. The Chodhras have no headman, and there is an entire want of caste organization in them.

The so-called Tribal section is only a misnomer, as those that returned their castes in lieu of religion in the column for religion were compiled as Tribal. There is no doubt that the Chodhras are the most Hinduised of these early tribes.

Dhanka (3,457)—Literally one who taps the palm tree. It is a general term loosely applied to all members of the forest tribe, and presumably has the same significance as Raniparaj.

Dhodia (Hindu 25,414 ; Tribal 718)—An early tribe found in the Navsari district. Man's ornaments are earrings and armlets of brass, tin or silver. The females put on solid rings of brass over the whole of the leg upto the knee and also on the arm from the wrist to the elbow. These ornaments weigh from 18 to 20 lbs. Dhodias hold a higher social position than the other early tribes, all of which except Chodhras eat food cooked by them. But a Dhodia dines with no one who is not of his own tribe. Among the Dhodias, there are many *kuls*, i.e., families whose status depends upon the villages inhabited by them and the occupations followed by them. They do not allow marriage within the same *kula*. Dhodias of higher families contract early marriages. A bride is purchased by the payment of about Rs. 25 to her father. Men with no means of paying the dowry, offer to serve the girl's father for a term of one to five years. During this time, the suitor receives food and clothing, but his earnings go to his master. If he proves idle or gluttonous, he may at any time be sent off. Even when the three years are over, the girl

may refuse him, but then he can claim payment for his services. When all goes well, the regular marriage ceremony is performed. But it is not necessary to allow the pair to live as husband and wife. This is called *khandhadia* or bride-purchase system. In certain rare cases, Dhodias purchase a girl for their boy and allow the pair to live as husband and wife without making them go through any ceremony.

They do not use Brahmans as priests. Divorce and remarriage are allowed. A wife has to pay Rs. 5 only to be released from her husband. Corpses are taken in a procession with music playing to the burning ground. On the bier are placed a scythe, a *tansala* (brass bowl) and a *lota* (water jug). A *khatrun* (memorial stone) is erected in honour of the deceased. When the husband dies, the wife throws into the pyre her ornaments of solid rings of brass which she is wearing. When the wife dies, the husband throws one of his chief ornaments in the same way. In most Dhodia villages, one family has the hereditary right of headmanship. The Naik, as he is called, is treated with respect, but most of the social disputes are decided by a mass meeting of the tribe at one of the big funeral feasts. Breaches of caste rules are punished by fine, or if the offence is heinous by turning the culprit out of caste.

Dubla (Hindu 12,811 ; Tribal 83)—Derived from Sanskrit *durbala* (weak); an early tribe found in the Navsari district. They have come into closer contact with the civilised castes and do not much differ in appearance from Kolis. They have eight sub-divisions, Bava, Damani, Narda, Palia or Khodia, Sarvia, Talavia, Vasava and Voharia. The members of these clans seldom eat together and never intermarry. They claim a strain of Rajput blood and call themselves Rathod. Females wear the *kanchali*, and do not move about with open breasts like Gamits and other early tribes. They are peasants and labourers. Most of them are *halis* or the hereditary servants of Bhathelas, Kanbis and other better class of cultivators. They are entirely dependent on their masters for food and clothing. They treat Brahmans with respect and make use of their services on marriage and other occasions. Boys are married between 10 and 20 and girls between 10 and 18. Widow marriage is allowed, but polygamy is not allowed. The dead are burned. Caste disputes are settled by a few hereditary leaders or *patels*.

Gamatda—Same as Gamit.

Gamit (Hindu 33,210; Tribal 26,003)—Also called Gamtâ or Gamatdâ; an early tribe found in the Navsari district. They eat sheep, goat, rabbit and fowl, but will not touch the flesh of



Gamit

a cow nor of any animal found dead. They are peasants and wood-cutters. They worship *Vaghdev*, *Samladev* and *Devli Mata*. They never make use of a Brahman's services nor pay him any respect. Men of their own caste act as their priests. Among Gamtas marriage takes place when a boy can climb a palm tree, i.e., generally after he is 12 years of age. *Khandhadia* system prevails. Polygamy and divorce are allowed. Remarriage is also allowed but only between the widowed of both the sexes. A widowed person of either sex is not allowed to take as a partner the unmarried of the opposite sex. The dead are burned. Caste disputes are referred to a few hereditary leaders or *patels*.

Gamta—Same as Gamit.

Kathodia (Hindu 333; Tribal 218)—An early tribe found in the Navsari district. It has four sub-divisions; Helam, Jadu, Pawar and Sindhi. The Kathodias found in the State belong to the last class and are the most degraded. They are black in colour and go about almost naked. They are labourers and catechu makers. They worship the *Bhil Dev*. They pay no respect to Brahmans and never make use of their services. Boys and girls generally marry after they are fifteen years old. *Khandhadiya* system prevails. Polygamy and widow marriage are allowed and practised.

The dead are burned. A funeral feast is given by those who can afford to do so. They raise no tomb-stone and no other ceremonies in honour of the dead. They have a headman and a caste committee.

Kokna (Hindu 6,449; Tribal 1,503)—An early tribe found in the Navsari district. They speak a mixed dialect of Marathi and Gujarati, and from their name seem to have passed into Gujarat from Konkan. They are labourers and cultivators. Some who from want of bullocks themselves drag the plough are called *hathodia* or hand-ploughmen. They worship *Brahm* and *Vaghdev*. *Brahm*, a stone placed near a *samdi* tree, is supplied with a clay horse, a lampstand and a flag. *Vagh*, a wooden pillar, with a tiger cut on it, is generally covered with *sindur*. Koknas show no respect to Brahmans and never make use of their services as priests. The age of marriage is 16 to 20 for boys and 15 to 18 for girls.

The practice of *khandhadio* prevails. Polygamy is allowed and practised and widows marry again. A woman may leave her husband and go to live with another man on his agreeing to pay her husband the amount he spent as her dowry. The dead are cremated. Koknas have a well-organised caste system. When a man suspects his wife of adultery, he calls a meeting of the tribe. The *panchayat* hears the charge, and, if proved, fines the adulterer. Part of the fine is spent in liquor and the rest is made over to the complainant as compensation.

Kolgha (Hindu 798; Tribal 193)—They are one of the lowest of the early tribes, found in the Navsari district. Though reckoned impure, they neither eat with nor touch a Bhangi. The men's dress is a cap or a scanty turban, a waist cloth and a loin cloth. The women wear two clothes, one thrown over the head and shoulders, the other wound round the waist. Of ornaments they have earrings, two or three solid brass bands on each arm and one or two coils of glass beads round the neck. Anklets are not worn. As a class they are very poor and at times live on roots or fast for two or three days together. They pay no respect to Brahmans and have no priests of their own class. On the sixth day after a birth, the goddess *chhathi* is worshipped. On marriage occasions the boy's father gives girl's father Rs. 3 as dowry. Polygamy and widow marriage are allowed and practised. They have no headman. Social disputes are settled by the whole caste.

Kotwalia (Hindu 1,156; Tribal 1,051)—An early tribe found in the Navsari district. They are dark in colour. The males put on a small *dhotar* and a turban only; the females cover their lower limbs with a small piece of cloth, and their head with another like piece. They put on a bodice only when they have to go to a large town. They put on bracelets of brass, anklets of tin, and necklaces of beads. Marriages among them take place by mutual selection and choice. When a boy and a girl have agreed to join in matrimony after their meetings on the roads or in the fields, the parents of the boy visit those of the girl and contract to pay from Rs. 4½ to 10 as her dowry, and fix a day for the marriage. On the day so fixed, the girl and her parents go to the boy's house, and there dance, eat and drink. At this time ornaments are given to the girl by her future husband, excepting anklets, which are given to her by her father. The next morning the girl and the boy are severally placed on the shoulders of two men who dance about, and then their hands are joined. This finishes their marriage. After this, all join in drinking liquor and toddy, and the girl's parents then depart to their house. Marriages with the children of maternal uncle or a paternal aunt are legal with these people, but it is otherwise with the children of a mother's sister and of a brother.

In spite of this marriage by choice, if the husband does not like his wife, he sends her away from his house; and if the contrary is the case, the wife returns the dowry paid to her and leaves him. This is the easy way of divorce with them. Remarriage is also prevalent among them.

The *khandhadio* system obtains among them. The Kotwalias either burn or bury their dead; but before doing so they place a small quantity of *kodri* and a pice in the mouth of the corpse. After disposing of the dead body, they drink and then separate; at the end of a year they place a *khattrun* in the spirit yard and worship it every year.

They have no other ceremonies; but 5 days after the birth of the child, they coudung the house, drink liquor and toddy, and name the newly-born babe.

Mavchi (Hindu 905; Tribal 14)—A forest tribe found in the Navsari district. Those who came to Baroda as grooms are known as Bavcha. This tribe has its home in the West Pimpalner and Baglan talukas of the Nawapur peta of Khandesh and adjoining parts of the Dangs and Songadh mahal of this State. Almost all Mavchis found in the State are confined to this taluka, a few stray individuals occurring in Amreli and Mehsana *prants*. They are a timid, quiet inoffensive people, rather given to drink and especially the wilder ones, truthful. They constantly change their huts and move their settlement. The commonest form of marriage

among them is the *khandadio* form, i.e. winning of the bride by serving her father for a term of years. Five years is the usual period, but credit is often given and the girl is allowed to live with, and have children by him, before the full term is over. The marriage tie is loose and divorce is easy, even on trivial reasons. Remarriage is allowed to the woman who leaves her husband at will. The caste *panch* usually awards compensation, but cases are not rare when the husband does not think it worth his while to apply to the *panch* and without any further ado, he may take on another wife. Mavchis are ignorant and superstitious, tracing all evil to the influences of witches. They worship *Astamba*, *Gavli Mata*, *Vaghdev* and even *Parameshwar*. They bury the dead and also sometimes, the personal property of the deceased with him. Mainly cultivators, they have taken to cart. They eat variety of animal food, including beef.

Naika or Nayakda (Hindu 11,662 ; Tribal 140)—An early tribe found in the Navsari and Baroda districts. It has four sub-divisions—Cholival, Nicha, Gabad and Kadhad—of which



Naikda

the first two eat together but not with the last two. None of them intermarry. This tribe once held the place of leaders among the Dhodias, who look upon them with respect, and at marriage and other ceremonies treat them as Brahmans. Like Dhodias, they are peasants and cultivators. At betrothal and marriage, men and women dance both singly and in pairs. The dead are cremated. A year after a death, a memorial stone (*khatrun*) is set up. It is rubbed with red lead, a hen is killed and its blood sprinkled on it. After the ceremony is over, the hen is roasted and eaten by the party. Every year at *holi* time, a hen is offered to the memorial stone. Hereditary headmen settle caste disputes.

Tadvi (20,817)—One of the early tribes found in the Baroda district. The Tadvis were treated in 1901 as an unclassifiable unit of the forest tribes. But the Tadvis as the name implies are a sub-caste formed by fission (*tad*) from the great Bhil tribe. Exactly how the fission arose, the details are not so far available. Mr. Enthoven regards them as descendants of Bhil women and Musalman men and traces their origin to Aurangzeb. But there is no reason to treat them on that account as

Musalman. Possibly Mr. Enthoven was not referring to the Gujarat Tadvis who have no connection with the tribe of the same name found at the foot of the Satpuda Hills in Khandesh. Very special enquiries about their religious belief were made in Sankheda and Tilakwada where they bulk the largest, and there is no doubt that they are Hindus. They all worship Hindu deities including Shankar (Mahadev). In Sankeheda they have a special reverence for Sri Krishna Bhagwan, paying court also to the Sun, and to all Matas. They do not circumcise or keep beards nor do they venerate any Muslim Pirs. They call in Brahmans of the Nandora section for their marriages and Kayatia Brahmans for their funerals. To mark the beginning of marriage ceremonies, they make a drawing of Ganpati with *geru* (ochre)—they propitiate the planets and tie the *choli* bands. They sing marriage songs in Gujarati which is their home-language. They allow widow remarriage and divorce; through a caste *panch*, social disputes are settled and divorces are decreed. No money to the bridegroom has to be paid, but the *panch* requires a fee of Rs. 12 out of which Rs. 5 are paid to the officiating Brahman. The *natra* ceremony is less formal, not always requiring the presence of a Brahman. All that is required is that the couple throw rice at each other in the presence of the caste *patel*. Hindu festivals are generally observed including the *sitala satam* (to propitiate the small-pox goddess), and the *janmastami* day (Sri Krishna's birth-day) when fast is observed. There is caste organisation in settled villages, where there is a *nyat patel*, chosen from among the fittest families, but there is no such thing as *kul*. They have *vahivanchas* amongst the well-to-do families—some Barot from *Kheralu* visiting once in three years. They burn or bury their dead, according as their circumstances permit. If cremation is followed, then a Brahman is called in, who offers *pindas* and is paid Rs. 25 to 30. Where burial is practised, there the ritual is less expensive and formal. Dead bodies are buried usually on the banks of the Narmada; and *kasumbo* (opium juice diluted

with water) is drunk copiously. While burying, the head of the corpse is placed towards the north: if the corpse is that of a male, it is swathed in white, if of a female, it is wrapped in *lal shetu* (red covering cloth).

Talavia (Hindu 52,407 ; Tribal 158)—Originally a sub-caste of Dublas now grown into an independent caste with them. They are chiefly found in the Navsari and Baroda districts. They are all Gujarati speaking and more or less Hinduised. The tribals returned as such in this census are properly speaking Hindus. Talavias consider themselves hypergamous to other Dublas, and seldom eat with them or intermarry with them, although they acknowledge their connection. They look down upon Bhils very definitely and have no social dealings with them. They marry amongst themselves. The prospective son-in-law has to pay Rs. 25 to the bride's father for marriage expenses. Rs. 1-4-0 worth of cloth and 12 annas worth of *choli* are his gifts to his bride. No other ornaments are needed. In other respects their marriage costs them little, as the Brahman lets them off lightly charging them from 8 to 12 annas. They are worshippers of *verai* (*vihaṭ*) *mata*, the goddess also of the Rajputs, Vaghris and other communities. Brahmans are required for doing *puja* and applying *Sindur* (red paint) on to the stone image of the *Mata*. They have a vague notion of god and of Rama and other Hindu objects of veneration. But they worship the Sun every morning. Their women fast on full moon days and worship the moon. In the *navaratra* days (sacred to the *mata*) they sow paddy seeds and other corn and do fast. They bury their dead as they are too poor to burn. The corpse is buried in a lying position (an hour after death) with the head pointing to the north. No further ritual is observed, only the women wail. Their *gor* is an Audich Sahasara Brahman (in Karjan) who is looked down upon for ministering to these people. They have a *vahivancha*, by name Amarsing, who lives in Padra taluka.

Valari—Same as Varli.

Valvi (Hindu 101 ; Tribal 31)—A forest tribe found in the Baroda and Navsari districts. Considered degraded, they are probably an untouchable section of the Gamit tribe found in Songadh and Vyara talukas. Valvi is not to be confused with the Valvi section of Chodhras.

Varli (Hindu 187 ; Tribal 181)—An early tribe found in the Navsari district. They seem to have come from North Konkan where they are found in large numbers. The name is said to be derived from *varal*, a patch of cultivated ground. The men shave the head and do not wear the beard. The women wear the hair oiled and plaited. They do not eat the flesh of a cow or of a dead animal. They are fond of smoking and drinking. They cultivate land and also rear fowls. On the sixth day after a birth, the goddess *chhathi* is worshipped. Children are married at any time after they are twelve years old. The practice of serving for a wife, *khandhadio*, prevails. Widow marriage is allowed but polygamy is not practised. The dead are burned. Brahmans do not officiate on any ceremonial occasions. A headman who holds office during the pleasure of the community decides all caste questions.

Vasawa (Hindu 13,290 ; Tribal 4,237)—An early tribe, also called Vasavda, found in the Baroda and Navsari districts. Their males put on *dhotees* or *payjama*, a jacket and a turban. But one of their peculiarities is worth noting. Whenever a new garment is brought for the wife the husband tears off a piece from it sufficient to cover its nakedness. This piece is kept hanging from the thread on his waist at day-time and is made to cover up his loins at night. The females wrap a piece of cloth round about their lower limbs and put another on the head. They begin to put on a bodice only when they go to their husbands. They wear necklaces of white stones and two anklets of brass on each leg. When a boy has attained puberty, his parents and relations go out in search of a wife for him and take him along with them. If the boy likes the girl shown to him by his parents, they send for toddy from the market and drink it with the girl's parents. The boy's father agrees to pay from Rs. 22 to 30, and settles a day for the marriage and returns home. A day previous to that fixed for the performance of the ceremony, the boy and his parents reside and put up for the night outside the village and dance there the whole night. Next morning they go to the bride's house, where a bamboo is held lengthwise between the bride's and bridegroom's parties and dancing commences. After a time when a bottle of wine and two pice are given to the girl's party by that of the boy, the bamboo is removed and both parties dance together. Then, a new garment in one of the corners of which are tied a rupee and 4 pice is given to the bride by the bridegroom. Both are then anointed with oil and turmeric powder and are placed on the shoulders of two men,—the boy with a sword and the girl with its sheath. Both of these men dance away with the human burden on their shoulders for a time and then put them down. After that, they sit down to dinner, which when over, the boy and party return home with the new bride. When nine days have passed after this auspicious event, the leading men of the village of the bride's parents go to her husband's house and dance in front of it without speaking, until a bottle of

wine and a rupee are given to them by the boy's father. Then they speak with him, dine at his house and return with the girl to their village. The system of *khandhadio*, as well as re-marriage and divorce, obtains among these people.

No sooner a Vasawa dies, a match-lock is fired. The dead body is then placed on a bedstead and carried in procession with music playing and match-locks firing to the burning ground. Then the pyre is erected, around which the dead body with the bedstead is taken seven times and is afterwards placed on the pyre. Food is placed in the mouth of the dead body and his usual implements and weapons are placed by his side. The body is then burned and the mourners bathe and go home. In the evening they again assemble, drink and eat together. This being over, a relative of the deceased gets up and pierces an adjacent tree with an arrow to mark the completion of the funeral ceremonies.

They do not perform menstruation and pregnancy ceremonies at all, but give a small feast on the fifth day after the birth of a child and then give a name to it.

In the classification of early tribes, it is difficult to fit the Vasawas into the scheme. According to their own claim, they are the settled branch of the Bhils, as they have settled in permanent hamlets in the State. Mr. Enthoven considers them as a section of the Khandeshi pure Bhils. But the term Vasawa occurs as a well recognized sept of the Dublas (Group V).

RABARI (with Bharwad 64,378)—Herdsmen. They claim to be Rajputs, who instead of marrying Rajput women, married celestial damsels (*apsaras*) that is, perhaps, Charan women or daughters of god (*devputris*) as they style themselves and were therefore called *Rahā-bahāri*, that is going out of path. Their original home is said to be the United Provinces from which they moved to Marwar, and from thence to Gujarat, Kathiawad and Cutch. Some of their surnames are the same as Rajput tribe names, *e.g.*, Chohan, Dodiya, Gohel, Jadav, etc. Except in Kathiawad, Rabaris have no sub-castes. In Kathiawad, there are six sub-divisions which interdine but do not intermarry. They take flesh and drink spirits and in Kathiawad eat with Musalmans. They are quarrelsome people and by breaking fences, and grazing their cattle on crops cause great loss and annoyance to cultivators. In religion they belong to Bijmargi, Ramanandi, and Pirānā sects. Their priests are Audich and Sompura Brahmans. Among them all marriages take place on the same day. The Rabaris of one or more villages who wish to have their daughters married meet in a temple. A Brahman is called and he fixes the marriage day. Marriage among near relations is avoided. Widow marriage and divorce are allowed. The younger brother of the deceased husband has the first claim upon his widow. The dead are buried. *Shradhas* are performed, and caste people are feasted on the eleventh and twelfth day after a death. Rabaris have a headman but he has little authority and caste disputes are settled at meetings of the men of the caste.

RAJPUT (Hindu 94,805; Arya 88)—A Kshatriya caste found in all the parts of the State, but principally in the Kadi *prant*, as Anhilwad Patan in that district was, for many centuries, the capital of the Rajput kings of Gujarat. The chief social peculiarity of the Rajputs is their division into clans. The following is a list of the 103 Rajput clan names in use in Gujarat:—

Ada, Avera, Balater, Barod, Bhati, Bihola, Solanki, Biya, Bodav, Chamarpa, Chandavrat, Chavada, Chavad, Chochu, Chiod, Chohan, Chudavat, Dabhi, Dagb, Daima, Dairja, Devchand, Devda, Dhandhu, Dod, Dodiya, Duval, Ed, Galecha, Ghelot, Gohel, Golter, Gor, Gujjar, Hadial, Harashi, Hatha, Humad, Jadav, Jadeja, Jhala, Jiriya, Jodha Rathod, Joja, Jut, Kaba, Kachhotia, Kalam, Karadia, Kher, Khod, Khula, Kukan, Lakam, Mahida, Makvana, Mal, Masani, Mer, Mohal, Mori, Narvan, Padhra, Padhiar, Palonia, Parmar, Pesrau, Puravia Chohan, Rana, Ranrathod, Rathod, Raval, Ravar-Solanki, Rehevar, Revod, Sedhal, Sisodia, Sodha, Sodria or Sadria, Sojatria, Solanki, Songad, Surcha, Suvar, Tank, Tantol, Thokiya, Tuar, Vadhel, Vadvasia, Vaghela Vaish, Vaja, Vala, Vamla, Vanol, Vantia, Varam, Vejola, Vethia, Vezania, Virpura Solanki, Udvat and Uma.

All clans eat together and intermarry, but the members of a clan are forbidden to marry within the clan, as they are believed to be the children of one common ancestor. The Dagb, Karadia and Padhra clans allow widow remarriage and let their women appear in public. They are therefore looked upon as degraded. The Dagbs are found in Cutch, Karadias are scattered all over Gujarat and Kathiawad; and Padhras are found only in the Surat and Navsari districts. Of the other clans only Chavada, Chohan, Daima, Gohel, Gori, Jadeja, Jhala, Parmar, Rathod, Rehevar, Sarvaiya, Sisodia, Solanki and Vaghelas have retained their importance. The rest have sunk into insignificance.

Rajputs are by birth soldiers and landholders. Some of them are even now chiefs, *Girasias* or landholders and holders of service lands. But their service as soldiers is not in demand; and by their indolence, habits of extravagant expenditure and opium taking, most of the landholders have lost their patrimony and dwindled into peasant proprietors. A great many of them are forced to take service as peons and constables and even as personal attendants and field labourers.

Except among their lower classes, Rajputs have no headman. Caste disputes are usually settled by a jury of four or five respectable persons of the clan who have the power to fine or expel from the caste.

RAVALIA (27,614)—Also called Jogi. They appear to be of Rajput origin and are sub-divided into Sakhia (clansmen) and Vahalia (carriers). Sakhias are divided into Joshi Raval, Maru Raval and Patai Raval. Both Sakhias and Vahalias eat together and intermarry. Surat Ravals are divided into Khambhati, Rajbhari and Surati; and Ahmedabad Ravals into Baria, Bhalia, Bhoinia Makvana and Udlia. The five Ahmedabad subdivisions eat together, but do not intermarry. Ravals eat fish, mutton and fowl and drink liquor. They keep sheep and asses and work as carriers and labourers; some weave bed tapes and a few cultivate lands. They also beg and it is considered pious to give cooked food to a Raval especially when there has been some death in the family. Widow remarriage and divorce are allowed; younger brother has the choice of marrying his elder brother's widow. They have caste councils and headmen in large villages.

SADHU—See under Ascetics—Hindu and Jain.

SAIYAD (9,590)—One of the four classes into which the Musalmans with a foreign strain are divided. They claim descent from Fatima and Ali, the daughter and son-in-law of the Prophet and are the descendants of those who came during the period of Musalman rule in Gujarat, as religious teachers, soldiers and adventurers. They mark their high birth by placing the title *Saiyad* or *Mir* before, or *Shah* after male names and *Begam* after female names. They marry their daughters only among themselves, but take wives from other Musalmans. Some of them are *pirs* or spiritual guides and the rest follow all callings. The head is often shaved but when allowed to grow the hair has a natural curl. As a class Saiyads are fond of learning. "Daulat mile to Mir, nahin to fakir, maren to Pir": "if we get money we are lords, without it, we are beggars; and when we die we are saints." As spiritual guides and religious teachers, they are well-to-do and some of them rich. In religion, they are both Sunnis and Shiah. In South and Central Gujarat, they are mostly Sunnis. In North Gujarat, though all profess the Sunni rite, most are Shiah at heart. The Shiah fraternity form a distinct group, their chief bond of union being their secret celebration of Shiah rituals. Saiyads, though they take daughters from all *pukka* Muslims are chary of doing so from the Nau-muslims.

SATHWARA (6,550)—A caste peculiar to the Mehsana and Amreli districts where its members follow agricultural operations in villages but are bricklayers in towns. Women of the caste sell vegetables. Their surnames Chavda, Dhobi, etc., point to a Rajput origin. They have no recognized divisions, though Ahmedabadi Sathwaras do not marry with the Kathiawadi section. Marriages are forbidden between descendants of collateral males within seven degrees, but *natra* (widow remarriage) and *diyarvatu* (marriage with the deceased husband's younger brother) are allowed; so is divorce. Both husband and wife can seek divorce. In religion Sathwaras are Shaiyas and Vallabhacharis. A few are Ramanandis and Bijmargis. Kathiawadi Sathwaras are meat-eaters, but do not eat birds; they eat fish only in the evening. The Kathiawadi Sathwara grows rich garden crops.

SHAikh (26,073)—Properly speaking one of the four classes into which the Musalmans with a foreign strain are divided. But the term "Shaikh" which means *elder* is applied to descendants of local converts as well as of foreigners. The men have the title *Shaikh* or *Mahomed* placed before their names and women *Bibi* after theirs. They follow all callings and are found in every grade of life.

Shaikh or Shaikhada (Hindu 231)—They are found chiefly in the Baroda district. Originally Hindus, they are converts to Islam worshipping the shrine of Bala Mahomed Shah, one of the minor Pirana saints. In their ways, they are similar to the Matia Kanbis. They bury their dead, but otherwise follow Hindu customs. They are not circumcised and do not eat with Musalmans. They make *tila* and many of them have lately been following the tenets of the Swaminarayan sect, and have returned themselves as Hindus in the present census. At the time of marriage, both a Hindu and a Mahomedan priest attends. *Nika* is performed by a Fakir and afterwards the Hindu rite of *chori* is performed by a Brahman. They form a distinct community and marry only among themselves.

SHENVA—See under Depressed Classes.

SHRIMALI—See under Brahman and Vania respectively.

SINDHI (4,602)—Musalman immigrants from Sindh. They are chiefly found in Baroda, Amreli and Mehsana districts.

SONI (Hindu 12,145; Arya 32)—Gold and silver smiths. They are found in towns and large villages. They are of eight main divisions :—Gujjar, Maru, Mewada, Parajia, Shrimali, Tragad, Kathiawadi and Khandeshi. The Shrimali section forms half of the total strength. The Tragad or Mastan community has two divisions, called *nanu* (small) and *motu* (large) and claims descent from a Vania father and a Brahman mother. In token of their partly Brahman origin, they wear the Brahmanic thread and do not eat food cooked by any one, other than a Brahman. The Parajias called after the village of Paraj near Junaghad, claim to be Rajputs. They are of two branches, Garana and Patni. Gango, the founder of the Garana branch, established himself at Girnar and his descendants are found in Halar and Sorath. Nando, the founder of the Patni branch, went to Patan during the reign of Sidhraj Jayasing (A. D. 1094-1143) and established himself there. The Patnis and Garanas eat together but do not intermarry. The four other subdivisions, Gujjar, Maru, Mewada and Shrimali claim to have once been Vanias. The Shrimali Sonis, who originally belonged to the Shrimali Vania community, are divided into Ahmedabadi and Charotaria. They eat together. The Ahmedabadis take Charotaria wives, but never give their daughters to a Charotaria in marriage. Mewada Sonis originally belonged to Mewada Vania community; the Maru or Marwari Sonis have come into Gujarat from Marwar; and the Gujjar belong to the Gujjar Vania stock and are a trace of the great settlement of Gujjars who gave its name to Gujarat.

Arranged according to their work, *Sonis* are goldsmiths or workers of gold ornaments, *Jadias* or tracers of designs on ornaments and *Panchigars* or diamond and precious stone setters.

Like Vanias Sonis live on grain and smoke tobacco. They have a bad name for filching gold and for mixing metal. The saying is :—“A Soni takes gold even out of his sister's ornaments.” Socially Sonis hold a high position, ranking next to Vanias. Some of them are Shaiva, some Vallabhachari, and some Swaminarayan. Their family priests are Audich, Saraswat and Shrimali Brahmans. The Maru, Parajia and Chorataria Shrimali Sonis practise polygamy and allow widow remarriage. Among Charotaria Shrimalis alone, the wife is free to divorce her husband. Each community has its headman or *patel* who, in consultation with four or five leading men, settles caste disputes at a meeting of all the men of the caste.

SUTAR (Hindu 24,275; Arya 15)—Carpenters from the Sanskrit word *sutradhar* (*sutra*, i.e., the thread with which the course of the saw is marked). They are pretty evenly distributed over the whole State. They belong to six divisions, Pithva, Gujjar, Mewada, Pancholi, Marwadi and Vaishya. Of these, the Pancholis and the Vaishyas are found only in Gujarat proper, the Gujjars and Marwadis in Gujarat, Kathiawad and Cutch and the Pithvas in Kadi. The Gujjar, Mewada, Pancholi and Vaishya claim to be the descendants of Vishvakarma, the divine world builder. Both Marwadis and Pithvas claim to be the Rajputs who took to carpentry when Parshuram resolved to destroy the Kshatriyas. The Gujjar section forms over 40 per cent in the State. The Vaishya and Pancholi rank next in order of strength. Except that the other five divisions eat food cooked by Vaishyas, none of the six divisions eat together or intermarry. The Vaishyas rank highest, because they do not eat food cooked by the other divisions, wear the sacred thread and do not allow their widows to marry. The Pancholis rank lowest, because they alone prepare oil-presses and do other woodwork which causes the loss of animal life. Besides the regular carpenters, some Darjis, Kolis, Kumbhars and Tapodhans have taken to carpentry.

In look and dress, Sutars do not differ from Vanias. All the six divisions of Sutars are thrifty and sober. In religion they are Parnamipanthi, Ramanandi, Shaiva, Swaminarayan and Vallabhachari. Of the six divisions of Sutars, the Vaishya and Mewada in North Gujarat wear the Brahmanic thread. The Sutars' marriage customs do not differ from those of Vanias and Kanbis. Among the Vaishya and Mewada, widow remarriage, polygamy and divorce are not allowed; among the rest widows are allowed to marry, divorce is granted and polygamy practised. Caste disputes among the several divisions are settled either by a headman or a few leading men at the meeting of all the men of the caste. No fee is levied from an outsider who takes to carpentry. Carpenters who do not observe as a close day the dark fifteenth of every Hindu month, or the day on which a death has taken place in the caste in a town or village, are fined; and those who work as shoemakers are excommunicated.

A very small section of Sutars has become Musalman—numbering only about 40 families.

TADVI—See under Primitive and Forest Tribes.

TAI (4,160)—Weavers found chiefly in Dabhoi taluka of the Baroda district and also in the Navsari district. They claim descent from Hatim Tai, but appear to be a mixed class of foreigners and converted Hindus. Some of them speak Hindustani and others, Gujarati. They wear cotton robes and turbans. Like Hindus, they give caste dinners on pregnancy, marriage and death occasions. They marry only among themselves and form a separate *jamat* with a headman of their own.

TALABDA (Hindu 59,525 ; Arya 41)—A caste intermediate between Kanbis and Kolis and disdaining to call themselves by the latter name: they are also called Dharala or swordsmen. The name is derived from *sthalpada*, meaning local. According to themselves, the name is a corruption of talpati—landlord, and consider themselves superior to other Kolis and do not dine with them. They claim descent from a Parmar Rajput of Dharanagri in Malwa, who married the daughter of a Bhil chief in Gujarat to secure his help and support. The caste is localised mostly in Central and South Gujarat, isolated groups being found in Kathiawad and other places. The Central Gujarat group has two sections, the Mahikantha and Charotaria. The Dharalas of Charotar are subdivided into Vaghela, Pagi and Kotwal sections. Another section known as Baria is often confused with Barias proper (*q. v.*). The Dharala Talabda is a poor mean looking specimen. But in North Gujarat, the Talabda Patelia is a fine class. In South Gujarat, Talabdas are the main group. They are there thrifty and prosperous and make excellent agriculturists. It is curious that where they are financially the most affluent, they have little objection to the Koli name. Marriage between Rajputs and Talabdas is not uncommon, but the latter usually marry amongst themselves, observing the Rajput rule against marriages between members of the same subdivision. They have 22 surnames of which Chudasma, Jadav and Sarvarga are the highest socially. Talabdas have borne a good reputation for peaceful pursuits. Most are good agriculturists and efficient labourers. The Kotwals and Pagis serve as guards and village trackers. The caste has taken to education, and English literates including matriculates and at least one graduate are not unknown.

TALAVIA—See under Primitive and Forest Tribes.

TARGALA (Hindu 4,902 ; Jain 340)—Also called Bhavaiya, that is performers of *bhavai* or comedy. They are found mostly in the Mehsana *prant*. The word *bhavai* is derived from the Sanskrit word *bhav* which is a name of the god Shiva and is so called from that deity being personated in acting. Bhavaiyas are said to be the descendants of one Asit, an Audich Brahman of Unjha in the Mehsana district. Asit was excommunicated by other Audich Brahmans for dining with a Kanbi girl. He was a good songster and supported himself by singing and dancing. His descendants followed his profession and formed a new caste. The Targalas have two divisions, the Vyas and the Bhavaiyas who neither eat together nor intermarry. Both consider that they have the right to wear the Brahmanic thread, but are not very careful about wearing it. The Vyas do not eat with other castes lower than Kanbis, while some Bhavaiyas eat with Kolis. The latter are called Bhil Bhavaiyas with whom other Bhavaiyas neither eat nor intermarry. They travel during the fair season in companies of 15 to 30 and return to their homes and cultivate their fields during the rains. Each company or *tol* has its *naik*. They have no theatres and perform in open places in the outskirts of towns and villages. The high class performers nowadays take service as actors in dramatic companies in Bombay and other places. Their marriage and death ceremonies do not differ from those of Kanbis. Marriages are not allowed among the descendants of collateral males on the farther's side, but they are allowed among the descendants on the mother's side, when they are from three to seven degrees removed. Widow remarriage is allowed, but the widow of a man does not marry his younger brother. Divorce is granted on the ground of disagreement, the offending party having to pay a fine of Rs. 12. They have a headman in Ahmedabad who exercises little control. Social disputes are settled by a majority of the caste people. Targalas are Shaiva and keep in their houses, images of *Umia Mata* and *Mahadev*. No band starts on its cold weather acting tour without first performing before the *Pahucharaji Mata*.

THAKARDA—See under Koli.

THORI—See under Depressed Classes.

TURI—See under Depressed Classes.

UMAD—See under Vania.

VAGHER (5,175)—They are partly Hindus and partly Musalmans and are found in Okhamandal of which they claim to be the earliest inhabitants. The name Vagher is partly derived from *vai*, without, and *ger*, smell, meaning a tiger devoid of the sense of smell. In time the term

was applied to the *kala* tribe who were as criminal and sanguinary as tigers. Another legend is that Vaghers were so called because they cooled the gods on a visit to hot Okhamandal by *gher* (enclosing) of *va*, or wind and this refreshed them.

Vaghers are a fine looking race, strong, sturdy and enterprising. Like Rajputs, Rabaris and Charans, they part the beard in the middle curling the ends behind the ears. Their women are well-built and hard-working. The mother-tongue of the Vaghers is a corrupt form of the Kachchhi dialect. By nature they are restless, turbulent, impatient of control and have predatory leanings. They rose four times between 1816 and 1873 against the constituted authority. By occupation, they were first fishermen, then pirates and freebooters and are now landholders, fishermen and sailors. By religion, Musalman converts are Sunni. Those who are Hindus hold *Dwarkadhish* in great veneration. All Vaghers come to Dwarka on the *bhim agiaras* day (11th of the bright half of *Jeth*), bathe in the Gomti and worship *Ranchhodji*. Hindu Vaghers do not eat food cooked by Musalmans, but give their daughters in marriage to those Musalmans who can pay for them.

VAGHRI (35,805)—A caste deriving its name from Sanskrit, *wagurik* or *vagura* drawer and means tribe of netters. In appearance and occupation, they seem associated with fowlers and birdcatchers known as Pardhis. Vaghari are superior to Dheds but inferior to Kolis. According to their own account they are Chohan Rajputs. Their surnames, however, do not favour a separate tribal origin. Chavan, Charan, and Koli suggest a mixed people, descendants of men of higher classes who either in time of famine or from a passion for a girl of the tribe or from some breach of caste rule, sank to be Vaghri.

Vaghri are divided into four main sub-castes Chunaras or lime-burners, who are also cultivators and fowlers; Dataniyas who sell *datan* or tooth brushes, Vedu who grow and sell *aria*, a species of gourd, and live in towns, and Patani who trade in wood and bamboos and sell chickens. The names of the other subdivisions are Talabda, Champta, Kankodia, Marwadi, Saraniya (27), etc. The Talbadas neither eat nor drink with the other divisions. The other divisions are of a lower grade and eat and drink together but do not intermarry. In order of strength the Dataniyas are the most numerous, forming about one-third; then come Talbadas forming one-sixth; followed by Chunaras and Patani.

Except the owl and the jackal, they eat all animals including the pig. Their favourite food is the flesh of the iguana or *gho* and *sandha* (a reptile of the lizard species). They generally keep goats and fowls, sell eggs, catch birds, and go as *shikaris*. They need no Brahmans for betrothal, marriage or death ceremonies. They believe in spirits and lucky and unlucky days. They worship goddesses, the chief among whom are *Bahucharaji*, *Kalka*, *Khodiar*, *Meldi*, *Hadkai* and *Vihat*. Children are married when 10 or 15 years old. They burn or bury their dead. Widow marriage and divorce are allowed. They have their headman or *patels*, but all caste disputes are decided by the council of the caste.

Vaghri pride themselves on the chastity of their women. When a family returns home from a tour abroad, the women are taken to *vihat*, and a buffalo or sheep is also brought along with her. The woman then has to confess all her sins; even the most trivial, as "One day, a miya ogled me, and forgive me, *Mata*, if my looks encouraged him." If the Devi is satisfied, then the animal shivers and is forthwith decapitated. If otherwise, then her wrath falls upon some member of the family, who sickens and dies. The priests of the Vaghri in these and other rituals are *bhuvas*, who are simply spirit-possessed Vaghri into whose bodies the *vihat mata* enters. These *bhuvas* are slayers of evil spirits.

VALAND (Hindu 28,016; Arya 19)—Barbers. They are found in every town and village in Gujarat. The word Hajam is derived from Arabic *hajam*, to cup, and refers to his doing cupping operations in olden times. This word can be applied more appropriately to muslim barbers and when applied to a Hindu, it is resented. "Valand" is the appropriate word—for this caste so named. The caste is also variously known as *Gainjo* from the barber's old operation of dressing wounds or *gha*; *rat* from practice of carrying a torch at night time; and *matka* from an earthen pot on which barber boys are taught to shave. There are seven main divisions of Valands:—Limachia, Bhatia, Maru, Masuria, Pardeshi, and Dakshani. Of these divisions, the Limachia (or more properly Nimachia from Neemuch) rank the highest. They allow Bhatia Valands to smoke out of their pipes, but do not eat with any other division. None of the divisions intermarry or interdine, but all except the Pardeshi and Dakshani eat food cooked by a Limachia Valand. The Limachias claim descent from a band of Rajputs, who after some defeat fled for protection to their goddess Limachia in Patan. From Patan they went to Champaner and from Champaner they spread over Gujarat. Among the Limachia surnames are Bhati, Chavda, Chohan, Dabhi, Gohel, Parmar, Rathod, etc. Except the Masurias of South Gujarat, who eat goat's flesh and drink liquor, and also work as *dholis*, or drum-beaters on

marriage occasions, Valands live on ordinary food-grains. Their ordinary profession is shaving, but in villages they also cultivate land. Their women act as midwives in villages and some of them have received professional training in cities and towns. High caste Hindus do not allow Valands to touch drinking pots. Among Kanbis and low caste Hindus, a barber touches the drinking pots and cleanses the cooking pots and vessels. Valands' priests are Audich, Rayakval, Borsada and Shrigaud Brahmans, who by way of slight are called "Hajamgors". By religion, Valands are Bijpanthi, Kabirpanthi, Ramanandi and Vallabhachari. Divorce and widow remarriage are allowed. The widow of a man sometimes marries his younger brother. Hajams are proverbially talkative, boastful and pretentious. In villages where the Patidar element is strong, the Valand has to put in a great deal of forced labour, in respect of which he has a legitimate grievance.

The Deccani barbers of the Hindu persuasion are called *Nhavis*, while the corresponding caste in North India is known as *Nai*. A section of these, presumably under Arya Samaj influence have started calling themselves Nai Brahmans, implying a claim to Brahmanhood, on which Gujarat Valands have not yet insisted.

During the decade, this caste in various parts of Gujarat have taken kindly to vernacular education, and improved their caste organisation by running a caste journal, agitating against the encroachment of Patidars, etc., and the forced labour from subordinate village officials. But on the whole, the Valand caste is docile and noted for its fidelity in domestic service. The agitation set up by the Nai Brahmans has *totally* caused something like fission on the caste uplift movement.

VALVI—See under Primitive and Forest Tribes.

VALRI—See under Primitive and Forest Tribes.

VANIA (Hindu 41,486 ; Jain 44,939 ; Arya 52)—The Vanias occurring in the State are almost all Gujarati Vanias, claiming to be Vaishyas, the third of the fourfold classification of the Manavan system. But most of them do not perform the thread ceremony, which is compulsory in respect of the first three divisions. Possibly the caste in its present form (like the Patidar with the agricultural communities) evolved from members of many castes engaged in trade, who later when they rose in social position on account of their wealth claimed the Vaishya name, as a national designation for the commercial community as a whole. This tendency was welded through the centuries by the growth of the *mahajan* system of trade-guilds which definitely strengthened their corporate character, although in their marriages and other social exchanges the different Vania castes lived on a basis of co-existent exclusiveness.

Sub-castes of Vanias—Gujarat Vanias have forty sub-castes, of which the following are met with in this State:—

- | | | | | |
|-------------|---------------|-------------|--------------|---------------|
| 1. Agarwal* | 6. Kapol* | 10. Mewada* | 14. Nima* | 18. Shrimali* |
| 2. Baj | 7. Kanpuri | 11. Modh* | 15. Oswal* | 19. Sorathia* |
| 3. Disawal* | 8. Khadayata* | 12. Nagar | 16. Porwad* | 20. Umad* |
| 4. Gujar | 9. Lad* | 13. Nandora | 17. Rayakwal | 21. Vayad |
| 5. Jharola | | | | |

Those marked with an asterisk have a Jain section. Dishaval, Kapol, Khadayata, Lad, and Modh have indeed small Jain sections but they are predominantly Hindu. Shrimali, the largest Vania caste is predominantly Jain. So is Porwad. Mewada, Oswal and Umad are exclusively so. Most of the sub-castes (except Kapol) have two divisions each a Visa and a Dasa section. A few have a Pancha section, *e.g.*, Baj, Dishaval, Jharola and Nagar. These terms signify numerals, "twenties," "tens" and "fives". The last named are considered degraded with whom other Vanias will not dine. Occasionally a Pancha group, *e.g.*, that of the Baj, develops class consciousness and refuses to dine with Patidars and forms a section of its own. "Twenties" or "tens" are said to represent gradations in the purity of lineage, although different traditions ascribe a variety of origins for these divisions. Thus about the origin of Dasas and Visas amongst Shrimalis, three stories are current: One says that those who settled in Gujarat after wandering in the four quarters of heaven or *disha* were called Dasas, and that those who had settled in the four corners or *vidish* were called *Vidishas* or *Visas*. A second account says that those who sprang from the right side of Mahalakshmi's garland were called Visas, and those from the left Dasas. The third tradition, which is the most sensible, the Visas, twenties were so called because they were twice as high as Dasas or tens. These divisions have become through time harder than even the difference of religion between the Meshri (Vaishnava) and Jain sections. For there could have been marriage between a Jain and Hindu belonging to the Visa Shrimali section, but a Visa Hindu cannot marry a Dasa Hindu bride from the same caste. The recent revival of sectarianism however has prevented the spread of intermarriages

between Jain and Hindu sections. The process of fission has further developed through the multiplication of marriage groups (*ekdas*) or circles of villages or towns within which all girls are reserved as brides for the eligible males of the caste. Originally these *ekdas* (or *gols*) were established as a protest (as with the Patidars) against the hypergamy of the *kulin* (or town-bred and affluent) families. The latter naturally did not care to give their daughters used to the standards of town-life to rude homes in the countryside, although they were willing to take brides from villages. Those with a rural domicile were at first attracted by the comforts of a city-life, but they soon found that brides were rare for the rural husbands, and the revolt led to the rapid development of *gols* which are now general throughout Gujarat. These groups are by no means rigid, villages drop out or are added, and departures from the strict rule of marriage within the circle are sometimes permitted by the *gol* panchayat on payment of a prescribed fee or fine.

Social Solidarity of Vanias—All the Vania sub-castes resemble each other strongly in most respects of social ceremonial or religious belief. They differ little in colour and dress varies according to locality. These resemblances have tended to produce a considerable amount of class consciousness which is seen in the efficiency of their *mahajan* organisation. In all the chief centres of trade or distribution of agricultural produce, the chief Vania capitalists under the name of *mahajan* (great men) form a merchant guild. The guild fixes the rates of exchange and discount, and levies fees on certain occasions spending the proceeds on humane and religious objects. The head of this guild is the *nagarsheth* or city-merchant (Shreshti—chief citizen) formerly a person of great importance, now with much diminished head, on account of the sweeping social changes brought about by democratic franchises and municipal institutions. The *mahajan* within recent years has taken on new phases, by taking on its body representatives from other commercial communities not necessarily Hindu (Vohras and Parsis have been sometimes requisitioned) and also from the crafts (such as Sonis, etc.). But it has carefully excluded the Brahman and the Kshatriya. For the settlement of social disputes each subdivision of Vanias has in each town one or more leading families. The representative of this family under the name of *patel* or *sheth* chooses some four or five members of the community and with their help decides the question in dispute. Compared with high-caste Hindus, Vanias treat their headmen with respect and are careful not to break their caste rules.

Religion—Vaishnava Vanias are staunch followers of the Vallabhachari sect, to which they were converted four centuries ago. To the Maharaj or religious head of the sect, they are wont to pay extreme reverence, which is now however on the wane owing to modern influences. Instead of the sacred thread, men and women both wear a basil bead necklace or *kanthi*. Agarwals and Shaiva Nagar Vanias wear the sacred thread. The Jain Vanias in Gujarat belong principally to two sections—Digambari and Svetambari.

Deshaval or Disaval (Hindu 7,137 ; Jain 78)—A Vania caste found mainly in the Mehsana and Baroda districts. Disavals are found in large numbers in Kalol, Kadi, Patan and Sidhpur talukas. They take their name from Deesa or Juna Disa, an ancient town near the military station of the same name. They are divided into Visa, Dasa and Pancha. Dasas are further subdivided into Ahmedabadi, Surati and Ghoghari. Both Visa and Dasa eat together but do not intermarry. The Panchas form a separate community. Bride and Bridegroom go round the *chori* eight times among the Deshavals instead of seven times as in other Vania castes. Their family priests are Deshaval Brahmans and they are followers of the Vallabhachari sect. *Sidhmata* is their family goddess, and certain rituals have to be done in her presence. The Deshavals of the Dasa section have a circle regulated by rules. These give their daughters to other circles, surreptitiously against the rules of their circle, and they do so only where they are able to drive a hard bargain.

Kapol (Hindu 2,535 ; Jain 10)—A Vania caste. It traces its origin to Junaghad or Girnar. Kapols are chiefly found in the Amreli and Dhari talukas of the Amreli district. They are not divided into Dasa and Visa. But they have divisions called Delvadia and Ghoghari, who interdine but do not intermarry. Their family priests are Kandolia Brahmans who take their name from Kandol near Than in Kathiawad. Their family goddess is *Samudri Mata* whose chief shrine is at Samudri, a Dhrangadra village, twenty miles from Than. Some of their families have settled in Bombay, where they hold a high place as merchants. They are Vaishnava Vallabhachari in religion.

Khadayata (Hindu 3,850, Jain 13)—A Vania caste which takes its name from Khadat, a village near Vijapur. Khadayatas are found chiefly in Baroda and Mehsana districts. They are numerous in the Savli and Vaghodia talukas. They are divided into Visa and Dasa. Their family priests are Khadayata Brahmans and their family deity is *Kotyarkeshvar* of Khadat Mahudi near Vijapur in the Mehsana district. They are Vallabhachari Vaishnavas and have to pay large sums for marriageable girls. The Visa section has nine circles : (i) Umreth circle

of 14 villages, (ii) Nadiad circle, (iii) Kheda Matar circle, (iv) Ahmedabad circle, (v) Haldarwas circle, (vi) Vanswada circle, (vii) Modasa, (viii) Dakshin chok and (ix) Madras. The largest circle is No. (ii).

Lad (Hindu 7,754; Jain 44)—A Vania caste; next to Shrimalis and Porwads, Lads are the most numerous in the Vania population of the State. They are found chiefly in Baroda and Dabhoi. They take their name from *Lat-desh*, the old name of South Gujarat, that is the country south of the Mahi river. They are divided into Visa and Dasa, who are found in equal strength in the State. Their family priests are Khedaval Brahmans and their family diety is *Ashapuri Mata* near Petlad. Their old names ended in *rai* and *pal* instead of in *das* or *lal* as at present, as Kalianrai, Dhanpal, etc. They are Vallabhachari Vaishnav.

Modh (Hindu 4,268; Jain 21)—A Vania caste which derives its name from Modhera in the Chanasma taluka of the Mehsana district. Modh Vanias form an important element in the Vania community and are found in all the districts. They are also found in Malwa, where some of them seem to have emigrated from Modhera, while others migrated to Adalaj, Gogha and other places in Gujarat, when Ala-ud-Din's army invaded Gujarat in 1298 A.D. Modh Vanias are divided into six different sub-castes each of which keeps itself aloof from the rest, and illustrates how castes are subdivided in Gujarat. The main divisions are *Adalja* from Adalaj near Ahmedabad; *Goghva* from Gogha and *Mandaliya* from Mandal, formerly a place of consequence about 48 miles north-west of Ahmedabad. All the divisions are subdivided into Visa and Dasa. Goghva and Adalja intermarry in Kathiawad and Cutch, but not in Gujarat proper. At the wedding of Modh Vanias, a sword and a fly-whisk are used which suggest a Rajput origin. But no trace of tribal surnames remains. They are Vallabhachari Vaishnavas. Malwa Modhs used to allow widow remarriage so late as in the 17th century. They appear to have however given it up in imitation of the Deccani Prahmans, who accompanied the Maratha invaders and settled in Malwa.

The large class of oilmen, known in Gujarat as Modh Ghanchi, were originally Modh Vanias, who by taking to making and selling oil were considered as degraded and now form a separate caste. They have now improved themselves and their Ahmedabadi section especially is now keen on calling themselves Vania.

Nagar (Hindu 3,619)—A caste of Vanias. Like Nagar Brahmans, it claims Vadnagar as its original seat. Nagar Vanias are found in considerable number in the Mehsana *prant*, more especially in Vadnagar, Visnagar and Vijapur. They are divided into Dasa, Visa and Pancha. Like the Brahmans of the same name, they are shrewd and intelligent and are mainly employed in trade or government service. In religion they are Vallabhachari Vaishnava. A small subdivision called Bam Nagars wear the sacred thread and are Shaiva. They are strict observers of religious ceremonials and do not eat with other Vanias.

Oswal (Jain 3,505)—A caste of Vanias. According to Tod (Western India, 465), they are descendants of the Solanki Kings of Anhilwada (A.D. 942-1240), who gave up the sword for the till. They have such surnames as Chaudhri, Jhala, etc., which supports the theory of their Rajput origin. They are divided into three sub-castes, Visa, Dasa and Pancha or Leta. The last subdivision is found in Cutch and ranks the lowest. They allow widow remarriage and few Shravak or Meshri Vanias eat with them. Dasa Oswal marry Dasa Shrimali and Dasa Porwad, but Dasa and Visa Oswals, though they eat together do not intermarry. The family goddess of all Oswals is *Osia* in Marwar. Their priests are mostly Audich Brahmans.

Porwad (Hindu 1,314; Jain 6,553)—A Vania caste said to take its name from Porwad, a suburb of Shrimāl or Bhinmāl, the old capital of South Marwar. They are divided into Visa and Dasa who interdine but do not intermarry. Among Visa Porwads, there are both Jains and Vaishnavas. Their family priests are the Shrimali Brahmans and their family deity is the *Shri* or *Mahalakshmi* of Shrimāl. They are partly Vaishnavas and partly Jains. The Dasas are more than twice as numerous as Visas in the State.

Shrimali (Hindu 4,637; Jain 29,535)—A Vania caste. Like Shrimali Brahmans they are settlers from Marwar. They are subdivided into Visa, Dasa and the Ladva. There are very few Ladvas in the State, but the Dasas are nearly double the strength of Visas. Like Oswal, they are said to be descendants of Solanki Rajputs. According to their caste story at Bhimral in Marwar, 90,000 families were created by Shri or Mahalakshmi, the daughter of the Sage Bhrigu (out of her flower garland, say one party, and out of her thigh, say another). Visa and Dasa Shrimalis eat together but do not intermarry; neither of them eat with the Ladvas. The Visa Shrimalis are mostly Jains. The Dasas are either Jains or Vaishnavas. Jains and Vaishnava are pretty equally distributed in the Mehsana and Baroda districts and in the Baroda City. The Shrimali Sonis originally belonged to the Shrimali Vania class, but now form a new caste owing to their change of occupation.

Vania Sonis of Amreli are Vanias in all respects.

Umad (Jain 1,233)—A Vania caste; said to have entered Gujarat from Marwar about ten centuries ago. They are partly Vaishnava and partly Jain and are found mainly in the Mehsana and Baroda districts. The two sections, Visa and Dasa, exist also in almost equal strength, interdining, but not allowing marriage. The name "Umad" is said to have been derived from Humda, the spiritual head or *guru*, who established the class. They are also called Vagadiya, from the Vagad or wild country including Dungarpur, Pratapgarh and Sagvada, where considerable numbers are still settled. The headquarters of the caste are still at Sagvada near Dungarpur. They are mostly Jains of the strict Sthanakvasi (non-idolatrous) sect. There is a tradition that they originated from Patan about the 9th or 10th century and that there was a ruler of Patan named Ajit Shatru (*sic*), whose two sons quarrelled about the succession, and the elder eventually relinquished the throne and was converted to Jainism through the preaching of a Muni called Matungacharya. But this tradition is not borne out by the facts of history, such as are available.

VANKAR—See under Depressed Classes.

VANSFODA—See under Depressed Classes.

VARLI—See under Primitive and Forest Tribes.

VASAWA—See under Primitive and Forest Tribes.

VOHRA (Agricultural) (16,646)—Are the descendants of the Kanbi and other cultivating castes, who adopted Islam at the close of the fourteenth and during the fifteenth centuries. They are found mainly in the Baroda and Navsari districts. Their language is Gujarati and their ordinary food is rice, millet-bread and pulse. They eat fish or flesh but never drink liquor. Except in towns where they have lately adopted Musalman fashions, peasant Vohras, both males and females, dress like ordinary Hindus, males in *dhoti*, *bandi* and *fenta* and women in *sallo*, *ghagro* and *kapdu*. Their ornaments are peculiar, very massive and heavy and in make partly Hindu, partly Musalman. They marry only among themselves. But a few rich men in towns have begun to marry with regular Musalmans. Those who claim high-class descent, i.e., from Brahmans, Vanias, or Kanbis take wives from, but refuse to give their daughters in marriage to those who are descended from Kolis, Ravalias, Dheds and other low castes. Almost all are landholders or peasants, but some go to Burma or East Africa for trade or labour. Their home language is Gujarati, but a change is going on from Gujarati to Urdu. They are Sunnis in faith and have their Pirzadahs or spiritual guides whom they treat with great respect. Most of the peasant Vohras still keep some Hindu practices. Some of their males have Hindu names, as Akhuji, Bajibhai, etc., others have oddly changed Musalman names, Ibru or Ibla for Ibrahim and Ipu or Isap for Yusuf; among women, Khaja for Khatija and Fatudi for Fatima. At death, their women beat their breast and wail like Hindus. They celebrate marriage, pregnancy and death by giving caste dinners in which *ladu*, *kansar* and such other vegetable Hindu dishes alone are prepared. When a caste dinner is to be given the village barber is sent round to ask the guests. Each village has its headman of the community and caste disputes are settled in a meeting of the community in some central place.

VOHRA (Trading) (11,709)—These are mostly descendants of Hindu converts to the teaching of Ismailian missionaries who came to Gujarat in the 11th century. Even now they have such surnames as Dave, Travadi, Mehta, etc., pointing to their Brahman or Vania origin. A few Vohras claim descent from Egyptian and Arab refugees. They are the richest and most prosperous class of Musalmans in the State. Trading Vohras are divided into five sections—Daudi, Sulemani, Alia, Jaffri and Naghoshi or Rotia. The last four were formed by schisms from the main body.

Daudi Vohras are the most numerous among the Vohras in the State. They are also the richest and the most widely spread class in India. They are to be found in Aden, Zanzibar, Rangoon, Siam, China and other places, where they have migrated for trade. Boys' names end in *ji* or *ali*, as Ismailji, Yusufali, etc. A few girls have Hindu names, but the rest have oddly changed Musalman names such as Khatli for Khatija, Fatudi for Fatima and Ahli for Ayesha. They shave their head, wear long thin beards and cut the hair on the upper lip close. Their women pencil their eyelids with collyrium, blacken their teeth with *missi* and redden the palms of their hands and the soles of their feet with henna. Their home-tongue is Gujarati marked by some peculiarities in pronunciation, such as the irregular use of the dental and palatal *d* and *t* and of *kh* for *qu*. Daudi Vohras are noted for their fondness for living in large and airy houses and for their love of display in house ornaments and furniture. Their chief occupation is trade. Some Daudis in Sidhpur have large trade dealings in Bombay, Madras and Africa. Others are local traders and shopkeepers selling hardware, stationery, etc. Their women do house

work and weave cotton turbans. Daudis are Shiah of the Mustalian division of the great Ismaili sect. They are fond of pilgrimages to Mecca and Karbala. They abstain from music and dancing and from using or dealing in tobacco and intoxicating drinks or drugs. Of late, they have made a few converts chiefly of their servants and Hindu women taken in marriage. Their leader, both in things religious and social, is their Mullah who has headquarters at Surat. The Daudi Vohras in Kadi have their Mullah there who decides all religious and social disputes. Appeals against his decision lie to the Miya Saheb who resides in Ahmedabad and appeal against the decisions of the latter lie to the Bhai Saheb who also resides in Ahmedabad. The final appeal lies to the Bava Saheb who resides in Surat. On both religious and civil questions, his authority is final. Discipline is enforced in religious matters by fine and in cases of adultery and drunkenness, by fine and excommunication. Every important settlement of Daudi Vohras has its Mullah or Deputy of the head Mullah. Appeal from him lies to the head Mullah.

Sulemani Vohras, though not so numerous as Daudi Vohras, are an influential division of the trading Vohras. The origin of the Sulemani sect was during the sixteenth century, when a Surat Vohra sent as a missionary to Arabia, succeeded in making a considerable number of converts. These, besides by the regular name of Ismail, became known as Biazis Vohras, from the priest's title of Biazis, the fair. For a time, they considered the Gujarat high priest as their head. But about the close of the sixteenth century upon the death of Daud bin Ajabshah, the high priest of Gujarat Vohras, the Gujarat Vohras chose as his successor one Daud bin Kutabshah. Meanwhile one of the Yaman priesthood, Suleman by name, was accepted by the people of Yaman as the successor. He came over to Gujarat, but finding his claim rejected by all, returned to Arabia. Such of the Gujarat Vohras as upheld his claim were called Sulemani. In look, belief and customs, the Sulemanis do not differ from the Daudi Vohras with whom they associate but do not marry. They are a small class. They have given up the Gujarat Vohra dress and turban. Their home language is both Gujarati and Hindustani and they have begun to marry with regular Musalmans.

Alia Vohras are so called from Ali, the founder, one of the sons of Shaikh Adam, the head Mullah, who passing over his sons, appointed one Shaikh Tayyib as his successor. Tayyib had very few followers. Like Sulemanis, Alias do not intermarry with Daudis but do not differ from them in appearance or customs.

Jaffri Vohras are a section of the trading Vohras, who became Sunni on the advent of Muzaffar I, as Governor of Gujarat in A. D. 1391. They kept up their marriage relations with the Daudi section until their connection was severed by a saint named *Sayad Jaafari Shiraji* from whose name, they are called Jaffri. They are also called *Patani* from Patan, their headquarters. Because they are Sunnis, they are also known as *badi jamat*, the large body, and as *char yari* or believers in the Prophet's four companions, *as-habs*. In appearance they differ somewhat from Daudis, and from ordinary Musalmans by their round narrow-rimmed brown or black turban. Their occupation is trade and keeping of hardware, glass, cloth and stationery shops. Among them males have such names as Umar, Usman and Ali, preceded by Mian and followed by Bhai. Female names are like those of Daudi women. They marry only among themselves. Each settlement has its headman and forms a fairly organised body.

Naghoshi or Rotia literally means bread-eater. They form a very small section founded in A. D. 1789 by a member who held certain peculiar doctrines prominent among which was that to eat animal food was sin. From this, his followers came to be called *Naghoshi*, non-flesh eating or *Rotia*, bread-eaters. They intermarry with Alia but not with Daudi Vohras.

APPENDIX X

DIVORCE

1. Introductory—About the time of promulgation of the Baroda Divorce Act in 1931 His Highness the Maharaja Gaekwad expressed a desire that the existing practices of divorce among castes which permit it, should be enquired into. This note is an attempt to analyse the data made available by the enquiry which was conducted along with the census. It must be clearly understood at the outset that the census proper never attempts to enquire into the question of divorce, as it treats divorced persons as widowed, and further, that divorce is not a subject which lends itself to a proper statistical survey. The data obtained are of a descriptive nature and have few homogeneous aspects which could enable their tabulation; the material cannot be grouped into well-defined categories and few general conclusions can be drawn. An idea of these difficulties can be had when it is seen that there are nearly a hundred castes returning information which is not alike in any two. The ramifications of sub-castes which are again disintegrated by localities, multiply the varieties of social customs to an extent which almost defies analysis in a survey so modest as this. In such circumstances the second best line for the statistician is to deal with typical examples and the most frequently occurring aspects, to determine some common factors for a rough grouping and to view the data serially rather than in its cumulative perspective. The treatment of divorce practices in these pages therefore will be more in the nature of a series of loose-knit observations with the single common thread of the theme than a compact bird's-eye view.

2. Marriage and Divorce—Divorce has come as a corollary only after the axiom of marriage was established. The nature of divorce therefore varies according as the nature of marriage is considered institutional or as a phase of human relations. The institutional aspects of marriage and divorce are mainly social, religious and legal in their order of evolution, because in the beginning cognate societies codified their social tenets and called it religion and subsequently law. Yet it is not always that social custom, religious rulings and legal clauses harmonise, as the present Hindu Society illustrates, on the point of divorce. All the three aspects are present side by side—first, social custom renders marriage a utilitarian agreement and divorce is easy if the agreement proves unsatisfactory; secondly religion considers marriage a sacrament and does not conceive of its dissolution, while law fluctuates between social practice and religious edicts. The aspects of marriage as a phase of human relationship are physical and psychological. Human relations and particularly those between husband and wife are not hidebound by any set of rules and therefore are simple. If the marriage is neither a proper biological mating nor a temperamental harmony, it fails and it fails in spite of any custom, religion or law which may refuse to conceive of such a failure. It is the impossibility of continuation of marital relations between two discordant parties which led society first to provide for a release from marriage ties. As said above, at the evolution of social rules into religion this provision was also accepted, but the founders of the Hindu religion like the later Roman Catholics, have set such a hyperidealistic premium on the sanctity of the marriage institution that its nullity is almost impossible. Other religions however perhaps being much younger, have appreciated and made due allowance for the want of universal perfection. Law has generally followed the line of least resistance, favouring the opinion of the majority—be it for social or religious sanction. It is evident, therefore, that it is human relations that ultimately determine social custom, modify or override religion to suit their convenience and force law into recognition of human needs; and it is only because Hindu religion has been a monopoly in the safe keeping of an oligarchy for hundreds of years that human pressure has not hitherto succeeded in modifying it. Many communities have however wisely shelved religion in inconvenient matters like divorce, which must sooner or later receive universal legal sanction as it has already done in Baroda State.

3. Divorce and Society—In the meanwhile as far as Hindu society is concerned, the further away from religious ritual a community is, the more human its customs appear; in other words convenience in social customs seems to vary inversely with contiguity to religion. This explains why a man of the depressed classes, a Raniparaj, or a Koli, who is beyond the pale of strict Brahmanic influence freely allows divorce. As the strata of society go higher the aspects of divorce get more complicated. While for instance purely physical causes like impotency or sterility are common grounds for divorce in primitive tribes, intensely psychological causes like "incompatibility of temperament" distinguish those at the top of the social ladder. Between these extremes are sets of causes not necessarily exclusive of each other, like:—religious—such as conversion, socio-religious—such as loss of caste, socio-ethical—such as adultery, legal—such as bigamy, or economic—such as inability to maintain a wife. These causes operate amongst all the classes of society with varying importance, though those pertaining to human

relations are necessarily common to all classes. In Hindu society as it stands at present, grounds for divorce tend to assume a more institutional aspect as a community gets 'advanced.' In the ascent towards the higher social level, as custom becomes more stringent, religious ritual more exacting and ethics more ruthless, offences against the institution of marriage appear to be considered graver than offences against the human relations of man and wife. It was with a view to remedy this state of affairs that His Highness the Maharaja Gaekwad launched the latest bold experiment of offering legal redress to those whom it was denied by religion or tradition.

4. The Baroda Divorce Act : Its Purpose—It is a sad truism that Hindu advanced castes have occasion to seek relief from the law against their own religion which has completely pervaded their every-day life, and whenever such an occasion comes one can be sure that the aid of the law is invoked against some unnatural or inhuman edict, not of religion so much as of a cruel tradition which has displaced religion. In the present instance law in the Baroda State has come to the rescue of a people whose religion had once provided for divorce (of a kind) but whose traditions would not countenance it. The preamble of the Baroda Hindu Divorce Act (Act 22 of 1931) says :—

"The Parsis, Mahomedans and Christians are at liberty to dissolve marriage according to the law applicable to each of these communities. The Hindus in the present time are not allowed by any law to dissolve marriage; divorces are allowed by custom only in certain communities. It appears however that they were allowed by scriptures even in the higher communities in ancient times; but in course of time people lost sight of the fact and there is a traditional belief prevalent in certain communities that there can be no divorce among the Hindus. People at certain stage of social progress suffer mentally the evil effects of traditions and sentiments because they have not the courage to remove the defects of such traditions and sentiments or they do not know how to do it. This act is enacted with a view to give healthy facilities to the Hindu society and to promote its happiness. It contains provisions for filing a suit for the dissolution of marriage. But the communities in which divorces are allowed by custom will be at liberty to dissolve marriage according to their customs; only such dissolutions will have to be registered in courts."

5. The Provisions of the Act—The Act came in force on the 10th August 1931, and applied to Hindus including Jains, Buddhists and Sikhs of the State domicile. The definition of domicile varies slightly according as the suit is for dissolution, nullity of marriage, judicial separation, separate residence or restitution of conjugal rights. The parties can be husband or wife if they are majors and if they are minors, their next friend. Grounds for divorce briefly are (where it is possible for either party)—

- (1) disappearance for seven years,
- (2) becoming a recluse,
- (3) conversion to another religion,
- (4) guilt of cruelty,
- (5) desertion without reasonable cause for a period of more than three years after commencement of co-habitation,
- (6) addiction to intoxicants to the detriment of fulfilment of marital obligation,
- (7) adultery,
- (8) impotence (of husband), and
- (9) pregnancy of wife without husband's knowledge or bigamy on part of the wife.

Suits are to be framed only on clearly stated grounds and in case of adultery the co-respondent also is to be hauled up. The court is to hear the suit in the presence of jurors of whom the majority will be of the parties' caste. The jurors' majority opinion is taken on points of fact and the court either gives judgment or refers the suit to a higher court according as it agrees or disagrees with the jurors. Nullity of marriages is granted upon either party discovering an infirmity or a different religion in the other. Judicial separation or separate residency can be granted upon all the above grounds with the following in addition :—Lunacy after marriage, cessation of conjugal relations for more than three years owing to incompatibility of temperament and bigamy on part of either party.

6. The Act and Existing Divorce Customs—As noted above, divorce according to existing social practices will be allowed so long as every such divorce is registered. The Act has not only refrained from infringing upon communal usages of divorce but on the contrary has been an additional convenience to caste custom, as well as an appeal over the caste's decision. It is also expected to exercise a healthy check through its system of registration over divorces sometimes obtained among lower castes on frivolous grounds, and over those surreptitious agreements between the first and second husbands by which divorce custom is exploited for virtual trafficking in wives.

7. The Public Attitude towards the Divorce Act—The Divorce Act is yet too new to prove its utility to the general public although it is endorsed by members of Dhara Sabha. It is however hailed as a landmark of social legislation from distant places in India. Women have welcomed it as an escape from misalliance to which a coercive tradition had hitherto bound them. But its inauguration is not likely to show immediate results; provision is made for an occasional social need; it is not as if this flood-gate was opened to relieve the pressure of marital miseries, and a considerable period of time must elapse before the effect of this law will enable one to assign values to it.

8. The Enquiry: Preliminary Arrangements—The special enquiry into the practice of divorce in the State which forms the theme of this appendix was started as a result of the following cablegram received by me on the 20th December 1930 from His Excellency the Dewan Sahab, when he was in England with His Highness the Maharaja Sahab:—

“His Highness desires you to collect information about existing customs in regard to divorce among communities in which divorce is permitted. Stop. After collection the information should be tabulated for each caste or community separately.”

A questionnaire therefore was drawn up by the Census department and referred to the census committees appointed in connection with inquiries *re*: social, economic and general condition of the people for collecting information on this question too. This department also referred to the Registration, Judicial and Revenue departments for information relating to this subject.

9. The Questionnaire—The questionnaire consisted of 36 questions divided into the following main heads:—

- (1) whether the practice of divorce is old or newly introduced;
- (2) whether the practice is unilateral or bilateral, i.e., which of the parties to a marriage can give divorce;
- (3) what are valid grounds for divorce;
- (4) what is the authority of the caste *panchas* in the matter;
- (5) what ceremonies are performed at the time of divorce;
- (6) what price, if any, has got to be paid for procuring a divorce;
- (7) what is the practice as to reducing the consent to divorce to writing; whether it is registered or not;
- (8) what is the practice in regard to the divorce of minors;
- (9) whether resort to court is taken by the parties or not;
- (10) whether a woman is taken in marriage while her first husband is living or not; and
- (11) whether children of a divorced mother inherit the property of her second husband.

10. Special Additional Statistics called for—In addition to the subjects comprised in the foregoing questionnaire the following other data were collected:—

- (a) The Registration department was asked to furnish in regard to registered deeds of divorce details regarding:—
 - (1) castes of the parties to divorce,
 - (2) reasons for the divorce,
 - (3) party executing the divorce deed,
 - (4) consideration for the deed, and
 - (5) whether divorce is compulsorily registrable.
- (b) The Judicial department was asked to furnish information regarding:—
 - (1) criminal complaints
 - (a) under Wife's Possession Act,
 - (b) under Section 498 of the Penal Code *re*: adultery, and
 - (c) under Section 488 of Penal Code *re*: marrying again while the husband or wife is living.
 - (2) civil suits regarding
 - (a) restitution of conjugal rights, and
 - (b) *fargati* (release from the marriage bond).
- (c) Lastly, the Revenue mahal officers were asked to furnish statistics *re*: divorces registered under the Marriage and Divorce Registration Act.

11. Volume and Variety of Data collected—We have already stated that the Indian Census does not deal with the question of divorce in any of its aspects. It cannot therefore help us in any way to study this subject. We have therefore to rely on the material received in response to our questions. The responses to the questionnaire related to 74 Hindu and 23 Muslim castes as also for the Parsi community. The names of the castes for which the returns were received are given on the next page along with their population strength.

CASTE	Strength of Population	CASTE	Strength of Population	CASTE	Strength of Population
<i>All Castes</i>	2,002,678	Rajput	94,893	Bhandari	265
Advanced	367,225	Sathwara	6,550	Bharathari	255
<i>Hindu and Jain</i>	315,841	Targala	5,242	Bhoi	4,765
Barot	4,505	Valand	28,034	Charan	2,611
Bhavsar	5,876	Vankar-Dhed	107,988	Dabgar	961
<i>Brahman</i>	6,070	<i>Muslim</i>	101,666	Dhobi	2,672
Tapodhan	6,070	Fakir	6,495	Gondha	Not available
Other	Not available	Ghanchi	7,426	Kadia	1,946
Ghanchi	14,300	Hajam	1,129	Kalal	1,606
Kachhia	8,155	Malek	11,206	Kansara	2,159
Lewa Patidar	226,871	Molesalam	10,862	Kharwa	6,699
Luhana	13,597	Momna	13,829	Khatri	3,125
Soni	12,177	Pathan	15,884	Khavas	Not available
Sutar	24,290	Shaikh	26,073	Koli	27,438
<i>Muslim</i>	44,257	Sindhi	4,602	Lakkadfoda	Not available
Khoja	2,167	Tai	4,160	Machhi	5,681
Memon	8,971	Illiterate	599,320	Mali	2,723
Pinjara	4,764	Bhangi	31,018	Matia-Patidar	3,530
Vohra (Agricultural)	16,646	Bharwad-Rabari	70,915	Meghwal	Not available
Vohra (Trading)	11,709	Chunvalia	8,185	Od	2,028
<i>Parsi</i>	7,127	<i>Primitive and Forest Tribes</i>	229,413	Otara	Not available
Intermediate	949,107	Bhil	54,542	<i>Primitive and Forest Tribes</i>	7,952
<i>Hindu, Jain and Tribal</i>	847,441	Dubla	12,894	Kokna	7,952
Anjana Chaudhari	38,459	Gamit	59,213	Sagar	1,364
Baria	103,775	Nayakda	11,802	Sarana	554
Bava and Gosain	28,134	Tadvi	20,870	Sikligar Luhar	Not available
Chamar	42,802	Talavia	52,565	Tamboli	535
Darji	15,753	Vasawa	17,527	Teli	18
Garoda	7,796	Ravalia	27,614	Turi	1,711
Kadwa Patidar	219,161	Thakarda (Hindu and Jain)	191,195	Vansfoda	478
Kumbhar	52,276	Vagher	5,175	Muslim other	2,025
Luhar	21,062	Vaghri	35,805	Bhadela	1,908
Mochi	10,598	Hindu, Jain and Tribal other	85,001	Chauhan	Not available
<i>Primitive and Forest Tribes</i>	64,918	Bajania	3,925	Gandharva (Mumna)	Do.
Chodhra	38,786	Barad Patidar	Not available	Kasai	117
Dhodia	26,132			Khatri	Not available
				Mochi	Do.
				Rangrej	Do.
				Sepoy	Do.

The margin gives the population by religion for which returns have been received. It will be seen that divorce is allowed by all religions except the Hindu and the Jain. Amongst the Hindus, however, almost all castes practise it except the Vanias and the Brahmans, though stray cases are met with in both these classes also. Even amongst Brahmans, Tapodhan, Rajgar and Vyas sub-castes are reported to be practising it. The last two castes were not separately compiled. But if we deduct the Tapodhan strength from the total of Brahmans we get 123,714 Brahmans and 86,425 Vanias not practising divorce. If we deduct the total of these Brahmans and Vanias from the remaining Hindu, Jain and Tribal strength we get 186,411 persons for whom returns are not received but they mostly belong to lower Hindu elements which generally practise divorce. Before however accepting as true the above strength of the population practising divorce, we have to reckon the fact sometimes happening that although a caste may allow divorce, yet the advanced or socially higher section may not be practising it, e. g., the Charotar section amongst Lewa Patidars does not allow this practice at all. Amongst Muslims, Christians and Parsis, it is allowed by their religion and all members of those faiths practise it. But here too, the socially higher sections do not practise it. Some of the converted Rajput houses who are considered *kulin* like the Makwanas and Khants and other higher groups of Molesalams forbid divorce as being contrary to good form. The following castes are reported to have given up the practice of divorce within recent years in the localities shown against their names:—

HINDU

1. Dhobi (Chanasma mahal).
2. Darji (Chanasma, Kheralu, Padra and Karjan).
3. Gola (Baroda City).
4. Lewa Patidar (Dehgam mahal).
5. Luhana (Okhamandal).

RELIGION	Total population	Returned as practising divorce	Remainder
Hindu, Jain and Tribal ..	2,244,153	1,847,603	396,550
Parsi	7,127	7,127	..
Muslim	182,030	147,948	34,082

6. Pancholi Sutar (Baroda City).
7. Barot (Padra mahal).
8. Rajput (Kadi mahal).

9. Bhavsar (Kadi, Mahuva and Chanasma).
MUSALMAN
10. Saiyad (Padra).

12. Statistics relating to Divorce supplied by Other Departments—In order to know the extent of this practice in the State—

- (i) The registration of divorces like that of marriages was made compulsory in the State under the Marriage and Divorce Registration Act in the year 1923-24. The following statement gives the number of divorces so registered by caste upto the end of February 1931, i.e., for a period of $7\frac{1}{2}$ years since the Act came into operation.

NAME OF CASTE	NUMBER OF DIVORCES REGISTERED IN								Total
	1923-24	1924-25	1925-26	1926-27	1927-28	1928-29	1929-30	1930-31 February	
All Castes	316	362	398	310	447	434	431	186	2,884
<i>Advanced</i>	15	14	19	6	14	20	10	2	100
<i>Hindu and Jain</i>	13	10	15	5	11	13	6	1	74
Ghanchi	6	..	2	2	2	1	2	..	15
Kachhia	4	7	9	3	8	6	2	..	39
Sutar	3	3	4	..	1	6	2	1	20
<i>Muslim</i>	2	4	3	1	3	7	4	1	25
Khoja .. ..	..	..	..	..	..	..	1	..	1
Vohra	2	4	3	1	3	7	3	1	24
<i>Parsi</i> .. ..	..	..	1	..	..	..	..	..	1
<i>Intermediate</i>	123	124	143	114	139	151	151	65	1,010
<i>Hindu, Jain and Tribal</i> ..	122	124	143	114	139	149	148	65	1,004
Baria	45	49	31	25	40	37	24	17	268
Bava and Gosain .. ..	..	..	..	1	..	..	2	..	3
Chamar	9	4	8	7	6	5	8	3	50
Kadwa Patidar	21	20	26	24	20	27	35	12	185
Karadia .. ..	..	..	..	2	2	..	..	..	4
Kumbhar	4	1	2	7	3	4	4	2	27
Lohar	1	1	..	..	2	..	1	..	5
Mochi	1	2	4	2	6	4	3	..	22
<i>Primitive and Forest Tribes</i>	5	5	14	8	14	14	17	1	78
Chodhra	1	..	2	2	..	3	4	..	12
Dhanka	3	5	12	6	12	11	13	1	63
Dhodia	1	..	..	..	2	..	..	..	3
Rajput	1	3	5	7	3	3	2	1	25
Targala .. ..	..	..	..	..	1	1	..	..	2
Valand .. ..	..	2	3	1	1	4	1	1	13
Vankar-Dhed	35	37	50	30	41	50	51	28	322
<i>Muslim</i>	1	..	..	..	..	2	2	..	5
Mumna	1	..	..	..	..	..	1	..	2
Shaikh .. ..	..	..	..	..	..	2	1	..	3
<i>Indian Christian</i> .. ..	..	..	..	..	..	..	1	..	1
<i>Illiterate</i>	132	175	197	153	221	204	196	98	1,376
Bhangi	9	7	13	4	12	24	26	6	101
Bharwad-Rabari	1	2	1	1	3	2	..	2	12
<i>Primitive and Forest Tribes</i>	93	138	155	122	176	138	141	79	1,042
Bhil and Vasawa	28	20	28	23	31	22	47	16	215
Dubla	11	33	28	21	38	28	25	15	199
Gamit	1	1	..	1	..	..	1	1	5
Nayakda .. ..	..	1	..	..	1	4	3	..	11
Talavia	12	15	18	15	14	18	23	9	124
Unspecified	41	68	79	62	92	66	42	38	488
Ravalia	5	1	3	4	3	3	6	3	28
Thakarda (Hindu and Jain)	2	16	8	12	11	15	8	2	74
Vaghri	22	11	17	10	16	22	15	6	119
<i>Hindu and Jain Rest</i>	25	23	26	24	46	33	47	11	240
Koli	22	25	20	22	39	26	41	9	204
Other	3	3	6	2	7	7	6	2	36
<i>Muslim Rest</i>	21	21	13	13	27	26	27	10	158

- (ii) Though the registration of divorce was introduced in the State in the year 1923-24, it was customary with the parties to a divorce to reduce their consent to writing and get it registered in order to avoid future complications in the matter. The Registration department was asked to furnish such cases for the last 10 years and they are given below by caste. It may be mentioned that no such cases were registered in the Amreli and Okhamandel *prants* at all.

CASTE	No. of Divorces with deeds registered	CASTE	No. of Divorces with deeds registered	CASTE	No. of Divorces with deeds registered
1	2	1	2	1	2
All Castes	287	Vohra (Agricultural) ..	1	Muslim	1
Advanced	79	Parsi	14	Shaikh	1
<i>Hindu and Jain</i> ..	<i>60</i>	Intermediate	149	Illiterate	30
Brahmabat	1	<i>Hindu, Jain and Tribal.</i>	<i>148</i>	Bhangi	1
Brahman	3	Anjana Chaudhari ..	14	Bharwad-Rabari ..	16
Audich	1	Baria	13	<i>Primitive & Forest Tribes.</i>	<i>3</i>
Unspecified ..	2	Bava	4	Bhil	2
Ghanchi	2	Darji	1	Vasawa	1
Kachhia (Khambhar) ..	1	Garoda	2	Ravalia	3
Lewa Patidar ..	49	Kadwa Patidar ..	65	Shenva	1
Sutar	2	Kumbhar	2	Thakarda (Hindu and Jain) ..	4
Vania	2	Luhar	9	Vaghri	2
Disawal	1	Mochi	2	Hindu and Jain Rest ..	15
Modh	1	Patanwadia	7	Muslim Rest	14
Muslim	5	Rajput	2		
Memon	3	Sathwara	2		
Pinjara	1	Targala	2		
		Valand	1		
		Vankar-Dhed ..	22		

- (iii) It was further thought that the statistics regarding (1) divorce suits, (2) suits for restitution of conjugal rights and of possession of wife, and (3) bigamy and adultery cases would be instructive regarding the extent of resort to courts in such cases and also of the offences which led to such a resort. The figures supplied by the Judicial department for the last ten years are given below :—

NAME OF CASTE	Divorce suits	Suits for restitution of conjugal rights	Suits for possession of wife	Suits for bigamy	Suits for adultery
1	2	3	4	5	6
All Castes	224	368	2,899	1,410	1,150
Advanced	20	58	253	42	77
<i>Hindu and Jain</i> ..	<i>14</i>	<i>36</i>	<i>222</i>	<i>33</i>	<i>69</i>
Barot	1	2	13	3	8
Bhavsar .. ..	....	....	3	....	2
Brahman	2	12	72	2	16
Ghanchi	2	3	19	1	10
Kachhia (Khambhar) ..	1	1	11	....	4
Luhana	1	1	5	1	2
Maratha	4	3	39	4	2
Soni	1	9	19	2	6
Sutar	1	1	27	17	8
Vania	1	4	14	3	11
Muslim	5	19	27	8	8
Khoja .. ..	....	2	6	....	....
Memon	2	12	10	3	....
Pinjara .. ..	....	1	2	....	1
Saiyad	1	1	1	....	....
Vohra	2	3	8	5	7
Parsi	1	3	4	1	....
Intermediate	95	181	1,094	438	414
<i>Hindu, Jain and Tribal</i> ..	<i>92</i>	<i>179</i>	<i>1,075</i>	<i>433</i>	<i>407</i>
Anjana Chaudhari ..	2	3	15	....	16
Baria	26	10	237	127	112

NAME OF CASTE	Divorce Suits	Suits for restitution of conjugal rights	Suits for possession of wife	Suits for bigamy	Suits for adultery
1	2	3	4	5	6
Intermediate—contd.					
Bava and Gosain	4	8	27	12	16
Chamar	6	....	38	9	6
Darji	4	7	13	3	3
Garoda	1	3	4	....	2
Gola	1	1	8	....	1
Kadwa Patidar	16	58	219	128	112
Karadia .. .. .	....	2	15	3	....
Kumbhar	10	17	60	10	14
Luhar	1	6	25	10	10
Mochi	5	3	26	15	3
Patanwadia	2	....	8	5	9
Primitive and Forest Tribes					
Chodhra .. .. .	....	2	21	20	5
Dhanka .. .. .	....	....	....	17	....
Dholia .. .. .	....	2	4	3	5
Rajput	2	3	56	36	40
Sathwara .. .. .	....	1	1	....	....
Talabda .. .. .	....	1	4	6	1
Targala	2	4	23	2	2
Valand	3	10	26	14	9
Vankar-Dhed	7	40	249	33	46
Muslim					
Fakir .. .. .	....	1	5	1	4
Pathan .. .. .	....	1	1	....	....
Sindhi	1	....	2	2	2
Indian Christian					
Indian Christian	2	....	11	2	1
Illiterate					
Illiterate	41	52	864	461	402
Bhangi	2	13	110	38	43
Bharwad-Rabari	1	5	30	52	45
Chunvalia	2	2	4	1	2
Primitive and Forest Tribes					
Primitive and Forest Tribes	14	13	163	120	47
Bhil	2	7	70	57	16
Dubla	3	....	42	20	....
Gamit .. .. .	....	4	47	12	3
Nayakda .. .. .	....	....	2	....	....
Tadvi	9	1	....	23	20
Talavia .. .. .	....	....	5	2	6
Vasawa .. .. .	....	1	2	6	2
Ravalia	6	4	51	23	22
Shenva .. .. .	....	....	1	2	1
Thakarda	3	2	176	114	142
Vaghri	13	13	324	111	100
Hindu, Jain and Tribal Rest					
Hindu, Jain and Tribal Rest	35	52	410	415	173
Bhoi	1	1	33	22	7
Dhobi	3	6	11	3	1
Garasia	1	2	13	7	4
Koli	20	23	234	341	123
Primitive and Forest Tribes	2	1	20	5	2
Other	8	19	99	37	36
Muslim Rest					
Muslim Rest	33	25	278	54	84

13. The Divorce Rate—It might be helpful to a certain extent to study such figures as are available about this interesting social phenomenon. Since 1923-24 the Revenue department of the State started the registration of divorces and although it cannot be claimed that all divorces till now are registered, the available figures may be considered good enough to show us the trend of the practice of divorce among different castes. It might be mentioned in passing that whereas hitherto divorce registration was a mere note of the fact, it will henceforward be a legally solemnised record under the new Baroda Divorce Act. The actual number of divorces since 1923-24, for caste-groups arranged according to their

literacy standard are shown in column 2 of the marginal table. The divorce rate shown is calculated first for 100,000 persons living during the decade on the basis of the mean strength of each caste-group and then for 100,000 married persons on the same principle. It is evident from the table that the divorce rate tends to fall as literacy advances. In this connection it must be noted as an exception that the divorce rate of the Advanced Hindu and Jain castes is higher than that of the corresponding Intermediate castes. This is no doubt due to the *bourgeois* accretions to this group like Sutar, Ghanchi and Kachhia who though advanced in literacy have not abandoned their wholesome social customs like divorce and widow remarriage as some other neo-advanced castes like Maratha Kshatriya and Lewa have done in imitation of the Brahmans and Vaniyas. The low rate among Muslims must be due to negligence in registration (since divorce is such an easy affair with them) unless

the practice of polygamy which renders divorce unnecessary is responsible for it. Depressed classes show the highest rate which might be interpreted as an indication of their whole-hearted adoption of this national social custom—an adoption to which they are free owing probably to their safe distance from Brahmanic influence. The relatively low rate among tribes must certainly be due to want of registration since divorce is easy among them too. The Parsi and Christian figures are too small to be of any value. Another feature noticeable is in regard to the divorce rate worked out on the married population. Roughly half the strength of each caste is found to be in the married state: according as the married proportion fluctuates from this norm, this rate is inversely affected: thus in castes more addicted to marriage it is low, and high in castes where marriages are fewer.

CASTE-GROUP	Number of divorces (Actual)	DIVORCE RATE	
		Per 100,000 persons living during decade	Per 100,000 of married persons during decade
All Groups	1,998	149	304
<i>Advanced</i>	<i>100</i>	<i>113</i>	<i>238</i>
Hindu and Jain	74	149	285
Muslim	25	79	186
Parsi	1	14	37
<i>Intermediate</i>	<i>1,010</i>	<i>135</i>	<i>262</i>
Depressed Classes	372	261	484
Primitive and Forest Tribes	78	120	287
Other Hindu, Jain and Tribal	554	109	208
Muslim	5	21	45
Indian Christian	1	14	30
<i>Illiterate</i>	<i>888</i>	<i>176</i>	<i>371</i>
Depressed Classes	101	345	631
Primitive and Forest Tribes	554	281	635
Other Hindu and Tribal	233	82	171

Besides the above there were 886 divorces in whose case, the caste was either unspecified or did not fall in any of the above groups.

14. Antiquity of the Custom of Divorce—Voluntary or involuntary separation of a couple bound in ties of marriage is a custom prevalent in almost all castes in the State from very old times. But it is more or less in abeyance in certain *kulin* sections of particular castes while others have recently introduced it amongst themselves. The Golas in the Baroda City and the Darjis in Chanasma, Padra, Kheralu and Karjan do not now have it at all. On the other hand the Khatri in Amreli and Lubars generally had it for a very long time while the Gandevi Khatri practise it for last ten years and the Visnagar Lubars practise it for 50 years. The Rajputs have had it from very old days but in Kadi mahal, it is forbidden amongst them though the Nadoda section of them can dissociate from their wives at will. Among the Musalmans, the Saiyads do not generally practise divorce while the Momnas have recently introduced it.

15. Who can sue for Divorce?—The next question that crops up is as to the competency of the party to sue for divorce. In certain castes both the parties to a marriage can move for it while in certain castes the practice is unilateral, i.e., one of the two parties—generally the male—can sue for it. Here again the practice varies in different localities, e.g., amongst Targalas the husband alone can give it but in Mehsana and in Kheralu both the husband and the wife in their caste are competent to give it. On the contrary amongst Khambhars, the practice is bilateral but in Kalol the husband alone has the right to give it. Amongst Khatri in Gandevi, the right rests in the *panchayat* of seven villages of their circle, while amongst Koknas it can be valid only after endorsement by the *panchayat*. Sikligar is the only caste reported, in which the right to divorce is confined to the wife alone. Amongst Musalmans except the Ghanchis, Mochis and Khojas with whom it is bilateral, this practice is unilateral, i.e., the husband alone has the right to give it. The following statement gives details regarding

Hindu and Muslim castes with their practice (whether unilateral or bilateral) and also the names of the places where one takes the other form for certain communities:—

Castes that allow divorce only to the husband	Places where such practice becomes bilateral	Castes that allow divorce only to the husband	Places where such practice becomes bilateral
1	2	1	2
Hindu, Jain and Tribal			
Anjana Chaudhari .. ..	....	Rabari	Patan, Navsari, Gandevi, Kheralu, Kalol and Bhimkatta
Bajania .. ..	....	Rajput .. ..	....
Barad	Vaghodia	Rawal	Atarsumba, Kheralu, Meh-sana, Dehgam and Sinor
Baria	Karjan and Sinor.	Sadhu	City
Barot .. ..	....	Sarania .. ..	....
Bava .. ..	....	Sathwara	Mehsana and Kheralu
Bhangi	Sinor, Petlad, Kheralu, Mahuva, Baroda and Baroda City	Soni	Vyara
Bharthari .. ..	....	Sutar	Navsari, Gandevi, Vyara Mahuva and Visnagar.
Bhavsar	Visnagar and Kheralu	Tadvi .. ..	....
Bhil	Vaghodia and Sinor	Talavia	Dabhoi
Bhoi	Petlad and City	Tapodhan .. ..	....
Chamar .. ..	....	Targala	Mehsana, Kheralu
Charan .. ..	....	Thakarda .. ..	....
Chunvalia	Bhimkatta and Kadi	Turi .. ..	....
Dalvadi .. ..	....	Vagher .. ..	....
Darji .. ..	....	Vaghri	Padra, Petlad, City, Dabhoi, Kheralu, Meh-sana and Karjan
Dhed	Mahuva, Sidhpur, Dehgam, Dabhoi, Atarsumba, Navsari, Gandevi, and City	Valand	Kheralu, Vyara and Beyt
Dhobi	City, Dabhoi, Navsari, and Damnagar	Vasawa .. ..	....
Dubla	Navsari and Gandevi	Vyas (Brahman) .. ..	....
Gamit	Songadh	Musalman	
Garoda .. ..	....	Bhadela .. ..	....
Ghanchi	City, Visnagar and Meh-sana	Chauhan .. ..	....
Kadia .. ..	....	Fakir .. ..	....
Kadwa Patidar	Visnagar	Gandharva (Mumna)	....
Kalal .. ..	....	Ghanchi	Atarsumba
Kansara .. ..	....	Hajam .. ..	....
Khatri .. ..	....	Kasai .. ..	....
Khavas .. ..	....	Khatri .. ..	....
Koli	Gandevi, Meh-sana, Patan and Navsari	Malek .. ..	....
Kumbhar	Vyara	Memon .. ..	....
Lakkadfoda .. ..	....	Molesalam .. ..	....
Lewa Patidar	Navsari and Baroda	Mumna .. ..	....
Luhana .. ..	....	Pathan .. ..	....
Luhar	Kheralu, Meh-sana, Karjan and Vyara	Pinjara .. ..	....
Machhi	Sinor	Rangrej .. ..	....
Matia Patidar	Mahuva	Sepoy .. ..	....
Meghwal .. ..	....	Shaikh .. ..	....
Mochi .. ..	....	Sindhi	Sinor
Od .. ..	....	Tai .. ..	....
		Vohra (Trading) .. ..	....

Castes that allow both parties freedom to divorce	Places where such bilateral practice becomes unilateral (husband alone)	Castes that allow both parties freedom to divorce	Places where such bilateral practice becomes unilateral (husband alone)
3	4	3	4
Hindu			
Bhandari .. ..	....	Mali	Sinor, Baroda, Meh-sana and Damnagar
Chodhara .. ..	....	Nayka .. ..	....
Dabgar .. ..	....	Otara .. ..	....
Dhodia .. ..	....	Sagar .. ..	....
Gandha .. ..	....	Tamboli .. ..	....
Gosain .. ..	....	Teli .. ..	....
Kachhia	Ratanpur and Meh-sana	Vansfoda .. ..	....
	Karjan, Tilakwada, Dabhoi and Sankheda	Parsi .. ..	....
Khambhar	Kadi, Kalol and Meh-sana	Musalman .. ..	....
Kharva	Beyt and Okhamandal	Khoja .. ..	....
Kokna (with the help of Panch)	....	Mochi .. ..	....
		Vohra (Ghanchi) .. ..	....

16. Parties to Release Deeds—In the majority of castes, the release deed is executed by the husband and given to the wife. In certain castes however, mutual deeds are passed, each party keeping one to ensure against betrayal of the other party. The marginal table shows that of 287 cases of divorce registered in the Sub-Registrar's offices in the State, no less than 265 were signed by the husband alone. Only in one case, it was signed by both. It will be noted that the release deeds were signed by the guardians of the husband in 10 cases in Mehsana division and by the woman alone in an equal number of cases.

Party signing the deed	Total number of cases
Total	287
Husband	265
Guardian of Husband.	10
Relatives of Husband.	1
Wife	10
Both	1

17. Divorce and the Minors—Where marriage is a sacrament, the divorce of minors is unthinkable. But the irony of fate is that it exists and owes its existence to the custom of child marriages in India. Its prevalence however is not universal. There are certain castes which forbid it while there are others which freely allow it. There are again certain castes in which it is allowed for the boy and not for the girl and *vice versa*. The margin sets out the castes which do or do not allow it at all. There are curious customs in this matter too. Amongst Ods, if the minor girl is pregnant, the husband cannot divorce her. Amongst Kolis, the guardians of a minor party can move for divorce but the practice is that the boy is required to hold the pen in his hand and then if he cannot write the release deed, he puts it down so as to allow somebody else to write it out on his behalf. Amongst Kansaras divorce is allowed to minors, only for indispensable reasons. The Vaghris in Dehgam have the practice of putting Rs. 12 on the laps of both the minors before divorce is given. The Musalmans also have a varying practice but amongst Vohra Ghanchis, the minor wife has to pay Rs. 127-8-0 before she can sue for divorce.

Castes in which the divorce can be sued for and accepted by guardians of the minors	Castes in which divorce can neither be sued for nor accepted on behalf of minors	
Hindu	Hindu	Parsi
Garoda	Barot	Musalman
Kachhia	Bava	
Kadwa (Baroda Section)	Bharthari	
Kansara	Dabgar	Chamar
Khawas	Dalwadi	Gandharva
Koli	Gondha	Khatki
Od	Kalal	
Otara	Khambhar	Memon
Rajput	Khatri	Mochi
Thakarda	Kokna	Momna
Vansfoda	Nayaka	
	Sadhu	Pathan
	Sagaria	Rangrej
Musalman	Sarania	Sindhi
Bhadela	Talavia	
Hajam	Tamboli	
Malek	Tapodhan	
Molesalam		

18. Reasons for Divorce—The following are reported to be the reasons which occasion divorce :—

Common grounds of divorce for both parties	Grounds of divorce for the husband alone	Grounds for divorce for the wife only
(1) Incompatibility of temperament	(1) Wife's sterility	(1) Cruelty
(2) Mutual dislike	(2) Refuse to begin marital life	(2) Ruthless beating by husband
(3) Disparity of age between the pair	(3) Not working well, i.e., to husband's desire	(3) Vagabondism on the part of the husband
(4) Quarrels between relatives	(4) Family quarrels	(4) Addiction to vices
(5) Conversion of either to other religion	(5) Disclosure of relation between prohibited degrees	(5) Impotency
(6) Insanity after marriage	(6) Bigamy on the part of the wife	(6) Husband not calling the wife to keep house for him
(7) Chronic disease	(7) Woman given to thieving habits	(7) Continuous sickness of husband
(8) Mutual consent to divorce	(8) Married only for the sake of marriage, e.g., a defective woman	(8) If exchange promised not given by the husband
(9) Licentiousness on either side	(9) Woman having bad looks ..	(9) Husband having turned into an ascetic

But the most common causes are (1) incompatibility of temperament; (2) constant domestic quarrels; (3) ill-treatment; (4) sterility and (5) adultery or bigamy on either side. Where the woman has no right to divorce, she has recourse to a court of law either for maintenance or for

release on account of more or less the same reasons as above indicated. The following statement is illustrative of the reasons which occasioned divorces during the last ten years in the State, amongst different communities :—

Serial No.	CAUSES LEADING TO DIVORCE	NUMBER OF REGISTERED DEEDS OF DIVORCE BY THEIR CAUSES			
		Total	Baroda	Mehsana	Navsari
	Total ..	287	134	139	14
1	Incompatibility of Temperament	240	123	106	11
2	Breach of pacts made at marriage	1	..	1	..
3	Discovery of the wife's earlier marriage	1	..	1	..
4	Divorce of sister who was given in exchange of the wife to a person of wife's party	1	..	1	..
5	Abandoning husband	2	..	2	..
6	Tender age of husband in comparison to the wife's age	3	..	3	..
7	Marriage having caused disruption among relatives	1	..	1	..
8	Mutual dislike	4	1	3	..
9	Sterility	1	..	1	..
10	Want of equal family status of both parties	1	..	1	..
11	Husband refusing wife's maintenance	4	..	4	..
12	Wife's desertion in favour of a fresh husband	4	2	2	..
13	Husband's inability to support wife	4	..	3	1
14	Either party catching some disease	2	..	2	..
15	Either party being rendered unfit for continuation of the marital state	1	..	1	..
16	Physical defect in either party	2	1	1	..
17	Lunacy in either party	3	..	3	..
18	Absence of ordinary marital relations	3	..	1	2
19	Husband and wife belonging to different castes	1	..	1	..
20	Wife refusing to stay at husband's house	2	2	..	..
21	Husband's refusal to treat wife as such	1	1	..	..
22	Marriage having not turned out to be happy	2	2	..	..
23	Infidelity of either party	2	2	..	..
24	Husband taking <i>Sanyas</i>	1	..	1	..

19. Authority of the Caste Panchas—The next question is whether the permission of the caste *panch* is necessary for divorce or not? It is generally necessary but in certain castes at certain places it is not necessary. The marginal table gives the names of the castes in which it is absolutely necessary and not at all necessary to seek permission of the *panchas* before a divorce is given. If both parties are willing to divorce, the permission of the *panch* is dispensed with but in cases of unwillingness on the either side, the *panch* is called upon to decide the matter. It is generally called by the party suing for divorce who bears the expenses but at certain places in certain castes it has to be borne by the defaulting party, e.g. Kharwa in Beyt and Ghanchi in Kheralu. In certain castes it is borne by both the parties, e.g. Raval in Petlad and Meh-sana and Vaghri in Kadi, Mehsana, Padra, etc. It has sometimes to be borne by the husband even though he may not be at fault, e.g. Chunvalia in Damnagar, Bava in Baroda, Sankheda and Vaghodia

Names of castes in which the permission of the Panchas is absolutely		
NECESSARY		NOT NECESSARY
<i>Hindu</i>	<i>Hindu</i>	<i>Hindu</i>
1. Od	18. Vyas Brahman	1. Kadia
2. Otara	19. Sagaria	2. Kalal
3. Kachhia	20. Sarania	3. Kansara
4. Kokna	21. Meghwal	4. Charan
5. Kumbhar	22. Tadvi	5. Teli (Deccani)
6. Koli	23. Nayakda	6. Vagher
7. Kharwa		7. Sadhu
8. Gondha	<i>Musalman</i>	8. Gamit
9. Tapodhan		9. Chodhra
10. Tamboli	24. Kasai	<i>Musalman</i>
11. Dulwadi	25. Khatri	
	26. Khoja	10. Gandharva
12. Barot	27. Tai	11. Chawan
13. Bharthari	28. Pathan	12. Momna
14. Bhoi	29. Bhadela	13. Molesalam
15. Bhandari	30. Malek	14. Rangrej
16. Mali	31. Mochi	15. Vohra Trading
17. Vansfoda	32. Vohra (Ghanchi)	16. Shaikh

talukas, and Luhanas in Amreli. Amongst Bharwad and Dheds, it is customary for the people of the village to invite *panchas* in groups at their places, and feed them so that no expenditure is incurred.

The general usage is that the *panch* cannot give divorce if the husband is not willing to give it; of course where both parties are willing, the permission or the interference of the *panch* is not necessary, but in certain marginally noted Hindu castes, the *panchas* are competent to give divorce for unavoidable reasons against the will of the husband, but such cases are very rare. Amongst Musalmans, the *panch* interferes only if the woman is at fault; amongst Khojas, their council after weighing the reasons *pro* and *con* pronounces in the matter of divorce while in the Muslim Ghanchis in Atarsumba and Mochis generally, the *panchas* do sanction divorce against the will of the husband. But these occasions are very rarely to be found. The general principle seems to be that the organisation of the *panch* is only set in motion in defence of the weaker party.

The Khojas have the most methodical form of *panch* government amongst their community. They have a council called "*Rajkot Sarhukami Shia Ismail Imami Council*" with whose permission the divorces take place. The Council has powers to grant divorce even against the will of the husband or the wife and its decree is appealable, the Agakhan having the right to hear it. Instead of the release deed, it is usual in this caste to give a copy of the council's decision to the parties. If the husband does not respond to the summons of the Council he is given three months' time, at the end of which the case is decided by Council.

1. Od
2. Otara
3. Khatri (Gandevi)
4. Gosain (Mehsana)
5. Ghanchi (Mehsana and Baroda City)
6. Dabgar (Baroda City)
7. Teli
8. Dhobi (Damnagar)
9. Kadwa Patidar (Kheralu)
10. Matia Patidar (Mahuwa)
11. Barad Patidar (Vaghodia)
12. Baria (Karjan)
13. Bhoi (Atarsumba)
14. Mali (Kadi)
15. Rabari (Kalol, Khambha, Kodinar, Bhimkatta)
16. Luhar (Karjan, Chansma, Beyt)
17. Valand (Khambha)
18. Sutar (Mahuwa)
19. Chamadia (Tilakwada)
20. Bhangi (Mahuwa)

20. The Mode of Divorce—There is no ceremony of a religious nature attached to the act of divorce. But custom has taken the place of religion and prescribed certain ceremonies which are required to be observed in fulfilment of the act. Before detailing the different observances, it would be better first to refer to the practice common to almost all castes to reduce in writing the act of divorce for avoiding future troubles. These deeds are mostly executed on an unstamped paper and are rarely registered, though registration is resorted to if stamp paper is used. They are usually written in the presence of the caste *panchayat* concerned and are witnessed by them. Turning now to the customary ceremonies, it would be convenient to study them by groups of castes for which returns have been received. We shall therefore divide them into the following groups :—

Serial No.	Name of Groups	Number of castes included in the groups
1	Advanced	Barot, Bhavsar, Ghanchi, Khambhar, Lewa Patidar, Luhana, Soni, Sutar, Tapodhan and Vyas Brahmans.
2	Intermediate	Anjana Chaudhari, Barad, Baria, Bava, Darji, Gosai, Kadia, Kalal, Kadwa Patidar, Kansara, Khatri, Kharwa, Kumbhar, Machhi, Mali, Rajput, Sathwara, Tamboli, Targala and Valand.
3	Depressed classes ..	Bhangi, Chamadia, Garoda, Hadi, Meghwal, Turi, Vankar (Dhed) and Vansfoda.
4	Primitive and Forest Tribes	Gamit, Chodhra, Dhodia, Dubla, Kokna, Nayaka, Tadvi, Talavia, Vasawa.
5	Rest	Bajania, Bhandari, Bharathai, Bhoi, Dhobi, Charan, Dabgar, Gondha, Khawas Lakkadfoda, Od, Sadhu, Sagaria, Sarania, Teli, Vagher, Vaghri.
6	Muslim	Bhadela, Chawan, Fakir, Ghanchi, Hazam, Kasai, Khatri, Khoja, Malek, Memon, Mochi, Molesalam, Momna, Pathan, Pinjara, Rangrej, Shaikh, Sepoy, Sindhi, Tai and Vohra.

(i) Amongst the Advanced section, the release deed is executed in all the castes though amongst Sonis, oral divorce is operative. Amongst Lahanas and Tapodhan Brahmans the deed is mutually executed. The Bhavsar and the Sathwara women in Kalol taluka have to take off their bangles in token of the divorce. The Khambhars in Visnagar have the practice of tearing the end of their women's *gown* (upper garment) in the presence of the *panchas*. On the other hand, the Lewa Patidars in Harij have to tear off an end piece of the husband's *falia* (turban cloth) which has to be given to the wife. The Sutars in Mehana and the Lewa Patidars in Vyara allow the divorced woman to retain an ornament of her choice from amongst those given to her by the husband.

(ii) In the Intermediate class too, the *fargati* takes the form of a written deed though amongst Kadias, it takes the oral form, i.e., the husband orally asks the woman to go away—(*chaliya*). The Kumbhars in Patan also do not require a written divorce deed. The Anjana Chaudhari execute it mutually and the Kumbhars and Darjis have to do it in the presence of

the *panchas*. The Rajputs execute it on the village boundaries. The Anjanas and Kadwas, and Darjis in the Kalol mahal, and the Sathwaras in Mehsana, and the Targalas require the woman to remove her bangles; amongst the Barias in Petlad, both the husband and wife tear off the ends of their garments in addition. The Khavas in Beyt have the practice for the husband to utter to his wife the words "*tu tare raste thai ja*" (you can now go your own way). Amongst the Gosains in Mehsana and Kumbhars in Khambha mahal, it is customary for the husband to tear off an end of his turban and give it to the woman in token of her release; the Kumbhars in addition have to utter to the woman, the words "*tu mari ma bahen chhe*" (you are my mother or sister); the Valand husband in Khambha also has to call her "*ma bahen*".

(iii) Over and above the written *fargati*, there is, in the Depressed Class castes, a practice for the woman to remove her bangles and return them to the husband or sometimes, as amongst Bhangis in Bhadrans to break or throw them away. Amongst these classes in the Ratanpur mahal, the deed is always written on the boundary of the village. Amongst Dheds in the Damnagar mahal, it is usual to write in the divorce deed, the words "*bannene kain leva deva nathi*" (either of them has nothing to do with the other).

(iv) As in the other classes, amongst the Forest Tribes too, the release is given in writing. The Dhodias in Gandevi and the Nayakdas generally execute it mutually. Amongst the Gamits in Songadh taluka and the Vasawas in Mangrol, the *panch* is called together and offered wine to drink. But amongst the former it is the practice for the husband to give to the wife a new garment, of which an end is torn afterwards to signify the act of separation. The Dhodias in Mahuva remove the *mangalsutra* from the woman's neck and an end of her gown is torn. But the most curious practice prevails amongst the Bhils in Baroda district. In Baroda mahal, the Bhil husband and wife wishing to have a divorce are made to sit on the two banks of a *kotar* by the *panch* who then fix the amount of divorce and ask one of the parties to deal a blow to the tree nearby in token of separation. In Sinor, however, it is the practice to cut the very tree under which the *fargati* is written. Amongst Chodhras in Songadh the husband is required to give in writing an undertaking that he would not object to the woman taking another husband.

(v) Amongst the castes grouped under the Rest also, the *fargati* is generally given in writing. Amongst the Charans and Sagarias it is executed mutually. Amongst Vaghers, the written document is entrusted to a respectable third party to preserve. Amongst Dhobis, it is required to be witnessed by two or three persons on the husband's side. The Vaghris go to the *Simada* of the village and write it there. Amongst Ods, it is the practice to write the words "*a kanya tene Bapne marjiman ave te thekane valave: a kanya uper have maro koi pan prakarno hak rahyo nathi*." (This girl can be sent to any place her father fancies; I have now no kind of right upon her.) Amongst the Telis, the death ceremonies are performed as if the woman is dead. The Khavas in Beyt have the practice for the husband to utter to his wife the words, "*tu tare raste thai ja*" (you can now go your way) or "*tare ane mare ajithi fargati chhe*" (you and I are separated from today). Amongst Sadhus, after breaking her bangles, the woman has to bathe before she can marry again. Amongst the Hindu divorce practising castes in Dhari mahal, the deed of release is executed in a solitary place, outside the village, by the hands of one who is not of good repute in the village (*gam man saro na ganayo hoi eva manasna hathe*).

(vi) Amongst Muslims, it is customary amongst all castes thrice orally to utter the words signifying the act of separation in the presence of at least two *panchas* or other witnesses, though *fargati* is also passed in writing generally. The Memons in Harij and Musalmans generally in Bhadrans say to the wife "*tu mari ma bahen chhe*", while in Sinor, the Memons declare before the *panchas* "*mhe hak oothavyo chhe*" (I waive my right over her). The Vohras in Sinor make such a declaration before the *Mulla* while those in Vijapur have to bathe and then utter words signifying *tallak* with *Kurane Sharif* in their hands. The Sindhis in Khambha ask the woman to go away (*chali ja*). Other castes follow the general usage of a document and an oral *tallak*.

21. The Price of Divorce—When a wife is divorced or sues for divorce, she, her relatives or her new spouse is required to give a certain amount in exchange for her release to her first husband in almost all castes, the only exception being the Khatri, Dabgar, Tapodhan, Tamboli, Luhana and Vyas Brahman castes in which nothing is given to the husband. The amount so given is called "*vel*" and the fixing of the amount depends on (i) the age of the woman, (ii) the expenditure incurred by the divorced husband in marriage, (iii) social circumstances of the parties, and (iv) the need for her on the part of her new spouse. This amount varies from Rs. 10 in the Nayakdas to Rs. 5,000 amongst the Lewa Patidars. This amount is fixed by the *panchas* in certain castes, e.g., Navsari Kachhias, Lahanas, Dhobis, Vaghris, Talavias and Garodas. During the last ten years, 287 cases of divorce were registered in the Sub-Registrar's offices. In 100 out of these, no price was given to husband for divorce, but in the remaining cases, various

amounts were given to the party concerned in exchange for divorce. The marginal table gives these cases by the amount of money given. It gives a very good idea of the price that is paid for it. Moreover it is usual in all castes to exact a certain amount (varying according to the conditions of the parties) as fine from either of the parties, the new spouse or the defaulting party. The amount varies from Re. 1 to Rs. 125. Amongst Kachhias and Otaras, the caste has got to be feasted.

Besides this, the woman is required to return all ornaments that she might have received from the husband to be divorced and also any consideration received by her father in exchange for her. Amongst Bharwads in Harij, it is one of the conditions of divorce that woman cannot be given in marriage in the neighbouring villages or to the relatives of the divorced husband. Amongst Muslims, however when a woman is divorced, the husband has to give her some amount in the form of *meher*. This is to maintain her during the time (which is generally four months) she cannot marry again. The amount varies from a rupee and a quarter amongst Charans to Rs. 600 amongst Pinjaras. Amongst Ghanchis in Atarsumbha, the *panchas* sometimes prevail upon the woman to forgo the amount of *meher*. Amongst Fakirs, if the woman wants to have a divorce against the will of the husband she has to give an amount fixed by the *panchas* to her husband. Amongst Shaikhs, if she sues for divorce, nothing is given to her.

Amount in Rupees	Total
No consideration	100
1—50	4
50—100	16
100—250	53
250—500	42
500—1,000	43
1,000—2,000	11
2000 and over	8
Part cash and part kind ..	10
Total ..	287

22. Divorce and Resort to Courts—It is only when the *panchas* fail to bring about a divorce, the parties resort to courts for separation. The marginal table gives the number of suits and appeals filed in the different courts with their results in all such suits during the decade (1921–30). But we have seen already that no less than 2,884 divorces were registered under the Act upto the end of February 1931, i.e., 7½ years since the Marriage and Divorce Registration Act came into force. It would be interesting in this connection to know the grounds for which the parties had to go to the court. These grounds are given in the margin along with the number of cases. It may be noted that of the 224 cases, in no less than 220 the wife had to go to the court as a plaintiff while the husband figured as such in only 4 cases. This shows that it is only the weaker sex that is obliged to resort to court for separation.

Divorce suits or appeals	Total	Allowed	Rejected	Other-wise disposed of	Pending disposal
Original suits ..	224	81	129	1	13
First appeal ..	43	9	33	..	1
Second appeal ..	12	1	11	..	..

It would be interesting in this connection to

Grounds for suits	Number of cases
Ruthless beating	145
Incompatibility of temperament ..	17
Husband running away from home ..	15
Marrying another woman	12
Impotence	6
Husband's addiction to drinking liquor ..	5
Other	24

23. Divorce and Inheritance—It is the general practice that the children of the divorced mother remain with their legitimate father and inherit his property. Only where the husband waives his right over the children the latter go with the mother and inherit the step-father's property, e.g., amongst Chunvalias in Kodinar. In Beyt amongst Bavas and in Rabaris in Kodinar if the sucking child accompanies the mother and does not return to his or her legitimate father, it inherits the step-father's property. Amongst Mochis in Khambha if the woman has no children by her second husband those of the first get benefit of inheriting the second husband's property.

24. Conclusion—The discussion can now be brought to a close with a final word of caution; the heterogeneous mass of information, an analysis of which is attempted in these pages, does not give any solid ground to build theories upon—nothing short of clear tabular figures can give that. Yet the descriptive material may be of some use to study tendencies of different communities, their racial characteristics and the effect of literacy upon their social customs—as revealed by their divorce practices. It may be mentioned here at the risk of repetition that divorce customs will shed more light on the ways of thinking of the various communities if studied in conjunction with marriage customs. However such as the material was available, its treatment on the present lines was the only possible one. It is to be hoped that after an interval of years the operation of the new Act will give the student enough reliable statistics capable of more definite analysis.

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