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GUJARA'T.

SURAT AND BROACH.

VOLUME II.

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J. M. CAMPBELL.

August 1877.

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SURAT.

SURAT.

CHAPTER I.

DESCRIPTION.

POSITION AND AREA.

The district of Surat,[1] lying between 20° 15′ 0″ and 21° 28′ 0″ north latitude, and 72° 38 0″ and 73° 30′ 30″ east longitude,[2] has a total area of 1,669 square miles, and a population of 607,087 souls, or 363 to the square mile.[3] Of £223,828 (Rs. 22,38,280), the total realizable land revenue, £223,202 (Rs. 22,32,020) were recovered before the close of the year ending the 31st July 1875.

BOUNDARIES.

Situated on the shore of the Arabian Sea, where its waters begin to narrow into the Gulf of Cambay, the district of Surat stretches for about eighty miles from the Damanganga river northwards to the Kim. On the north a line, following for about forty miles the course of the Kim, and then passing eastwards for fifty miles more till it ends in one of the southern spurs of the Rájpipla hills, separates Surat from the district of Broach and the Wasrávi sub-division of the Baroda state. The eastern boundary is more irregular. At its northern extremity, leaving Rájpipla on the left, it runs for thirty miles south to the Tápti, where, for a short distance, it follows the course of the river westward, and then crossing with Baroda territory on the left, it stretches south for about twenty miles. Here a belt of Baroda land, about ten miles broad, cuts through the boundary line, passing westwards to the sea. But again beyond this break, keeping the lands of the petty states of Bánsda and Dharampor on the left, the boundary stretches southwards, drawing gradually towards the west until, at the extreme south of the district, it approaches within fifteen miles of the sea. To the south lie the Portuguese possessions, separated by the lands of the Surat and Tanna districts,

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[1] The Surat district occupies about one-half of the area known as the Surat *Athá-visi*, or territory of twenty-eight sub-divisions. The portion of Gujarát to which this name is applied may be roughly described as the lands that lie between the Kim and the Damanganga rivers and west of the Rájpipla, Bánsda, and Dharampor states. A list of the twenty-eight sub-divisions will be found below, p. 94. Those not included in the Surat district are now in the hands of His Highness the Gáekwár.

[2] The latitudes and longitudes shown in this account have been supplied by the officer in charge of the Gujarát party of the Great Trigonometrical Survey.

[3] Population figures, when nothing to the contrary is said, are taken from the Census Returns of 1872.

Chapter I., Description.

BOUNDARIES.

into the Nagar-Haveli division on the south-east, and Daman on the south-west. The area included within these limits does not all form a part of the Surat district. Two belts of land, each about fifteen miles in breadth, one running north and south, the other crossing from east to west, divide the district into three distinct sections. Of these, one on the north-west, about twenty-five miles long and twenty broad, includes the rich alluvial lands on either side of the estuary of the river Tápti, the second, about thirty miles long and from five to twenty miles broad, forms the north-east corner of the district; the third, twenty-five miles long and from fifteen to twenty broad, comprises the southern parts of the Surat plain, where it narrows between the Bánsda and Dharampor states and the sea. With the exception of the north-eastern division, each of these groups contains territory belonging to Native chiefs. In the north-west, on the right bank of the Tápti, are some Baroda villages, and on the left are the lands that go to make up the estate of the chief of Sachin. Within the limits of the southern division are included a tract of territory about eight miles long and six miles broad, and an isolated village, both belonging to His Highness the Gáekwár.

ADMINISTRATIVE SUB-DIVISIONS.

The area included in the district of Surat is, for administrative purposes, distributed over eight sub-divisions, with an average area of 208 square miles, containing on an average the lands of 107 villages, and a population of 75,885 souls. The following summary gives the chief statistics of each of these sub-divisions:—

Comparative Summary of the Chief Sub-divisional Details of the Surat District.

Names of Sub divisions.	Area in square miles	Number of Villages and Hamlets									Population according to the census of 1872	Pressure of population to the square mile.	Land revenue for the year ending 31st July 1875.
		Government			Alienated			Total Villages					
		Villages.		Hamlets (a)	Villages.		Hamlets. (a)						
		Inhabited.	Uninhabited	Inhabited	Inhabited	Uninhabited	Inhabited	Government	Alienated	Total			£
Olpád.. .	326	116	19	17	3	1	..	135	4	139	66,256	203	58,825
Mándvi	280	123½	31	151½	14½	..	5½	154½	14½	169	48,367	172	12,900
Chorásí (b)	104	55	13	5	10	..	1	68	10	78	155,584	1,496	21,866
Bárdoli ..	221	123	15	44	.	..	.	138	.	138	77,500	350	39,027
Jaláipor	200	84	4	61	7	.	3	88	7	95	70,112	350	34,088
Chikhli .	165	58	.	204	5	..	15	58	5	63	59,311	359	20,969
Balsár ..	210	96	..	197	.	..	..	96	..	96	78,207	372	24,346
Párdi . ..	163	80	..	184	1	..	1	80	1	81	51,749	317	11,807
Total.	1,669	735½	82	863½	40½	1	25½	817½	41½	859	607,087	363	223,828

(a) There were no uninhabited hamlets in 1875.
(b) The population of Chorásí includes the population (107,149) of the city of Surat.

ASPECT.

The district forms an alluvial plain stretching from north to south for about eighty miles and, with a gradual fall sloping from the high lands to the east of the district, westwards to the shores of the

Arabian Sea. To the north, along the delta of the Tápti, the plain stretches from east to west for about sixty miles. But south of this the line of coast bends inwards, and as, at the same time, the hills draw towards the sea, the plain country is gradually reduced till, in the extreme south, its breadth is but little more than fifteen miles. Though, taken as a whole, they form a plain broken by but few rising grounds, the lands of the district vary from the rich level stretches of alluvial soil in the north-west, to the poorer tracts in the south-east, furrowed in some places by the channels of quick-flowing streams, and in others raised into barren and rocky uplands. Again, especially in the northern parts of the district, the aspect of the plain varies in accordance with its distance from the sea. Here the land is divided into three belts running, from north to south, parallel to the line of the coast. Nearest the sea is a barren stretch of sand-drift and salt marsh, behind that a rich highly cultivated plain, and further east poorer and more open land rising gradually into a wild tract of hill and forest.

Coast line.

The line of coast along a great part of its length is fringed by rows of small hills of drifted sand. These in some places are dry and barren. In others they contain springs of fresh water, and have their sides enclosed with hedges, and covered with a growth of creepers and palm trees. But through the openings of river-mouths the tidal waters find a ready entrance, and, passing behind the drifts of heaped-up sand, leave the main course of the stream, and along small winding channels make their way through miles of low-lying country Over a large area the tide regularly flows, and this remains a salt marsh But other lands generally beyond the reach of the sea are, at times of high springs, covered with a shallow film of salt water. As the water dries off, the surface shrivels into thin flakes of earth, and afterwards is again reduced to dust. This dust, borne in clouds before the strong sea-breeze of the hot-weather months, by its drought and bitterness, blights the crops and damages the soil of cultivated fields. In this tract, with the exception of a few favoured spots, the water is brackish and scanty; cultivation is confined within small limits; and the population, almost all seamen, are supported by the sale of dried fish, or engage in the local traffic up the channels of the navigable creeks.

Central belt.

The belt of highly cultivated land that lies beyond the reach of the tidal waters varies considerably in breadth in different parts of the district. Broadest in the north of the district, it is further to the south, by the nearer approach of the sea and the hills, generally confined within narrower limits till, in the extreme south, it almost entirely disappears. In the north the deeper loam brought down by the Tápti gives a uniformly rich and level aspect to the central parts of the district. But further south, where the streams are smaller and more rapid, the surface of the plain is rougher, and differences of soil more apparent. In the hollows near the beds of streams are plots of most fertile land, highly cultivated, and rich in trees. But between these low-lying tracts the uplands that form the water-sheds of the streams, though nowhere more than slightly raised above the general level of the plain, have a thinner soil and a more scanty supply of water. These tracts of land, bearing only grass or the

Chapter I. Description.

hardier sorts of brushwood, are used as village grazing grounds, and have a somewhat rough and uncared-for look.

ASPECT.

Inland tracts.

Towards the east, beyond the belt of rich black soil, the land grows gradually poorer. The level of the plain, more deeply seamed by river-beds, is, at the same time, relieved by mounds and plateaux of rising ground. The poorer lands cut up by the beds of small streams are, in some places, covered over large areas, with a growth of prickly-pear, acacia, date trees, and other of the coarse varieties of indigenous timber. But even where the soil is richer, signs of high cultivation become gradually fewer, and the huts of poor, ill-fed, almost unsettled, tribes take the place of the rich villages of skilled peasants. In the extreme east even the rough tillage disappears, the natural vegetation grows more and more dense, and the land merges into the hills and forests known as the Dángs; a tract which, except by the wilder tribes, can be visited only at certain seasons of the year. The extent to which the district of Surat stretches into this region of forest varies considerably at different parts of its eastern boundary. In the north of the lands of the Mándvi sub-division, passing eastwards through a rough and unhealthy country, include large tracts of forest land uncultivated and peopled by the rudest tribes. But further south, first a strip of Baroda territory, and lower down the lands of the Bánsda and Dharampor states, occupy the greater part of the space between the well-tilled fields of Bárdoli and the almost uninhabited forests of the Dángs. Again, as the hills draw closer to the sea, though their immediate slopes lie beyond, their spurs stretch westwards within the limits of the Chikhli sub-division. Finally, in the extreme south, the district throughout its whole breadth has, to some extent, the character of the more inland parts further north. The surface of the plain is rugged, furrowed by water-courses, and dotted with isolated mounds; the soil is poor, and the water unwholesome; the people are few, and ill-fed. Much land is waste or given up to grass, and the scanty tillage is confined to the raising of the coarser varieties of grain.

HILLS.

Though in some places undulating sharply, and in others rising into wide-swelling eminences, the surface of the district is, on the whole, but seldom raised above the average elevation of 150 feet.[1] In the north, near the village of Tadkesar, on the right bank of the Tápti, and further east in the Mándvi sub-division, chains of flat-topped hills, from 200 to 300 feet in height, stretch northwards to the main lines of the Rájpipla range. South of the Tápti a succession of high lands, running north-east from the Sahyádri mountains to the left bank of the Tápti, separate the plains of Khándesh and

[1] Records, Geological Survey of India, I., 2, 27. Measurements taken at stations along the line of railway give the plain about 10 miles from the coast an average elevation above the mean sea level of a little less than 50 feet. The following are the heights of these stations above the Town Hall *datum*, that is, a point 100 feet below the bench mark at the north end of the steps of the Bombay Town Hall, and approximately 80 feet below the mean sea level —Párdi, 130·58; Balsar, 128·75; Dungri, 135·78; Bilimora, 114·78; Amalsád, 123·18, Navsári, 117·78; Sachin, 121·48, Surat, 139·78, Amroli, 141·78; Sáen, 146·78; Kim, 144·45.—Bombay Sanitary Commissioner's Report for 1873, p. 12.

HILLS.

Surat. The northern extremity of this range of hills lies considerably beyond the eastern boundary of Surat. But further to the south, as they draw nearer to the coast, their western spurs stretch within the limits of the district till, in the south-east, ranges of high hills are seen in the distance, and across its southern limit the plain itself is broken by uplands and low ridges of rock. Besides these spurs from the Rájpipla hills on the north-east, and the outlying slopes of the Sahyádri hills on the south-east, the level of the plain is in some places broken by small isolated peaks, varying in height from fifty to 600 feet. About four miles to the north-east of Mota, a village about fifteen miles east of Surat, an isolated hill rises from the surrounding plain to a height of about 100 feet. Further to the south, about twenty-two miles north of Daman, and six from the coast, a group of small hills gives its name to the village of Dungri. These hills, seven in number, and varying in height from fifty to eighty feet, extend over an area of about one square mile. Their sides are covered with a stunted growth of small teak trees, and, in a country almost without stones, their rocks prove a valuable quarry. Twelve miles further to the south, the hill of Párnera rises to a height of about 500 feet above the plain.[1] Near its base the spurs were till lately (1863) covered with a growth of forest trees dense enough to attract panthers and other beasts of prey. At the top of the hill are the ruins of an old fort, which, formerly a place of some consequence, was, to prevent misappropriation, dismantled during the mutinies of 1857.[2] About five miles to the south of Párnera, the ruined fort of Párdi, said to have been built by the Portuguese, stands on a slight eminence, the most northerly of a series of small rocky hills that from this point crop up at intervals southwards to the Daman coast. Of the high grounds in the extreme south of the district the most prominent are on the right bank of the Kolak river, six miles to the south of Párdi, the fort and small hill of Bagwára, and close by, two saddle-backed hills which rise to a height of about 420 feet.

RIVERS.

Except the Kim and Tápti in the north, the district contains no rivers of any great size. But though short and of scanty volume, the southern streams are valuable, supplying, by their deep navigable tidal estuaries, an outlet for the produce of the district, and forming good fair-weather ports for the small craft engaged in the coasting trade. The character of the course of these smaller streams varies but little. Rising in the high lands to the east of the district they flow westwards, in many cases over rocky beds, between banks wide apart, formed sometimes of alluvial cliffs and at other places sloping gently to the stream. Swollen into torrents in the rainy season, the freshes soon pass off, and in the dry weather only a scanty flow of water remains, here trickling among the stones, and again forming still deep pools.[3] Below the influence of the tide the streams, passing between

[1] This measurement is supplied by the Superintendent of Revenue Survey, Gujarát. Mr. Wynne (Records, Geological Survey of India, I., 2-32) gives 200 feet, "roughly measured by a barometer at its summit."

[2] Further details will be found below under the head of Towns and Places of Interest (Párnera).

[3] Records, Geological Survey of India, I., 2-31.

Chapter I. Description.

banks of slime and mud, are, for boats of about fifty tons burden, generally navigable as far as ten miles from the coast.

RIVERS.

The Kim.

The Kim, with a course seventy miles in length, and a drainage area estimated at 700 square miles, forming the northern limit of the Surat district, falls into the Gulf of Cambay, about twenty miles to the north of the estuary of the Tápti. Rising in the Rájpipla hills, the Kim for the first fifty miles of its course passes through Rájpipla territory and the Wasrávi division of the Baroda state. For the remaining twenty miles the river winds in a westerly direction between the Ankleswar sub-division of the Broach district on the right and the Olpád sub-division of Surat on the left. Like the other rivers of the district, the course of the Kim lies between high banks of earth and mud, the northern bank being steeper and more rugged than that on the south.[1] The fall in the bed of the river is rapid, and its stream, though in times of flood it is difficult to cross, in the fair season dwindles down to a succession of pools. Its waters are not used for irrigation; and though the tidal wave is felt for some miles up the channel, there is not depth enough to allow of the passage of boats.

The Tápti.

The river Tápti, or more correctly Tápi, has a course, including windings, of about 450 miles, a drainage area of about 30,000 miles, and carries to the sea a volume of water estimated to vary from an hourly discharge of 120,000,000 cubic yards during seasons of extreme flood to 25,000 cubic yards towards the close of the dry-weather months.[2] The 450 miles of the Tápti's course, westward from the high lands of Central India to the sea, may be divided into four chief sections: the first, of 150 miles, from its source in the west of the great Sátpura plateau through parts of the Central Provinces and Berár till, a few miles below the town of Burhánpur, it enters the plain of Khándesh; the second, of 180 miles, its passage across Khándesh; the third, where the waters of the river through fifty miles of hill and rock force their way down to the low lands of Gujarát; and the fourth, seventy miles more, across the alluvial plain of Surat.

Berár.

Though the original stream may be traced for some miles further, a sacred reservoir in the town of Multái, in the Betul district of the Central Provinces, is generally considered the source of the river Tápti. After leaving Multái the stream runs at first through open and partially cultivated lands, and then cuts its way between the two spurs of the Sátpura mountains, the Chikalda hills of Berár on the left, and the wilder range of Kálibhit on the right. Beyond this gorge the hills again retire. But for the first 150 miles of its course

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[1] Details of the formation of the northern bank are given in the Broach Statistical Account.

[2] Mr. Saunders (Sketch of the Mountains and Rivers of India, 31) gives 441 miles as the length, and 27,000 square miles the drainage area. The estimate given in the text seems to agree somewhat more closely with the results of Mr. Edward's survey of the river (1852), of which details are given below. The discharge in times of extreme flood is calculated, for a body of water sufficient to fill the bed of the Tápti to the brink of its banks The measurement of 25,000 cubic yards was taken in May 1860. Similar measurements in February 1857 gave an hourly discharge of 100,000 cubic yards of water.—Bombay Government Selection, LXI. (New Series), p. 3.

spurs of the Sátpura range still somewhat closely hem in the valley of the Tápti. Falling rapidly from the Sátpura uplands, through a deep-cut channel from 100 to 150 yards wide, the flood-waters of the river soon drain away, leaving in the dry season a stream which, passing over a rocky bed, can in many places be forded. The banks, though high, are not steep, and, except where sharply cut by a turn in the river's course, they slope gradually to the level of the stream; and, like the country round, are covered with forest trees, brush-wood, and grass, a shelter to wild animals of every kind.

In Khándesh.

During the next 180 miles, the Tápti passes through the plain country of Khándesh. At its eastern extremity, where it is separated by only a slight fall from the plain of Berár, the level of the lands of Khándesh is from 700 to 750 feet above the sea. From this point they slope towards the north-west until they reach the high lands that divide Khándesh from Surat. In its passage through Khándesh the Tápti receives several tributaries. Of these the chief are, on the left bank, the Purna, the Wághur, the Girna, the Bori, the Pánjhra, and the Shiva. On the right bank, the neighbourhood of the Sátpura hills prevents the formation of any large tributaries. But from this side come the Suki, the Aner, the Arunáwati, the Gomai, and the Wáler. For the first 160 miles of its course in Khándesh the Tápti passes through a flat and well-cultivated country. The banks, from 250 to 400 yards apart, and generally raised about sixty feet above the bed of the stream, consist of two parts, a lower deposit of yellow earth, and a covering layer of black soil, the whole raised but little above the level of the surrounding country. Except in a few places, where the bed of the stream is crossed by rocky barriers, the water, after the floods of the rainy season are over, flows over gravel shoals, in numerous channels, with a general breadth of from 150 to 300 feet, a depth varying from nine to eighteen inches, and a velocity of from two to three miles an hour.[1] During the last twenty miles of its Khándesh course, as it draws near the west of the district, hills appearing in the plain on either side of the river send down spurs close to its banks; the land, no longer tilled, is covered with thick forests; and the only signs of inhabitants are clusters of three or four Bhil huts. At the same time the stream, forcing its way among stones and boulders, quickens into rapids, or shoots over barriers of rock.

Down the Ghát.

Here, at the narrow passage known as the Deer's Leap, or *Haranfál*, the descent from Khándesh to the plain of Gujarát begins. This section of the river's course, consisting partly of still deep basins bordered by high cliffs, and partly of rapids formed by barriers of rock, extends through more than fifty miles of a wild, almost uninhabited, country.

In Gujarát.

On leaving the Dáng forests the Tápti enters on its last stage, the passage of fifty miles in a direct line, or, including windings, of seventy miles across the Surat plain to the sea. For the first forty

[1] These are Mr. Edward's figures, taken during the survey of the river, March to May 1852.

Chapter I. Description. Rivers. *The Tápti.*

miles the river with some windings runs, on the whole, to the north-west; below that, for ten miles, it turns to the south-west, and then, suddenly striking to the north and winding first westwards, and again back towards the south-east, at the city of Surat, about twelve miles from its mouth, it again sweeps to the south-west. Below Surat the course of the river continues westward till, as they near the sea, its waters take a final bend to the south. These seventy miles of the Tápti's course are naturally divided into two parts, above and below the limit of the tidal wave. Of these the upper or fresh-water section includes about forty miles, and the lower or tidal section but little more than thirty. Though they gradually merge into each other, the character of these two sections is in several respects distinct. In the upper part the river passes through the less cultivated tracts in the east of the Surat plain. And it is only when the village of Wághecha is passed twenty-two miles west of the point where it enters the district, that the last spur of the Rájpipla hills is left behind. At this part of its course the river flows between banks from 500 to 1,000 yards apart, formed of thirty to forty feet of tough, yellowish clay, interspersed with layers of limestone, and capped with a deposit of from two to four feet of black soil.

Tidal section.

During almost the whole of its course of thirty-two miles as a tidal river, the Tápti passes through the rich highly cultivated plain that forms the central part of the district of Surat. Only for a few miles before it falls into the sea are the lands through which the river passes barren and liable to be submerged by the tides. Below Pálri the course of the river stretches for about eight miles towards the south-west; then near the village of Waráchа, where the tides daily ebb and flow, it winds westwards for about two miles. Here, a little above the village of Amroli, the limit of ordinary navigation, it strikes for three miles sharply to the north-west till, at Wariáv, the lowest ford in the course of the river, it bends for three miles more to the south-west; then winding again to the south-east, it runs for four miles in a line almost parallel to its former course to the city of Surat, where it again strikes suddenly towards the south-west. So sharp is this curve in the river's course that though by water Surat is more than ten miles from Amroli, by land the distance is but little more than two. Below Surat the river stretches to the south-west till, about four miles from its mouth, it turns to the left and, gradually widening, flows southwards into the sea. During this section of its course the banks have little of the steep and rough character they bear further up the stream. Below the limit of the tide, as the current becomes weaker, the land on either side of the river is less heaped up, till, within seven miles of Pálri, so little is it raised above the level of the stream that, for about two miles between the villages of Waráchа and Fulpára, in times of flood the river, overtopping the left bank, and in a great body of water rushing westwards, has more than once flooded the city of Surat. Further down the stream, at the more abrupt turnings, as on the right bank at Ránder, and at Surat about two miles further down on the left bank, the outer edge is heaped up by the force of the current into a high steep cliff. But below Ránder the right bank soon drops

again, and continues low and shelving fifteen miles to the sea. So, too, within a few miles of Surat the left bank that, for a mile or two, was raised from twenty to thirty feet above the stream, has again sunk so low that at high tide the water, overlapping the bank, passes beyond, covering a large area of land.

Bed of the river.

Below the limit of the tide the bed of the river is covered by a layer of mud. This deposit varies from a few inches, where the tide runs strong, to as much as four feet in the still bends of the river. Opposite the city of Surat, at Umra, two miles, and at Magdala, four miles, further to the west, the sand washed down in times of flood has formed banks and shoals. Especially is this the case near the mouth of the river, where the currents of the stream and tide meeting have, across almost the entire breadth of the river, thrown up alternate layers of sand and clay. Borings made in 1854 showed that the beds of sand and gravel in the channel of the river were firm and unyielding, the stratum of sand without gravel was compact, and the clay in all cases stiff.

Tributaries.

In its passage through the Surat district the only important tributary received by the Tápti is the Warch. This stream, rising in the western spurs of the Rájpipla hills, flows towards the south-west across the Mándvi sub-division, and after a course of about fifteen miles joins the Tápti on its right bank at the village of Piparia, forty miles from the sea.

Islands.

At the Wághecha rapids, about forty miles from its mouth, the trap rock *in situ* forms several islands in the bed of the Tápti. These islands, though occasionally liable to be flooded, are covered with trees as well as with grass and bushes. Of the banks of sand and clay that rise above the ordinary level of the Tápti's stream, the chief[1] lies in a bend of the right bank of the river about five miles below the city of Surat. Near the mouth of the river, inside of the bar, are also one or two flatwooded islands.

Ferries.

In its course through the Surat district there are two important ferries across the Tápti. From the town of Mándvi, on the right bank of the stream, about sixty miles from its mouth, a boat crosses to the villages on the southern bank The other ferry plies between the city of Surat and the villages on the northern bank. The Tápti can be forded at three places within the British territory. Of these Karod is the highest up, about fifty-six miles from the sea ; the next, Bodhán, about forty; and Wariáv, about twenty miles from the mouth of the river.

Navigation.

At present (1876) the navigation of the Tápti is confined to the last twenty miles of its course. Before the days of railways it was at one time thought that the Tápti might be made the highway for the carriage of the produce of Khándesh and the Central Provinces to the sea. With this object, in 1852 a survey of the Tápti

[1] This bank is generally spoken of simply as *Bet*, or the island. Forbes (see below, p. 18) speaks of it as "Namra," a name of which there is said to be now no trace. Perhaps the word should be Umra, as *Bet* once formed part of the lands of that village.

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was made. This survey extended over a distance of 232 miles from the city of Surat to near the east of Khándesh at the junction of the Wághur and Tápti rivers. Beyond the eastern limit of Khándesh, during the first 150 miles of its course, the bed of the Tápti is too rough to permit of its navigation by boats. The only use which its waters serve for purposes of trade is the floating down of timber in times of flood, and even then the channel is so broken that the wood is said frequently to be sucked into secret currents and lost. The 232 miles of the Tápti's course, surveyed by Mr. Edwards in 1852, have been divided by him into eleven sections : five open stretches, varying in length from eleven to fifty-eight miles ; five rocky barriers of, on an average, about two miles in length ; and a special section, fifty-one miles long, on the whole rocky and hard to navigate, through which the stream forces its way from the plain of Khándesh to the low-lying lands of Gujarát.

rvey, 1852.

Of each of the eleven sections Mr. Edwards has supplied the following details[1]: Beginning with the portion of the river furthest from the sea, the first section, forty-nine miles long, extends from the junction of the Wághur river on the left bank of the Tápti, about thirty-three miles below Burhánpur, westwards to the junction of the Bori. This part of the river presented no greater hinderance to navigation than twenty-seven gravel shoals and one light rocky ledge. At the junction of the Bori the second section begins, consisting of a barrier of rocks extending across the bed of the Tápti for a distance of one mile and 795 feet. But this barrier was not formidable, and, it was estimated, might be removed at a cost of not more than £150 (Rs. 1,500). Below these rocks the third division stretches westwards for fifty-eight miles and 1,575 feet, as far as the village of Prakásha, in the Sháda sub-division. This section was found to contain thirty-six gravel shoals and nine ledges of rock, but none of them large enough to prevent the passage of boats. At Prakásha rocks again blocked up the channel, forming a barrier extending over a distance of one mile and 3,020 feet, in character much like that formerly found at the junction of the Bori river. Through this barrier it was estimated that a passage could be cleared at a cost of £250 (Rs. 2,500). This rough section is again followed by an open reach extending over a distance of twenty miles and 2,143 feet, with fewer shoals than the former stretch, and a slight increase in the number of obstructions from rocks. The river has now reached the wild country at the west of Khándesh, and it is here that the first serious obstruction to navigation is met. This passage, beginning with a rapid falling 8·5 feet in a total length of 605 feet, extends over a distance of one mile and 5,120 feet, the stream shooting over four successive ridges of rock. Further on, the stream, among rocks and boulders, dashing over seven smaller barriers of rock, enters a rough passage with a fall of 18·69 feet in a length of 725 feet, called, from the narrowness of the channel and the wildness of its banks, the *Haranfál*, or Deer's Leap. To clear a channel fit for the passage of boats through these rocks

[1] Condensed from Mr. Edward's report.—Trans. Bom Geog. Soc., XI., 16-27.

would, it was estimated, cost a sum of £1,730 (Rs. 17,300). The seventh division extends through the wild country between the west of Khándesh and the east of Surat, a distance of fifty-one miles and 3,423 feet. The obstructions in this part of the river's course include altogether 3,120 feet of rocky ledges and twenty-one gravel shoals. After shooting the Haranfál rapids the river enters a deep basin, passing between high cliffs for about 2,500 feet, through a channel eighty feet wide and of considerable depth. Beyond this basin the cliffs cease, the channel of the river again becomes open, and, except for some rocks on the left side, the bed is of gravel. Below the village of Kokti there is plenty of water, and but few hinderances to navigation. At Koida, for about a mile and a half, the bed of the river is rocky. For a portion of this distance there are two channels; but the only obstacles are a few ridges of rock, some loose boulders, and at one spot for about thirty feet the narrowness of the channel. Beyond these rocks, except for two slight ridges, the one below the deserted village of Kurupora, and the other at Kapur, the stream again winds over a gravel bed past the fort of Bajrudh to Karanja. In the rocks opposite Kapur is some coarse-grained freestone, the only rocks of this kind found throughout the whole of the surveyed portions of the river. The channel of the river, which is now within the limits of the Mándvi sub-division of the Surat district, again passes through a barrier of rock, extending over a distance of 1 mile and 2,495 feet. Here the stream flows for some distance in one channel. It then divides into two, one on the right bank and the other on the left, and they again unite opposite the village of Wareth. The better channel on the left bank might, it was estimated, be made fit for navigation at a cost of £200 (Rs. 2,000). The next or ninth division stretches for eleven miles and forty-five feet as far as the village of Karod, about fifty-six miles from the mouth of the river. Except for a few rocky ledges and one gravel shoal, the channel of the river throughout this section is clear, the whole forming wide and deep pools. Beyond Karod, near the villages of Haripara and Wághecha, the stream encounters its last barrier in the most westerly spur of the Rájpipla hills. Here, for nearly four miles, the waters of the river, with an average fall of six feet a mile, force their way among masses of rock and isolated boulders that rise but a few feet above the surface of the stream. The confusion of rocks seemed too great to admit of the passage of a boat. But a close examination showed several good channels winding through the boulders. To make these rapids easily passable, the channel should be defined, straightened in some places, and all other outlets for the water blocked up. These changes, it was estimated, might be made at a cost of £700 (Rs. 7,000). Below this barrier of rocks to near Surat, a distance of more than thirty-one miles, the channel is, on the whole, open, the obstructions consisting of six gravel shoals and rocky ledges, amounting altogether to a breadth of seventy feet. For a short distance beyond Khanjroli, rocks continue to appear in the bed of the river till, at the village of Piparia, one portion of the water runs in a stream to the left bank, while another flows near the middle of the river. Nearly opposite Piparia the left stream again divides in two, one portion running between the

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left bank and a lofty island, thickly covered with acacia, or *báwal* trees, and the other uniting with the main stream. After passing the island as far as Pátna, the water is again collected in an extensive pool, with a few rocks here and there. Below this point, to the limits of the ordinary navigation, there are few obstructions, the river forming long and deep pools over beds of gravel. In spite of the difficulties mentioned above, Mr. Edwards was able at the driest season of the year—the months of April and May—to bring down the whole way, without once taking it out of the water, a boat fifteen feet long, four feet four inches wide, and drawing, when empty, one foot of water. He estimated that at a total cost of £5,355 (Rs. 53,550) all the obstructions might be removed, and the stream opened for trade over a distance of 232 miles. The average annual expenditure on establishment and in keeping the channel of the river clear he calculated at £650 (Rs. 6,500). With regard to the prospects of developing a river traffic, Mr. Edwards was of opinion that the whole produce of Khándesh and a portion of the exports from Berár and Central India would find their way by the Tápti to Surat. The vessels best suited for this trade were, in his opinion, boats ninety-six feet long, eight feet wide, and two feet deep, able to carry loads of about thirteen tons Such boats, he calculated, could be made of wood at a cost of £50 (Rs. 500) each, and with the help of the current on the way down, and the strong westerly winds on the return voyage, could complete, on an average, eight trips in the year. No attempt would seem to have been made to carry out Mr. Edwards' scheme, and a few years afterwards, with the construction of the railway from Bombay through Khándesh and Berár, the necessity of providing water-carriage for the produce of those countries ceased. To remove the sand-banks from the mouth of the river, and form a harbour at or near the town of Surat, was one of the original schemes framed by the projectors of the Bombay, Baroda, and Central India Railway. No steps were, however, taken to carry out this part of the original plan, and, with the exception of an unsuccessful attempt to use the force of the current to work a dredging-machine, no effort would seem to have been made to improve the navigation of the Tápti.

Navigation of the river, 1876.

The following details show the present (1876) state of the channel of the Tápti between the sea and the city of Surat. The anchorage ground for large ships in Surat road, at the mouth of the Tápti, is in forty-two to forty-eight feet at low water. Though the Surat roads are a safe place of anchorage from October to the beginning of April, it is considered dangerous for ships drawing much water to remain in the road after the middle of April. For in this month and early in May smart southerly winds frequently blow during the springs, particularly in the night, with the flood-tide.[1] At the road the tides run rapidly, especially the ebb, about 5¾ miles (five knots) an hour; further in, near the bar, they do not run with so much velocity. At the bar the height of the tide varies from twelve to twenty-

[1] In the heavy storm of the 20th April 1782 several large and small ships were moored in Surat road; some parted their cables, were driven on shore and went to pieces.—Horsburgh's East India Directory, 443, 444.

two feet at neaps, to twenty-seven feet at the highest springs. The average rise is here about fifteen feet; but further up the river, about four miles west of Surat, the rise of the tide is not more than ten feet.[1] The entrance over the bar into the Surat river is continually changing. By the shifting of the sand new channels are opened and old ones shut up. Formerly the Dumas channel was the deepest, and was generally used by ships. The direction of this passage was along the east side of a sand-bank towards the village of Dumas on the left bank of the river. This channel is now filled, and is only navigable at half tide. The proper entrance can be pointed out only by a native pilot. Although the estuary of the river is here not less than four miles across, the passage is narrow, and at low-water spring-tides, between the dry sands near the bar, there is not depth sufficient for a small boat. To those passing outward these banks of dry sand have a dreary aspect, rising from twelve to fourteen feet on either side of the narrow channel. During the latter part of the ebb the water, rushing violently through the narrow channels, carries boats with it at great speed. These passages are very shallow, and boats, always liable to touch the bottom, would upset if the sailors were not ready to leap out and support them. The distance from the bar to the city of Surat is about twelve, and by the winding of the channel about fifteen, miles. For nearly two-thirds of this distance there is a continued chain of sand-banks, many of them dry at half tide, with very small depths at low water in the channels between them. The two chief sand-banks are near Magdala, about four miles, and Umra, about ten miles, from the mouth of the river. Above Umra and near the city the river is more contracted, with deeper water. Opposite the fort of Surat there is at all times of the tide a depth of water of not less than ten feet.[2] Though boats sometimes pass up to Ránder, three miles, and on to the railway bridge at Amroli, eleven miles above Surat, that city is at present the ordinary limit of navigation. The shipping which now (1876) visit Surat are native craft of from eighteen to thirty-six tons (50 to 100 *khándis*) burden, and one light draft steamer that plies from Surat to Gogo and Bhaunagar on the western shore of the Gulf of Cambay. These boats, steam-ships, and sailing vessels alike ply only during the fair-weather season. In the months of June, July, and August there is nothing but purely local traffic on the Tápti, and very little else in the month of September. Unless when fortunate in tide and wind, sailing vessels of any size often take from two to three days to pass as far up as Surat. The steam-ships, varying from 100 to 200 tons burden, and drawing from five to six feet, cannot pass up and down the river at less than half tides.

Though at present so many obstacles exist in the way of navigation, a comparison of the descriptions of the river given in former years

Its condition in former years. 1876-1530.

[1] These figures and other details of the navigation of the Tápti have been kindly supplied by Mr. Shepherd, the proprietor of the line of steam ferry boats that ply between Bombay and Cambay. In Taylor's Sailing Directory (369), in the road the springs are said to rise 19 feet.

[2] These are Mr. Shepherd's figures. Captain Taylor (1873), Indian Directory, p. 369, says the Tápti is fordable abreast of Surat when the tide is out.

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would seem to show that the character of its bed has changed but little since the days when Surat was one of the chief centres of commerce in Western India. In 1863 the "Pioneer" steam-ship, 400 tons burden, attempted, when lying off Magdala, four miles from the mouth of the river, to take in a cargo of cotton. When about half loaded she took the ground and became a wreck[1] The engineer who examined the river in 1854, came to the conclusion that the bed had filled in considerably, and that the action of the current was not of sufficient power to scour out the channel.[2] In 1855 ships of from 144 to 180 tons burden (400-500 *khándis*) passed up as far as Surat. At that time there was over the bar at all times of the tide a depth of fifteen feet of water. Between the mouth of the river and Surat were several shoals and sand-banks that could be passed only at high tides. At neaps, even when the tide was full, on the banks at Umra and Magdala, there were not more than six and a half feet of water.[3] In 1850 it was thought that with no very great outlay the passage might be made practicable as far as Surat during the greater part of the day. The Waráchа cut, by draining off some of the current, was supposed to have increased the tendency of the river to silt.[4] In 1846, at the mouth of the river, across a whole breadth of from five to seven miles, were only two channels occupying together not more than a mile or a mile and a half. Boats getting on the sand-banks were often lost.[5] In the beginning of the present century (1813) the navigation of the Tápti is said to have been very difficult in consequence of "the sands frequently shifting, by which new channels are formed and old ones shut up Nearly by two-thirds of the distance from the bar to Surat was a continued chain of banks, having but narrow channels between them."[6]

A hundred years ago (November 1774), on the bar at the mouth of the river, the depth of water varied from three feet at low tide to eighteen feet at springs. Ships of considerable size could then pass over the bar; but further up in the river were other banks, of which that near the village of Umra, half a league below Surat, was the shoalest. Above Surat the river was described as becoming shallower and shallower, so that at low water, as at present, it was fordable at the village of Wáriáv.[7] Except when in want of repairs, ships engaged in the European trade remained at anchor on the roads, the merchants taking their goods to Surat either by land or in small boats. Though

[1] MS. note from Mr. Shepherd.

[2] Bom. Govt Sel. IX., 52.

[3] Collector of Surat to Government, 588, dated 7th July 1856.

[4] Mackay's Western India, 242.

[5] Trans Bom. Geog. Soc, VII., 102.

[6] Milburn's Or. Com. I., 157.

[7] Stavorinus Voyages, II., 447. Ten years earlier (1764) the traveller Niebuhr wrote Because the Tápti is full of sand-banks ships cannot enter the harbour. The river is too low in the dry season, and in the rains swells too suddenly to such a height as to overflow all the neighbourhood. Were the river confined by dykes, the stream, which during the rains often rises 28 feet above its ordinary level, would carry away all the sand, and, clearing the channel, would afford ships access to the very wall. (Niebuhr in Pinkerton, X., 211).

Ovington[1] (1688) states that the goods were brought up to Surat in "hoys, yachts, and country boats with great convenience and expedition," another traveller, a few years earlier (1666),[2] had found that even in a small boat the passage up the river took from 10 A.M. to 8 P.M., and in 1638 Mandelslo found the river so shallow that it could "scarce carry a bark of seventy or eighty tons."[3] Sir T. Herbert (1626) went from his ship at Suwáli roads to Surat in a "chariot drawn by two buffaloes." This traveller speaks of the Tápti with some contempt, "as good neither for drink nor for navigation, serving for nothing save to mundify the idolatrous Banian."[4] In 1609, though the channel was said to be fair, the river was able to bear vessels of only fifty tons.[5] In 1530, when Antonio de Sylveira came against Surat, he found the mouth of the river so full of sand, that the larger ships of war did not attempt the passage, and the troops were sent up the river in small vessels. Even in the small boats the commander failed to reach Surat in one day.[6] On the other hand, during the whole of this period, at certain seasons of the year, it was possible to bring large ships of 1,000 tons and upwards as far up the river as the city of Surat.

Irrigation.

[7] Though no lands are at present (1876) irrigated from the Tápti, several projects have from time to time been framed with the object of using the waters of the river for this purpose. About the year 1856 Captain Trevor, of the Bombay Engineers, drew the attention of Government to the admirable sites for irrigation works presented by some of the rocky barriers that, in the east of the district, cross the channel of the Tápti. Three years later Captain Chambers, an officer with special knowledge of the Madras rivers, was selected to draw up a report on the rivers of Gujarát; and in the following year he submitted a scheme of combined irrigation and navigation for the Surat collectorate. Three sites had been pointed out by Captain Trevor as suitable places for irrigation works. These were the rocky barriers at Kákdápár, sixty-two miles from the mouth of the Tápti; at Puna, about eight miles lower down; and at Wághecha, about six miles below Puna. In Captain Trevor's opinion, Kákdápár, the highest of these three sites, as commanding a much greater area of culturable land, was the most promising place for building a weir. On the other hand, the great depth of cutting required for canals taken from the upper rapids, and the long distance during which the water of the canal would continue to flow under the level of the country, led Captain Chambers to recommend the lowest site, that is, the rocky barrier at the head of the Wághecha rapid. At this place he proposed to cut two canals, one on the right bank of the river running north-west

Captain Chambers' scheme. 1859.

[1] Ovington's Voyage to Surat, 163 and 218.

[2] Suite de Voyage de M. de Thevenot V., 1.

[3] Mandelslo in Harris II., 119.

[4] Herbert's Travels, 44.

[5] Finch, in Harris I., 84.

[6] Faria, in Kerr VI., 220.

[7] This section is compiled from Bom. Govt. Sel. No. LXI. (New Series), and from information supplied by W. Clerke, Esq., Executive Engineer for Irrigation, Surat.

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and the other stretching to the south from the left bank. Of these canals, that on the right bank, with a total length of about twenty-one miles, should, be proposed, pass nearly parallel to the course of the river for ten miles to the town of Gala, and should then extend eleven miles further towards the north-west to near the village of Rundh. This northern branch, it was calculated, would command an area of not less than 110,000 acres of land belonging to the Surat district. Captain Chambers' proposals for the irrigation of the lands on the left bank of the river were on a larger scale. He suggested the construction of a canal with a length of fifty miles running to the south-west as far as the Auranga river near Balsár. In addition to the advantages to be obtained from this canal for purposes of irrigation, it was proposed to make it navigable. From June to December it was estimated there would be water enough for vessels of six feet draught, and at other seasons enough for boats drawing four feet of water. Besides this main canal Captain Chambers proposed to carry a branch navigation canal westward from the village of Mota to Surat, a distance of about fifteen miles. The area of land commanded by the proposed irrigation works on the left bank of the river included 375 square miles, or above 180,000 acres in the Surat district, of which 120 square miles, or 60,000 acres, were in the immediate neighbourhood of the city of Surat. The total cost of the works proposed on both sides of the river was estimated at a sum of £367,500 (Rs. 36,75,000), and it was calculated that if a water-rate of 4*s* (Rs 2) an acre was levied, the scheme would yield a return of over eight per cent.

Colonel Trevor's scheme. 1867.

Nothing more was done in the matter of Tápti irrigation till, in 1867, Colonel Trevor was appointed to report on Captain Chambers' project. This officer drew up a fresh and more extensive scheme, fixing the site of the dam at the spot he had originally recommended, Kákdápár, fourteen miles above Wághecha. The cost of completing this project, Colonel Trevor estimated at £1,320,000 (Rs 1,32,00,000). He calculated that the net receipts would represent a return of ten per cent. on this outlay These proposals were not, however, approved, and in 1871 a fresh scheme was drawn up on a smaller scale. The spot selected for the weir was at the head of the Wághecha rapids, the site formerly chosen by Captain Chambers. The proposals for irrigation were confined to the lands on the right bank of the river, a total area estimated at about 310,000 acres lying between the river Narbada on the north, the Tápti on the south, the Bombay, Baroda, and Central India Railway on the east, and the Gulf of Cambay on the west. The cost of this project was estimated at slightly less than £440,000 (Rs. 44,00,000) [1] From the 310,000 acres which the canal commanded, it was calculated that a yearly revenue would be recovered representing interest at the rate of nineteen per cent on the original outlay. On further inquiry, it was found that, though the canal commanded so large a tract of land, the actual area likely to yield a special irrigation

[1] The exact amount of the estimate is £437,728 (Rs. 43,77,280). This total includes all previous expenditure on surveys, estimated actual cost of work, establishment, tools and plant, and interest on expenditure during construction.—Letter from W. Clerke, Esq., Executive Engineer for Irrigation, dated 25th February 1876.

revenue was not more than 123,000 acres. This diminution of area would, it was estimated, reduce the probable return from nineteen per cent. to four and a half per cent. by the end of the first seven years, rising, after seven years more, to nine and a half per cent. Under these circumstances no steps have yet (1876) been taken to carry out the proposed scheme.

Its principal details.

The principal features of the project as finally drawn up are a masonry weir across the Tápti at Kamlápor, a distance of thirty-five miles above the city of Surat. At this point the channel of the river, through almost its whole breadth, consists of a bed of exposed trap rock. The design for the weir is 2,440 feet long and its crest twenty-seven feet above the hot-weather level of the river. Including flank walls and embankments the estimated cost of this work is £40,100 (Rs. 4,01,000). From this weir a canal is led away in a direction nearly parallel to the stream, and about two miles from its bank. This, which is called the main canal, and has a maximum carrying capacity of 650 cubic feet per second, is taken on for sixteen miles to a point in the Baroda village of Akhákhol. For the first ten miles the country is rough and broken, and the works heavy. In some places the channel has to be cut almost entirely through rock; in other places water-courses have to be crossed by masonry aqueducts. Of these aqueducts the two heaviest, costing £8,400 (Rs. 84,000) and £13,700 (Rs. 1,37,000) respectively, occur at the second mile across the Wareli river, and at the tenth mile across the bed of the Usked. After the tenth mile the country grows gradually less and less broken till, to the west of the railway line, where the chief part of the irrigable lands lie, it is almost a plain, sloping slowly to the sea. The total cost of the main canal is estimated at £150,000 (Rs. 15,00,000). At the village of Akhákhol the main canal divides into two branches. Of these, one, turning westwards, passes through the lands of the Olpád sub-division; the other, keeping to the north-west, crosses the river Kim and enters the Ankleswar sub-division of the district of Broach. The Olpád branch, with a maximum carrying capacity of 421 cubic feet per second, and a total estimated cost of £27,700 (Rs. 2,77,000), passes for seven and a half miles through an easy country till it crosses the railway line just north of Sáen station. Beyond the railway the main branch separates into two channels, one running to the west, the other to the south-west, and between them commanding the irrigation of the Olpád lands almost to the coast. Besides these two channels it is proposed that a third, leaving the main Olpád branch a little before it crosses the line of railway, should at no great distance from the railway pass southward to the Tápti. Here it is proposed to lead the water in troughs under the Tápti railway bridge, supplying drinking water to the city of Surat, and irrigating the lands in its neighbourhood. Passing northwards the Ankleswar branch crosses the Kim river about seven miles above the railway bridge. It then bends to the west and crosses the railway four miles north of the Kim station. From this it passes along the west side of the railway, throwing off towards the west two large channels, which run through the Ankleswar sub-division nearly to the coast line. Exclusive of the two channels the total length of the Ankleswar branch is twenty-four miles,

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and at its commencement its maximum carrying capacity is 235 cubic feet a second. The heaviest work on this branch is the aqueduct across the Kim river, estimated to cost a sum of £5,400 (Rs. 54,000). The cost of the entire branch is calculated at £45,000 (Rs. 4,50,000).

Except over a limited portion of the Sahyádri hills the tract of country drained by the Tápti is not subject to any great annual rain-fall. The break of the rains in the first week in June is generally marked by a considerable increase in the strength of the Tápti's stream, but a decided fresh is seldom seen till the first week of August. Floods bringing down water enough to fill the bed of the river up to the top of its banks are unusual, and even ordinary freshes last for but a short time.[1] Occasionally, however, the floods are very severe, and, from the sharp bend in the course of the river at Fulpára, two miles east of the city of Surat, the waters, rising at times above the level of their left bank, force their way across the land, and, deluging the city, have on more than one occasion caused much loss of life and property. Some particulars have been collected of thirteen floods ranging over a term of about one hundred and fifty years. Of these three occurred in the eighteenth century, in the years 1727, 1776, and 1782; and ten in the present century, in 1810, 1822, 1835, 1837, 1843, 1849, 1872, 1873, and two in 1876.

In 1727, 1776, and 1782

In August 1727 the water of the Tápti is said to have risen so high that boats, or *hodis*, sailed over the city wall near the castle as far as the Darbár, that is, behind the site of the present Káwasji Jehángir's Hospital.[2] Again in July 1776 the water of the river is said to have risen ten feet in the space of a quarter of an hour, and to have increased so rapidly that in a short time it was almost on a level with the city wall. So strong was the flood that all the vessels anchored near the town were carried away from their moorings. The Dutch Company's schooner "Young Peter" was driven on shore at Athwa, two miles below Surat, and the pilgrim ship "Ganjáwar" was carried down the river and dashed to pieces.[3] Five years later, in 1782 (April 20th), there was a great storm, "one of the most dreadful ever remembered in Gujarát." According to Mr. Forbes, "many ships were driven ashore at the mouth of the Tápti, and the bank of the river was covered with their wrecks, which the violence of the wind and the swelling floods carried to a great distance inland. The island of Namra (or Bet, as it is now called), in the bed of the Tápti, raised well above the level of ordinary freshes, was

[1] Bom Govt Sel. LXI (New Series).

[2] Stavorinus Voyages, II., 448. The height of the flood must to a great extent depend on the size of the boats that passed over the wall If they were the sailing vessels of from 20 to 40 tons, called *hodis*, as is stated in a note to this passage in Stavorinus, this must have been the highest flood on record But it is at least possible that the word *hodi* was applied to the canoes that do not draw more than a few inches. It will be seen below that in 1822, and even in the smaller floods of 1849, it would have been possible to take a canoe over the lower part of the river front of the city wall. Of this (1727) flood the director of the Portuguese factory wrote—"the lower parts of the town were submerged, men and animals were killed, and property estimated at £2,500,000 (Rs 25,000,000) was destroyed."—(Letter dated 29th August 1727.)

[3] Stavorinus Voyages, II., 449.

submerged, causing the death of more than 2,000 persons, who, to escape the exactions of the Maráthás, had sought a refuge upon it. At Surat the Tápti, overflowing its banks, entered the city, and did incalculable damage."[1]

Of the nineteenth century floods the first, in 1810, is spoken of as "another fearful visitation like that of 1782."[2] The flood of 1822 would seem to have been a still more serious calamity. At the north-west corner of the city, near the upper limit of the river front, the city wall, from the Rafi tower down the bank as far as the Phátak gate, was carried away by the flood.[3] West of the Fátak gate, above the castle, the water topped the walls, rising within two steps of the landing in front of the church, and below the castle, passing up the Mecca creek, it flooded the western suburbs to a depth of several feet. Besides this flow of water through the river front of the city, further up its course, at the Fulpára bend, the river, overtopping its left bank, rolled in a broad stream across two miles of country, and, setting against the east wall of the city between the Delhi and Sara gates, carried before it a large portion of the fortifications. This body of water, passing westwards through the city, joined the stream that had entered by the Mecca creek and rose to a depth of several feet along the line of the western wall. No particulars have been traced of the injuries to private property caused by this flood. With the exception of the damaged portion of the east wall, the breaches in the fortifications would seem to have been allowed to remain unrepaired. In 1810 and 1822.

On the 4th of August 1835 a severe storm passed over the district, the wind, accompanied by heavy rain, being strong enough to blow down large trees and unroof houses. Northwards at Broach, and southwards at Navsári, the flooding of the rivers is said to have caused much damage. At the mouth of the Tápti, when the flood-waters subsided, the beach at Dumas was strewn with trees, logs, and carcases of animals. In the city of Surat, about ten o'clock in the afternoon of the 6th, the river began to overflow its banks and enter the town. About half past five on the following morning, the gale still continuing, the whole city was under water, and had the appearance of a sea. In Surat the height of the flood is said to have been one and a half feet less than it was in 1822. On the other hand, probably owing to the severity of the gale, more damage than on the former occasion was done. At Surat alone upwards of 500 houses In 1835

[1] Forbes' Or Mem., III., 405. In 1790, "on account of the frequent damage from floods," a correspondence was carried on between the Bombay Government and the English Chief at Surat, with the object of building some wall or dam to check the overflowing of the river.—Surat Papers, 76.

[2] Briggs' Cities of Gujaráshtra, p. 35.

[3] The flood of 1822 did not, however, cause all the breaches in this part of the city wall. For in 1817 the wall between the Rafi tower and the Fátak gate is spoken of as of not much more than half the height of the rest of the fortifications, and as being in some places filled up by wooden piles (Survey of Surat City, 1817). In 1800 the committee appointed to examine the walls found in two places, between the Rafi tower and the Fátak gate, part of the wall deficient, and the space filled up with wooden piles.—Surat Papers, 434, 435.

Chapter I. Description. Rivers. *The Tápti.* Floods. In 1837.

are said to have been carried away, and more than twenty people to have perished.[1]

About two years after the storm of 1835, in August 1837, the country in the neighbourhood of the Tápti suffered from another flood. In the latter part of this month there were two distinct risings of the river. The first, beginning on the 21st August, passed over in three days, without causing any considerable damage. The second, a much greater flood, began on the 29th August, and continued to swell till the evening of the 1st September, when it reached its greatest height. For the season of the year in the neighbourhood of Surat the weather was still, nor was there any unusually heavy local fall of rain. The cause of the flood would seem to have been some great deluge of water poured into the Tápti from the high lands between Khándesh and Surat. Near that part of its course the stream rose high enough to sweep away several villages with great destruction of life and property.[2] The Kim and Narbada would seem to have been affected in the same way as the Tápti, for it is said that on reaching the plain country of Gujarát the three rivers joined, forming one continuous stretch of water across a distance of more than forty miles.[3] On its right bank, as it neared the coast, the Tápti is said to have overflowed the lands of the Olpád sub-division to a depth of five feet, covering the entire face of the country, except the raised village sites.[4] The city of Surat, which had escaped uninjured by the rise of the river on the 21st August, was by this second flood almost entirely submerged.[5] In some parts of the city the water stood at least twenty feet deep, "completely covering the tops of the houses and obliterating even the lines of considerable market places and streets." As in 1822 the waters of the river, overflowing the low land on its left bank near the north-west corner of the outer walls, forced their way into the city between the Katárgám and Wariáv gates, and flooded the north-eastern quarters of the town. Near the castle the Tápti rose above the level of the river front wall, and passing inwards covered the open ground to a depth of six feet three inches. Further west the waters, entering by the Mecca creek, poured southwards, flooding the whole of the western suburbs Besides this overflow direct from the river on the north, a body of water, said to be two

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[1] Asiatic Journal, Vol 35, p 167

[2] Edwards' Survey of the Tápti River —Trans. Bom Geog Soc , XI., 20.

[3] Trans Bom Geog Soc., I , 353.

[4] Superintendent of Survey to the Collector of Surat No. 129 of 1870

[5] The river is said to have risen thirty-seven feet above its average high-water level The following details give the height of the water at different places along the line of the outer wall, beginning with the gate most to the north. At the Wariáv gate the water stood 12 feet 9 inches from the ground ; at the Katárgám gate, 10 feet 7 inches ; at the Lál gate, 3 feet 3 inches , at the Delhi gate, 4 feet ; at the Sara gate, 5 feet 7 inches ; at the Salábat gate, 4 feet 1 inch ; at the Mán gate, 6 feet 8 inches ; at the Navsári gate, 2 feet 8 inches ; at the Jáfar Ali gate 4 feet ; at the Majura gate, 5 feet 4 inches ; and at the Athwa gate, 7 feet 1 inch No corresponding particulars were recorded for the flood of 1822. But, on the whole, the river would seem to have risen higher in 1837 than in 1822 For though in 1837 the flood, escaping through the breach in the western wall, stood at this part some inches lower than on the former occasion, in the east of the town the level of the flood is said to have been higher by several feet than had ever before been known.

miles broad, leaving the regular channel of the Tápti at Fulpára, tore straight across towards the east wall of Surat, and carried away parts that had been repaired since the flood of 1822. On reaching the city this torrent would seem to have split into two streams. Of these, one passed southwards to the Bhimpor creek; the other, pouring through the city, met the flood from the Mecca creek; and the two streams flowing together westwards, burst through the city wall near the Majura gate, falling finally into the Tápti below Surat.

Much damage was done by this flood. The city walls were in several places broken down. In the north-east, between the Wariáv and Katárgám gates, over a distance of 222 feet; further east, for twenty-one feet, between the Lál and Delhi gates;[1] beyond that, where the great body of water rushed through from Fulpára, was a break 222 feet in length; and finally in the west, between the Majura and Athwa gates, where the waters escaped, was a breach in the wall 153 feet long. On the river front near the custom house, for more than 100 yards, the wall fell outwards into the stream. Further west, in front of the church, portions of the bank, carrying with them the clerk's house (formerly the parsonage) and the school, sank into the river. Beyond the castle and the mouth of the Mecca creek, the Dutch wharf, already injured by former floods and by the destruction of its fine masonry screen, lost an additional space of more than fifty feet. Besides this injury to the city walls there was much loss of private property: 372 houses were entirely washed away, 1,012 fell, and 2,539 were injured. The estimated damage amounted to a sum of £27,455 (Rs. 2,74,550). In addition to the loss of property, 242 head of cattle were destroyed, and eighteen human beings killed.[2] After the flood was over, along the beach at Dumas, pieces of timber, reeds, bushes, parts of houses, as well as bodies of animals, deer, cows, bullocks, buffaloes, and an immense number of snakes, were deposited in a line stretching for more than one and a half miles, and in many places piled up to a height of nearly five feet. From inquiries made at Surat in connection with this flood, it was found that within three years, at different places along the course of the Tápti, the depth of the channel had diminished from three to five feet.[3] This silting up of the mouth of the river was at the time thought to be one of the causes of the special severity of the flood of 1837. With the object of providing the surplus waters of the river in times of flood with the means of escape, the construction of a channel known as the Warácha cut, beginning at the left bank of the Tápti near Fulpára, and running southwards to the Bhimpor creek, was sanctioned. At the same time, to protect the front of the river where the stone walls had given away, frame-works of wood were built at a cost of £2,500 (Rs. 25,000).[4]

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[1] This breach would seem to have been caused by a portion of the flood from Fulpára finding its way, as in 1843, by some hollow in the ground to the Lál gate.

[2] District Judge to Government No. 18, dated 3rd September 1837.

[3] Letter from Captain Harris, senior Naval Officer, Surat, No 274, dated 15th December 1838.

[4] Government letter dated 23rd March 1839.

Chapter I.
Description.
Rivers.
The Tápti.
Floods.

In 1843.

After six years the Tápti again flooded its banks. In 1843, as in 1837, there were two distinct freshes on the river: one, on the 1st of August, accompanied by a strong south-west wind, passed off without causing any damage; the second, in the beginning of September, was more serious. The rise set in from about eight o'clock in the evening of the 6th, and went on increasing till 1 A.M. on the 8th, when the waters began to fall. As in 1822 and 1837, the river flowed over its left bank near the Rafi tower, just above the north-west corner of the city wall, and, passing through the breaches in the fortifications on either side of the Wariáv gate, flooded a great part of the north-east suburb. As on former occasions, its further progress southwards was stayed by the ridge of high land that runs across the city from the Katárgám gate in the north, westwards to the Láti gate in the river front, about five hundred yards above the castle. Except behind the Chápat gate, immediately to the west of the castle, the rise of the ground prevented the flood from passing beyond the river gates. Through the Chápat gate, however, enough water found its way to swamp the low lands immediately east of the castle, and unite with a distinct stream that, entering by the Mecca creek, was flowing through the part of the town known as the Chok Bazár. To the west of the city the larger portion of the torrent that had found an entrance by the Mecca creek covered almost the whole of the south-west suburb, reaching as far as the Athwa, Majura, Navsári, and Mán gates on the west and south-west. Here it accumulated and was piled up many feet deep, escaping finally through the breach in the western wall between the Majura and Athwa gates, made by the flood of 1837. To the east of the city, at Fulpára, as in 1822 and 1837, the Tápti overflowed its left bank. Instead, however, of rushing westwards across the land, and dashing in a great body against the eastern wall of the city, the water is said to have found its way quietly along two hollows towards the Lál gate. Here, and further south near the Delhi gate, the flood poured into the ditch outside of the city, and, following the line of the wall towards the south, finally found its way into the Bhimpor creek. The measurements taken of the depth of the flood at different places in the north of the city would seem to show that the pressure of the flood at this part of the town was less than in 1837. At the Wariáv gate, for example, the height of the flood was only ten feet instead of twelve feet nine inches, and at Katárgám it was six instead of ten feet seven inches. So, too, in the southern suburbs, where in 1837 they were piled up to a depth of from two to seven feet, in 1843 the waters only just reached the gates. Though no destruction of life was reported, this flood caused much inconvenience and loss of property. The local officers again recommended that the river front of the town wall should be strengthened and sluice-gates built to check the flood at the Mecca creek and in other places.[1] None of these proposals would seem to have been carried out.

In 1849.

The next flood of importance took place in 1849. On the 19th

[1] Mr. Tremenhere's letter to the President, Flood Committee, No. 339, dated 7th November 1843.

September, about 2 A.M., the waters of the Tápti near Surat rose rapidly nine feet above high-water mark, and continued steadily to rise so that by daylight a large portion of the city was flooded.[1] At about 2 P.M. the surface of the river was found by the executive engineer to be twenty-one feet above high-water mark. Within the walls of the city boats were plying in several of the streets, and more than one quarter of the town was under water. Such was the violence of the current that two steamers, anchored in front of the castle, were obliged to leave their moorings and drop down the river. The flood began to subside about 7 P.M. on the 19th, and on the 20th communications were again opened between the different parts of the town. No lives were lost; but many huts, houses, and bridges fell in, or were seriously injured. A part of the wood piling facing the river near the Dutch wharf was also damaged.

Protective works 1869.

After 1849 the city continued at intervals to suffer from floods. But, except the digging of the Warácha cut (1838-1840), up till 1869 nothing in the way of protective works was undertaken at Surat. In 1843 it would seem that the less violence of the flood was by some[2] attributed to the relief afforded by the Warácha cut. But of late years the opinion among the engineers who have chiefly studied the river, would seem to be that a channel of the capacity of the Warácha cut, even if filled to overflowing, would have no appreciable effect in lowering the level of the Tápti in time of flood.[3] In 1869 the Surat municipality determined to do something to protect the city from the overflow of the Tápti. Any work that had for its object the raising of the left bank of the river either at Fulpára, or just above the city walls near the Rafi tower, required an expenditure which could not be met from municipal funds. It was therefore determined to limit the undertaking to the construction of such protective works as would keep the waters of the river out of the most thickly-peopled parts of the city during all floods except those of extraordinary severity. Beyond digging a ditch outside of the Lál gate to carry off the local drainage, no attempt was made to stop the progress of such bodies of water as in 1822 and 1837 had reached the city walls from the east. In the north-west suburbs, near the Fátak and Warí'v gates, where the population was scanty, and where, from the exposed character of those parts, protective works would be required on a large scale, no attempt was made to entirely keep out the flood. But further down the river, below the castle, by stopping up the Mecca creek, and by raising the level of the ground at certain places behind the river front, it was thought that the richest and most thickly-peopled

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[1] The depth of water at the several streets was as follows: Navsári Bhágal, 20 feet under water; Barekhán Chakla, 7 feet, Sagrámpura, Bhágátaláv, Galemandi, and Sayadpura, 6 feet each; Mahidharpura, 5 feet, Mulla Chakla, 4 feet, and Kelápit and Navápura, 2 feet each.—(Surat Collector's letter to Government, 315, dated 15th September 1849)

[2] Superintending Engineer, Northern Division, No 48, dated 18th January 1844.

[3] "The useless, or, more properly, mischievous Warácha cut would have to be closed." Captain Chambers' No. 65 of 1860, dated the 1st October 1860 (Selections, Government of Bombay, LXI., 10). In the opinion of Mr. Clerke, the present (1876) irrigation engineer, the Warácha cut could not lower the level of the Tápti in time of flood by one-half inch.

Chapter I. Description.

RIVERS.

The Tápti.

Floods.

parts of the town might at small expense be saved from the entry of any water through the river front.

Recent floods, 1872-1873.

Since these works have been completed four floods have occurred, one in 1872, one in 1873, and two in 1876. In 1872 (September 16th), in the north-west suburb, near the Fátak and Wariáv gates, as in former floods, the river rose high enough to bring the greater part of the land several feet under water. On the other hand, the closing of the Mecca creek and the raising of the ground along the river front were found to be sufficient to keep out the whole of the flood from the western and south-western quarters of the city, and so to save great part of the town from much inconvenience and injury. During this flood the waters did not by several feet rise so high as they had risen on former occasions. The height of the river was estimated at about seventeen feet above spring-tide, and at the north-western corner of the town, at the Wariáv gate, the water stood at eleven feet eleven inches instead of twelve feet nine inches as in 1837.[1] As the water came within three feet of the level of the roadway at the Mecca creek, it was thought advisable to raise the height of the bridge. The second flood was about a year later, 1873, September 4th. The water rose to 92 feet on the Mecca creek bridge, or about 1 62 feet less than in the previous year In neither case did the flood cause damage or last for more than twenty-four hours.

1876.

Of the two floods of 1876, one was due to a local fall of rain, and the other to the rising of the waters of the Tápti.[2] On the 29th of August sixteen inches of rain fell at Surat in twenty-four hours. As the sluices at the Mecca creek were built to provide against an extreme fall of ten inches in the twenty-four hours, they failed to carry off the accumulations of the local rain-fall. In the south of the city, the Navsári Bhágal market was flooded to the depth of four or five feet, and two persons were reported to have been drowned. Beyond this loss of life and the fall of a few houses no considerable damage was done. But a week later there came a second and more formidable flood. About eight o'clock on the morning of the 5th September the river began to rise. The height of the water continued steadily to increase till, at eleven in the evening of the 6th, it had reached 96 75 on the Mecca creek bridge, a point 3·13 feet higher than the corresponding maximum in 1872. The water remained stationary at this extreme height for nearly five hours, or till about four o'clock in the morning of the 7th. Then it began slowly to subside, but did not reach its original level of seventy-six till six o'clock in the evening of the 9th, or after the flood had lasted for

[1] The following measurements show for different points along the river front by how much the protective works overtopped the level of the flood In the north of the city, at the Wariáv market, with the flood-mark at 94·49, there were 4·15 feet to spare; at the river front, below the castle, with the flood at 93 58, there were 3 feet to spare; at the Mecca creek, the water standing at 93 62, was 2·49 feet below the level of the roadway, and 5 53 feet below the coping of the bridge across the creek. West of the creek, with a flood-mark at 92·24, the line of roadway remained 3 26 feet above the surface of the water.

[2] Surat Collector's letter No. 2088, dated 16th September 1876, to the Revenue Commissioner, N. D.

one hundred and six hours. Against this severe strain all the municipal inundation works stood well. No loss of life, and but little damage to property was caused. But for the protection of these works large parts of the city would have been inundated to depths varying from one to eighteen feet. The flood waters are said to have risen as high, or even higher, than they rose in 1849. Details for a satisfactory comparison are not available. But as no great body of water entered the city from the east, this last would not seem to have been so serious a flood as those of 1837 and 1822. Besides the height of the water at the Mecca creek, the following measurements have been recorded: under the Wárnav gate fourteen feet, and under the Katárgám gate six feet three inches; at the castle the water in the ditch rose two feet on the over-bridge and passed half way to the inner castle gate.

Though it enjoys a less wide-spread reputation for sanctity than the Narbada, the Tápti receives much local respect. On its banks there are, according to the *purán*, or religious history of the river, no fewer than one hundred and eight spots, or *tirthas*, of special sanctity. Of these, the chief is Bodhán, about fifteen miles east of Surat, where a religious gathering is held once in every twelve years. Ashvani Kumár and Gupteshwar, places about two miles up the river from Surat, are also held in esteem. Both spots are provided with temples, rest-houses, and flights of steps leading down to the water, and here, on several occasions in each year, large numbers come together to bathe. Gupteshwar is also a favourite place for burning the dead.

Sanctity of the river.

Of the smaller streams that, rising in the slopes of the high lands between Surat and Khándesh, flow westward across the district of Surat, the most northerly is the Mindhola or Midágri, which falls into the sea about five miles south of the Tápti. The forty miles of this river's course, westwards through Surat, consist of three sections of nearly equal length. Of these, the first passes through the sub-division of Bárdoli, the second across the central belt of Baroda territory, and the third between the Sachin villages and some of the southern parts of the Chorási sub-division on the right and Baroda territory on the left. For the first thirty miles of its course the Mindhola runs on the whole westwards till, about ten miles from the sea, taking a sudden bend, it strikes north for about four miles, and here, meeting the Kánkrákhán stream from near the town of Surat, they together bend westwards, broadening into an estuary two miles wide. Of its whole length of forty miles through the district of Surat, for the first thirty the waters of the Mindhola are fresh, passing between alluvial banks, in some places steep and high, in others sloping gradually to the level of the stream. In the earlier parts of its course, rocks occasionally crop up in the bed of the river, but further to the west the stream passes over a surface of tough clay. The limit of the tidal section is ten miles from the sea, and near this point, where the railway crosses the river, about four miles south of Sachin, the breadth of its bed is 360 feet, and the height of the left bank is forty feet. The water here is five feet deep, and it is crossed at half tides in boats. The railway bridge is 750 feet long, and is raised thirty-three feet above the level of the stream. The mouth of the

Southern Streams.
The Mindhola.

Chapter I. Description. Rivers.

Mindhola, known as the Sachin or 'False' river, is navigable for boats of ten tons and under. Except indirectly, by filling the wells along its banks, the waters of the Mindhola are not used for irrigation.

Southern Streams.

The Purna.

The Purna, with a westerly course of about forty miles across the Surat district, falls into the sea ten miles south of the Mindhola. Entering the district in two separate streams near the south-east corner of the Bárdoli sub-division, the Purna, for about eight miles, flows through British territory; then, crossing the central strips of Baroda land, separates, during its last twenty miles, Baroda territory on the right bank from the Surat sub-division of Jalálpor on the left. The Purna's passage across Surat is divided into two sections of nearly equal length, one above and the other below the limit of the tide. In the upper part of its course the Purna passes for some distance over beds and ridges of rock. Its waters, raised in buckets poised at the end of a long lever called *dhekudi*, are used to some extent for irrigation. About twenty miles from the sea, near the village of Tarsári, the tidal section begins. Ten miles further west, the stream divides into two branches, which again unite a short distance lower down. A little above their junction these branches are crossed by the line of railway, the bridge over the southern stream being 438 feet, and that over the northern 813 feet in length. Each of these bridges is raised thirty-two feet above low-water mark. Below the junction the river, passing between low banks 960 feet apart, can, when the tide is out, be forded through two feet of water over a bed of sand and mud For the passage of the river at other states of the tide two ferry boats are provided, one near the town of Navsári, on the left bank of the river, twelve miles from the sea, and the other at Jalálpor, about two miles further down on the same side of the stream. Below Navsári the Purna is in books of navigation referred to as the Navsári river. Here it is navigable by boats of 100 tons and under. But though the bed of the river at this part of its course is broad, the channel, winding among banks of sand, is hard to hit upon. Some years ago (1852) the passage was more open, but at present (1876) no vessel without a pilot can safely try to enter.

The Ambika.

The Ambika river, after a winding course of about forty miles towards the south-west, falls into the sea fifteen miles south of the Purna. This stream, rising in the Bánsda hills, flows westward in two widely-separated channels through Baroda territory till, entering within British limits, they pass over a deep bed of sand between the Chikhli and Jalálpor sub-divisions. West of this, turning for twelve miles sharply to the south, the line of the stream separates the Baroda territory of Gandevi from the lands of Jalálpor, and then for the last five miles stretches westward to the sea. The town of Gandevi, about twelve miles from the mouth of the river, is the limit of the flow of the tide. At a point about six miles from the sea the railway crosses the Ambika by a bridge 875 feet long, and raised twenty-eight feet above the level of the bed of the river. About one mile further west the Ambika is joined from the left by two considerable streams, the Káveri and Kharera. Below this junction the bed of the river widens out into a broad estuary stretching westwards to the sea. About a mile and a half from the entrance is a bar covered

at low water to a depth of three or four feet, and with a tidal rise of twenty-two feet. Vessels of considerable size can pass up for about six miles as far as Bilimora. Beyond Bilimora, for five miles more to Gandevi, the stream is navigable by boats of fifty tons and under. Of the two tributaries of the Ambika, the Káveri, rising in Bánsda territory, passes westward about eighteen miles across the Chikhli sub-division till it joins the Ambika at Wághrech. This stream, which during the last part of its course is navigable for boats of less than fifty tons burden, is, about two miles from its junction with the Ambika, crossed by a railway bridge 688 feet long, and raised about thirty-six feet above the level of its bed. The other tributary, the Kharera, rising in the Dharampor hills, passes through Chikhli and the northern corner of Balsár, and falls into the estuary of the Ambika about a mile west of the Káveri. For a few miles above its junction with the Ambika, the Kharera is, like the Káveri, navigable by the smaller class of native boats. It is crossed by a railway bridge 625 feet long, and raised thirty-six feet above the level of the stream.

Southern Streams.

The Auranga river, rising in the Dharampor hills, flows for about twelve miles, first westward, and then towards the north-west, through the Balsár sub-division, and falls into the sea about eight miles south of the Ambika. In the upper part of its course the banks of the stream are steep, and the country somewhat rugged. But, for the last fifteen miles, including the windings of its course, the Auranga is a tidal stream navigable by boats of fifty tons and under for about six miles from the sea. A mile above the town of Balsár the line of rail crosses the river by a bridge 1,000 feet long, and raised thirty-two feet above the stream. At Balsár the river passes over rocks and gravel along a channel 600 feet wide. West of Balsár the depth of the channel at low tide varies from seven to nine feet till, after four miles, the bar at the mouth of the river is reached. This bar at low-tide springs is covered only by two or three feet of water, but has a tidal rise of eighteen feet. The town and port of Balsár on the left bank of the river, about four miles from the sea, is a place of 11,313 inhabitants, and a trade in the year 1874-75 valued at £84,904 (Rs. 8,49,040). For the benefit of the trade of this port a light-house has been erected at the mouth of the river on its left bank. The only tributary is the Wánki, which, after a rocky and winding course, falls into the Auranga within half a mile of the sea.

The Auranga.

The Pár, with a north-westerly course of about twenty miles across the district of Surat, separates the Balsár sub-division on the north, from Párdi on the south, and falls into the sea about six miles south of the Auranga river. Though in the dry season a very small stream, during the rainy months the Pár is sometimes swollen by very heavy floods. About four miles from its mouth it is crossed by a railway bridge 750 feet long, and raised sixty-three feet above the bed of the stream. West of this the tides ebb and flow, and at springs there is water enough for boats of 54 tons burden. At the village of Umarsári, near its mouth, the creek is 765 feet wide, the banks are high, and the bed of rock, mud, and gravel. Travellers are here taken across the river in boats, as the water is too deep to allow of fording. The bar at the mouth of the river is dry at low-tides, but at high-water has a

The Pár.

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depth of fourteen feet, and in front of the landing place, only a short distance within the bar, vessels can anchor on a clean sandy beach with never less than nine feet of water. The value of the trade at this port in 1874-75 amounted to a total sum of £14,451 (Rs. 1,44,510), of which £1,679 (Rs. 16,790) were imports, and £12,772 (Rs. 1,27,720) were exports.

The Kolak.

The Kolak, with a westerly course of about fifteen miles through the Párdi sub-division, falls into the sea about five miles south of the Pár. This river, after passing for the greater part of its Surat course through the Párdi sub-division, separates, near its mouth, the district of Surat on the right bank from the Portuguese territory of Daman on the left. At the beginning of its course, passing over a rocky bed, the Kolak, about eight miles from the sea, comes within the influence of the tides. Near this point it is crossed by a railway bridge 438 feet long and thirty-three feet high. At its mouth, near the village of Kolak, where it has a breadth of 498 feet, the river can only be crossed in boats. Vessels of sixty-six tons can enter and find a clean and good landing. Beyond the bar are the beds of oysters for which the Kolak river is famous.

The Damanganga

The Damanganga flows for about fifteen miles towards the north-west, entering the sea four miles south of the Kolak. For the first eight miles of its passage through the Surat plain, this river has the district of Surat on the right and Tanna on the left. About six miles from the sea the left bank enters the lands of Daman, and about a mile beyond Surat also is left behind. For the rest of its course the river flows through Portuguese territory. The tidal wave passes up its channel for about eight miles. Near the limit of the tidal wave the river is crossed by a railway bridge 875 feet long and fifty-five feet high. During the months (May to October) of the south-west monsoon the mouth of this river forms an excellent shelter for small vessels. On the bar, at low-water spring-tide, is a depth of two feet, with a tidal rise varying from twelve feet at neaps to eighteen feet at springs. Except from the north point of the river, where rocky ground projects to a considerable distance, the bar is very flat, consisting chiefly of hard sand. The channel within the bar is extremely narrow, and the sand-banks shift every stormy season.

Creeks

Besides these rivers there are, in the parts of the district near the coast, many smaller streams which, during the greater part of the year, are little more than channels for the waters of the tide. In the north of the district the Sina river, passing for about twenty miles through the Olpád sub-division, falls into the sea five miles south of the Kim. On the right bank of this creek, about four miles from the coast, is the small harbour of Bhagwa. Near the south of Olpád, about eight miles above the mouth of the Tápti, a backwater, called the Tena creek, passes inland for about eight miles. In the west of the Jaláipor sub-division, four miles north of the Ambika or Gandevi river, the Kanái creek forms a large inlet for the waters of the sea. At a short distance from the coast, the main channel of this backwater divides into two parts. Of these, one branch, running for about fifteen miles north-east, is for part of its course a tidal creek, and for the rest a fresh-water stream. The other branch, passing eastwards for

about seven miles, joins the Ambika river below the limit of the tide, and is, therefore, throughout its course, a salt-water lagoon. In the west of the Balsár sub-division, between the lines of the Ambika and the Auranga rivers, the land is much cut up by salt-water channels that, entering about a mile north of the mouth of the Auranga, penetrate for about ten miles inland to the east and north-east. Of these channels the chief are the Bhám, Kháprí, and Koli. Finally, in the south of the district, between the Pár and Kolak rivers, runs the Kothal creek with a deep rocky bed 135 feet wide. Into this channel several small streams bring from the east the drainage of the central portions of the Párdi sub-division.

CREEKS.

The district contains no natural lakes, but is well supplied with reservoirs, which cover a total area of 10,838 acres. With the exception of the reservoir at Pálan, 153 acres in extent, and irrigating a large area of land, the other ponds are all small, formed by earthen embankments thrown, in horse-shoe shape, across the line of natural drainage. Only a few of them have retaining walls of masonry, and after February all are more or less dry. The total number of ponds and reservoirs in the British villages of the district is returned at 1,666, or, on an average, an area of six acres to each reservior.

LAKES.

Three geological formations occur in the lands of the Surat district. Of these the lowest is the *infra-tertiary*, represented by trap; the middle is the *tertiary*, represented by gravel, conglomerates, sandstone, and limestone, with and without nummulites; the highest is the *recent*, represented by cotton soil, alluvium, and river beds.[1]

GEOLOGY.

The lowest of these formations, in geological order, is the trap. This, extending from the hilly country to the east, passes west as far as Tadkesar, about twenty-two miles north-east of the city of Surat. From Tadkesar, though its limit is concealed by the alluvium of the plains, the trap appears to strike south-by-west, coming out upon the sea-shore near Balsár. These rocks form part of the great trappean group of Central and Western India, and, precisely as in the precipitous and highly picturesque mountains of the Sahyádri range, it is everywhere found to form part of a regularly stratified series intersected by numerous dykes, most of them porphyritic. The trap beds or flows consist of rocks of several varieties, ranging from solid basaltic trap to soft shaly-looking amygdaloid Of the latter, the variously-sized cavities are filled with zeolites of different kinds, chiefly stilbite, heulandite, apophyllite, or laumonite, and frequently by transparent or amethystine quartz. Highly ferruginous beds are of common occurrence, and in many instances have a red colour, and weather away rapidly into a rusty soil It is sometimes observed that, as if an alteration had been caused by the overflowing trap resting upon it, only the upper surface of a bed has the deep red colour. Among these traps concretionary structure is very common. Except one lateritic mass, alluded to further on, none were observed to be columnar. No regular order of arrangement seems to obtain

Trap.

[1] Condensed from Mr. Wynne's Paper, Records of the Geological Survey of India, Vol. I., Part 2 (1868). Mr. Blanford, Superintendent of the Geological Survey, has kindly revised this section.

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among the traps. The different varieties lie one upon another, and beds pass from one texture to the other without any regular sequence.

GEOLOGY.

Nummulitic series.

The nummulitic series is the next geological sub-division in ascending order. This rests unconformably upon the traps,[1] and spreads in gentle undulations under a large portion of the district. In every case it forms a fringe to the rocky trap country, and borders the alluvium of Gujarát, by which towards the west it is concealed. In the surveyed country to the north of the Narbada no rocks of this series have been found. Their best sections are seen in the Tápti near Gala, and in the streams which run from the Rájpipla hill country to the Narbada, north of the Kim valley. The uppermost section of the nummulitic series consists of gravel with a large proportion of agate pebbles, sandy clays, and calcareous sandstone frequently nodular. The gravels are often cemented into a conglomerate. Towards the base, bands of limestone, usually sandy and impure, abounding in nummulites and other fossils, are met with, and with them thick beds of a ferruginous clay, assuming, where exposed, the well-known brown crust, irregular surface, and general appearance, of laterite. Beds of agate conglomerate, apparently of considerable thickness, occur. The following table compiled from various sections shows the general features of the exposed portion of the series with its preponderance of sandy and gravelly beds above the ferruginous ones near the base :—

Conglomerates, sandstones, and hard calcareous breccia.

Yellow limestones, sandy and gravelly conglomerates, and shales *(oyster shells* and *Balanidæ)*.

Calcareous sandstones, gravelly conglomerates, sandy limestone, and shales *(fossil wood, shells and spines of Echinoderms)*

Sandy conglomerates, sand layers, and ferruginous partings.

Calcareous, concretionary clay, and pale yellow sandstone *(bone fragments)*.

Sandstone and clays (sandstone containing *plant* fragments).

Agate conglomerates.

Limestone (with *nummulites)*.

Stratified ferruginous conglomerates, sandstones, and sands.

Stratified ferruginous sandstones, blue clays, and variegated beds.

Yellow ochreous sandy clay, bluish and pale lilac clay.

Shales, sands, clays, and sandstones.

This list indicates the general features only, and is not a detailed representation of any one particular succession. Calcareous beds are often met with; but though these, here and there, become repre-

[1] Only one junction, or rather very near approach to a junction, is seen. Here the rocks have the appearance of unconformity; but in other places, where the two formations occur at short distances from each other, there is reason to believe that the ground is traversed by faults. The two series are proved to be unconformable by the frequent occurrence in the upper of gravels and conglomerates, some of which are composed of rolled fragments of basalt, whilst others contain agates derived from the traps.—Mr. Wynne, as above, p. 29 (foot-note).

sented by thin bands of limestone, only in one locality was the latter found to occupy a large space of ground. Though the angles of dip are frequently low, the thickness must be very considerable; for, in many of the streams, sections may be seen with a vertical depth of from one to three hundred feet. Many of the beds are highly fossiliferous; some are large, made up of nummulites, others of the separated valves of *Balanidæ*; some contain a number of univalve and other shells with which the teeth of sharks, segments of the caraface of a turtle, and portions of large ribs and of other bones as yet undetermined, have been found. From the evidence of the fossils an Eocene (Parisien) age has been assigned to this series of beds.[1]

Alluvium

Under the term alluvium are included all the deposits which so extensively occupy the district, concealing and covering up the above-mentioned rocks over the low ground, and forming the mural precipices which edge all the larger streams at a little distance from the sea. This alluvium, whose surface, over small spaces, is frequently moulded into hillocks and valleys, is almost universally composed of a fine, light-coloured argillaceous loam, seldom pebbly or gravelly. It sometimes presents lines of stratification, but is more frequently unstratified The only characteristic of this loam is, that, like other Indian deposits of the kind, it contains numerous concretions of the impure carbonate of lime known as *kankar* The mass of this soil appears to be older than the portions that form the flats along the large rivers; but the two varieties pass so insensibly into each other that it is impossible to distinguish between them. Associated with this alluvium, and generally passing beneath it, are numerous beds of recent conglomerate with a calcareous cement. As to the age of these beds it is not possible to speak with certainty. Along parts of the coast they seem still to be in process of formation, while further inland others are old enough to have been cut throughby the rivers, and in places to form their beds.

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[1] The following is a rough list of fossils procured from these beds, in the Tápti river, a little below Bodhán, near the junction of a small stream called the Rhea They have been identified by Dr F. Stoliczka —

Rostellaria Prestwichii, D'Orb.
Terebellum, sp.
Cerithium, sp.
Cypræa (Cypræovula) elegans, Lam.
Natica longispira, Leym
Conus, sp (near *C brevis*, but thinner).
Trochus, sp. (like *T. mitratus*, Desh).
Pholas, sp.
Pecten Hopkinsi, D'Arch. and Haime
,, *Favrei*, D'Arch.
,, *corneus*, Sow
Vulsella legumen, D'Arch and Haime.
Ostrea Flemingi, D'Arch.
,, *lingua*, Sow.
Hornera, sp (near *H. verrucosa*, M. Edw).
Echinanthus (fragments).
Cidaris (spines)
Fragments of other *Echinidæ*.
Stylocœnia Vicaryi, M Edw. and Haime.
Trochoseris (?)
Trochocyathus Vandenbecki, M. Edw. and Haime
Nummulites perforata, D'Orb
,, *Brongniarti*, D'Arch.
,, *exponens*, or *spira* (probably both).

The "bone fragments" appeared to be portions of ribs, but were too much broken for identification. Whilst the age of the lower beds exposed in the Tapti and elsewhere is clearly shown to be Eocene (Parisien), it is quite possible that the upper portion of the series may be much newer When the beds in Surat were examined very little was known of the tertiary series exposed in Sind and Cutch, which includes several sub-divisions; and it is probable that some of these, besides the Eocene Nummulitic group, are represented in Gujarát. (W. F. B. 1877).

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Cotton soil.

Almost everywhere, upon the open slopes as well as on the flats and in the hollows, the alluvium is covered by cotton soil. This soil is often of considerable depth, presenting the usual desiccation cracks, but without any peculiarities that throw additional light upon its source or formation. At least in Surat, black or cotton soil seems to be the ultimate result of the decomposition or recomposition of an alluvium largely made up of trappean materials. Its colour may be due to decayed vegetation, or to iron, or to both, and its light loamy or compost-like texture to changes from wet to extreme drought, and frequent disturbance of ants and other insects.

Surface Rocks.
In the north.

The following are the details of the surface rocks of the district beginning from the north-west. In the Kim river at Iláv, and above that village near Shâhol, there are hard, whiten calcareous sandstones and breccias, some of which, at the last-named village, are worked into stones for hand-mills. They belong to the upper part of the tertiary series. Near Obha, further up this stream, the alluvium is worn through by the river exposing yellow limestone and soft yellow clay with ferruginous bands These limestones occur again in the country to the north-east. More yellow limestone and sandstone, with calcareous concretions and ferruginous layers, occur: some of these heads are conglomeritic in places, and in others strangely cellular, with a knotted and angulo-concretionary structure. The alluvium in the river-banks is here only about fifteen feet thick. Conglomeritic and calcareous beds are seen occasionally from this to Kathodra, near Kimchoki, where is a calcareous bed with several shells and portions of spines. In the Kim river, about three miles above Kimchoki, calcareous beds again occur. Near Tadkesar is a considerable exposure of light buff and gray nummulitic limestone and agate conglomerate. A low range of hills rises near this town and stretches southwards to the Tápti These hills are formed of ferruginous or lateritic beds intercalated between agate conglomerates, and having a low dip to the west; they pass beneath the limestone just mentioned, which, however, is traceable along their flank, and re-appears in the Tápti river at the end of the range, being let down by a fault to a lower level, but preserving its westerly dip, and seen to be overlaid again by another band of laterite.[1]

In the east.

Towards the north-east, the country forming part of the Rájpipla group of hills is all occupied by the traps and amygdaloids already described. Except a curious pale flaggy band, which extends from near Usked to Mujláv, this tract shows no unusual variety of rock. At, and for many miles above, Bodhán the Tápti river exposes beds of trap rock, with a very general but low and undulating dip to the west, and intersected by numerous dykes of dark-green gray porphyry and solid trap. The following appears to be the order of these rocks: From Gala to Párdi the rocks of the nummulitic series overlying those of the Tadkesar neighbourhood are seen in the banks of the river; they consist of fine gravelly conglomerates, calcareous beds, and smooth,

[1] Mr. Rogers met with nummulitic limestone *in situ* at Tadkesar, about twenty-two miles north east of Surat. This shows that the rocks of the Eocene period are considerably developed in eastern Gujarát.—Memoirs, Geological Survey, VI., 182.

pale gray mudstones. The latter were not found to be fossiliferous, but the others contain many bones, fossilized wood, univalve and bivalve shells, the teeth of sharks, and plates of the caraface of turtles. The locality most fruitful in fossils is the limestone, let down by the fault, near a ruined village on the north bank of the Tápti, about three miles east of Gala. The Mota hill, of which mention has already been made, is formed of compact and brecciated laterite of very similar character to that occurring east of Gala. Its beds appear to undulate nearly horizontally. A small quarry in the east side of the hill exposes a soft purple and white mottled rock like a decomposed and lateritified amygdaloid, in which occur sub-angular lumps of red hœmatite. More red lateritic beds occur interstratified with the traps in the river due south of Mota and below Bárdoli. Eastwards the country rises and undulates, and the usual varieties of gray traps and amygdaloid are seen along the streams and protruding from the surface of the ground.

In the centre.

Near the village of Mahuwa, about twenty-five miles from its mouth, the Purna river exposes traps of the usual kinds, with some reddish beds. These, as the river, five miles further down, enters the alluvium near Koharia, are associated with beds of red laterite; north of Gandevi, at a bend in the Purna river, is a quantity of red lateritic rock, which, from its peculiar prismatic jointing, when viewed in one direction, assumes a columnar appearance. It seems to dip to the north at 15°, and a few yards above it, in this direction, with a similar dip, are some red shales and a band of loose conglomerate or coarse sandstone, a foot thick, which probably belongs to the upper series. Unfortunately very little of these rocks is seen projecting from the alluvium; but, although the want of a good section is felt, there is little doubt that the boundary of the two groups passes near this place, and, perhaps, includes the lateritic rock in the nummulitic series.

In the south.

In the south of the district the trap does not differ from that stretching along the whole of the eastern border, and, although not everywhere visible, there is no want of evidence that the whole country is composed of trap. Dykes are perhaps more numerous here than in most other parts of the district. Where the railway crosses the Daman river are many dykes, with a general direction from north to south. Beginning near Tithal on the west coast of Balsár, and re-appearing at intervals to the south, is a growing deposit of recent conglomerate formed of the materials of the beach, cemented by carbonate of lime. This deposit is stratified, the strata dipping at a low angle seawards. Dead shells, even those of large size, have been in many instances completely fossilized and replaced by carbonate of lime.

Water-bearing strata.

The following are the results of a special inquiry into the structure of the water-bearing strata of the district[1]:—

The alluvial deposits, which furnish nearly all the water obtained

[1] This inquiry was conducted in 1875 by Mr. W. T. Blanford, Superintendent of the Geological Survey. The account in the text is extracted from that officer's report dated 11th January 1875, published with Resolution of the Bombay Government, No. 924, dated 24th February 1875.

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in wells, consist of clays, sandy clays, and sand, much interspersed in places with concretionary nodules of carbonate of lime. Towards the surface they pass into black soil. Beds of gravel may occur in places, but they are exceptional. The different layers of sand and clay are probably very irregular in thickness and extent; but sections are rare, and very few borings have been taken. In those made for the Tápti bridge at Surat, a bed of hard clay, with calcareous nodules, was found to be very much thinner on one side of the river than on the other. The difference, which was not precisely determined, amounted to several feet. It is evident that this bed has an irregular and possibly a lenticular section, and the same is probably the case with all the strata in the alluvial deposits; whilst the more sandy layers, in which, owing to their greater permeability, water is generally found, may very often thin out and disappear in the distance of a few yards.

Brackishness

In any locality the brackishness of its well-water is due to one of four causes I., the presence of salt in the strata when originally formed; II., salt springs; and III., infiltration from spots in which salt is being deposited on the surface of the ground. To these may be added, though almost identical with the third form, IV., percolation from the sea or from estuaries. As the plains of Gujarát have every appearance of being estuarine or marine deposits formed from the clay and sand brought down by the Tápti, Narbada, and other rivers, the brackishness of their wells is probably due to the first of these four causes. The deposits, forming in the salt marshes and flats submerged at high tides near the mouth of the Tápti, are covered by a layer of earth differing so little from one form of black soil that it is impossible to draw a line separating the two. Such differences as exist are probably due to surface action, to the effect of rain and chemical changes, to impregnation with organic matter, and to agricultural processes.[1] There seems to be little reason to doubt that the whole of the surface formation in Surat may have been deposited from salt and brackish water in tidal estuaries and salt marshes, precisely similar to those which are now being reclaimed and converted into arable land in places on the sea-board of the district. The more sandy beds must have been deposited where some current, due either to tidal or stream action, existed. The fine argillaceous black soil has probably been formed in back-waters and marshes. Evidence of a recent rise in the level of the land has been found in several places on the western coast of India. Instances are known at Bombay, in Káthiáwár, and in Sind. There is every reason for believing that Surat has shared in this movement, and that the plains of south-eastern Gujarát have been raised above the sea-level at no very distant geological date.

Cause of brackish wells in Surat

Such being the geological nature and origin of the alluvial formations which cover the country, it may be assumed that more or less salt must originally have been left in the soil. The amount of salt

[1] It is highly probable that great part of Gujarát has been covered by forest, and the soil thus impregnated with decayed organic matter. In this manner the best and richest cotton soil has very probably been formed.—W. T. B.

that still remains will, therefore, depend on the extent to which the soil has been subject to the percolation of rain water. If other conditions remain similar, it is reasonable to anticipate that the salt would be removed more completely from those strata which have been raised to a greater height above the sea and from the more permeable beds, because the first, owing to their elevation, and the second, in consequence of their porousness, have been traversed to a greater extent by rain waters seeking a lower level. It is also probable that elevation has been gradual; and if this has been the case, it is evident that the surface deposits at a greater height above the sea have been first raised, and have consequently been longer subjected to the action of sweet water. But these more elevated portions of the plains are further from the sea, and consequently it appears probable that the amount of salt in the alluvial deposits diminishes gradually from the lower ground on the sea-board to the higher inland plains. The presence or absence of saline impurities also depends on the more or less porous nature of the beds, or, which is the same thing, the proportion of sand and gravel to clay in their composition. Moreover, as the beds thin out within short distances, and the intercalation of sandy and gravelly layers with the less pervious argillaceous strata is variable, much irregularity in the extent to which the water is impregnated with salt may be anticipated. If the brackishness of the water depended directly on the permeability of the beds, we should expect that the wells yielding the largest supply of water would be the least impregnated with salt; and although this does not appear to be universally the case, some instances in its favour have been observed in the town of Surat. In each instance, however, the amount of salt is much complicated by peculiarities in the course taken by the water in reaching the well from the surface, and the beds it passes through during the process of percolation.

Sweet wells near the sea.

Two circumstances, the occurrence of sweet water in wells close to the sea and an increase of saltness in the waters of certain wells, appear at first sight opposed to the views above expressed. Near some houses, between the villages of Dumas and Bhimpor, just south of the mouth of the Tápti river and about ten miles west of Surat, the water in the wells is perfectly sweet. These houses stand on hills of blown sand; the village, about a mile away, is on black soil. The wells at the houses are very shallow, not more than ten or twenty feet in depth; those at the village are double that depth. It appears evident that the water in the wells is derived from the sand resting upon the comparatively impervious black soil, and that the water in the sand is sweet, because any salt originally contained in the porous sand has long since been washed out of it, as water can percolate it freely in descending to a lower level. In another case, that of the sweet well near Vaux's tomb on the right bank of the Tápti, the conditions are similar to those at Dumas; whilst at Bhagwa Dándi, in the Olpád sub-division, where no good water is to be found, there are no sand hills. If the theory given above is correct, the sinking of deeper wells at Dumas or Vaux's tomb will probably result in brackish water being found in the beds underlying those which at present supply the sweet wells.

Chapter I. Description. Geology. Brackishness. Increase of brackishness to what due.

The other difficulty is the existence of numerous wells in various parts of the country, the water of which is said to have of late years become gradually salter. This is rather opposed to the view above expressed, because it is probable that percolation removes the salt in any given stratum, and consequently wells should become sweeter by use, if they do not undergo any change; that is, provided that the water always finds its way from the surface into the wells by the same route and traverses the same beds in its course. But the removal of water from a well may occasionally produce an inflow from other strata than those from which the supply was originally derived, and thus salter water may be introduced. The question is a difficult one, and would seem to require further examination. It would seem possible that, in some cases at least, the change has not been in the water, but in the soil of the fields. As all the well-water contains salts in solution, and as the water poured upon the land is evaporated, leaving the salts behind, a gradual concentration of the salt must take place in irrigated lands, until it may, unless remedial measures be taken, become so saturated as to be unfit for cultivation, as in the case of the *réh* lands of Upper India. In this case the blame would infallibly and justly be laid on the water used for irrigation, although no increase has really taken place in the saline impurities contained in the water. In and around Surat the impurities of the well-water are not confined to common salt (sodium chloride). Some rough tests show the presence in considerable quantities of lime, alumina, and of an alkaline earth, believed to be magnesia.

Number and value of Surat wells.

But, while the brackishness of some of the wells takes away from its character as a water-bearing district, Surat has this great advantage, that the water is generally found near the surface of the ground. Over the greater part of the district, to get a sufficient supply, it is enough to dig a pit of from ten to twelve feet deep, and even in the least favourable localities of the Jalálpor and Chorási sub-divisions, the upper surface to be cut through is not more than twenty-five feet thick. The wells of the district are of two kinds—pits dug in the earth and wells built of masonry. The former, which in the alluvial tracts south of the Tápti are almost unlimited in number, cost to dig from 10*s.* to £1 (Rs. 5 to Rs. 10). Of masonry wells the returns show a total of 8,607, each of which is estimated, on an average, to cost about £40 (Rs. 400) Besides the ordinary wells, and those to some extent made useless by the brackishness of their waters, there is at Unái a mineral spring of some local celebrity.[1]

Climate.

As regards climate the district of Surat consists of two parts,—one, of equable temperature, under the influence of the sea-breeze; the other, beyond this influence, subject to changes in heat and cold almost as great as in the more northerly parts of the province. Except in the neighbourhood of rivers, which, acting as channels, carry the sea-breeze further inland, its influence does not, as a general rule, extend for more than from eight to ten miles from the coast. Another peculiarity which helps to make the coast districts

[1] Further details of this spring will be found under the head Places of Interest.

more healthy than the inland parts, is their much lighter rain-fall. The average rain-fall varies from thirty inches in Olpád to seventy-two in Chikhli. The average annual rain-fall at Surat for the period from 1839 to 1848 was 31·58 inches; from 1852 to 1861 was 34·15 inches; and from 1862 to 1871 was 46·26 inches. Of the inland parts, in the opinion of the people of the district, Párdi in the south and Mándvi in the north-east are the most unhealthy.[1]

During the cold-weather months, that is, from the beginning of December to the end of February, the winds are changeable, but come generally from the north-east. From March to May north-easterly winds, gradually growing hotter as the season advances, blow in the early part of the day, changing towards the afternoon to a sea-breeze from the west. May is the hottest month in the year; but, except in towns, is acknowledged to be the healthiest. In the rainy season, from June to October, westerly winds prevail, falling in force towards September. In October the failure of the breeze and the heat of the sun combine to make the climate unhealthy as well as unpleasant. In November the heat gradually diminishes as the north-eastern winds of the cold season begin to set in. In the city of Surat, almost at the limit of the influence of the sea-breeze, a series of thermometer readings in the shade ranged as follows :—

Term of Years	January.		May.		September		December.	
	Min	Max	Min.	Max.	Min.	Max	Min	Max.
Average of ten years from 1839 to 1848 [2]	61	86	80	96	78	89	63	86
Do do. from 1852 to 1861 [3]	60	87	80	99	77	89	63	87

A more detailed account of the rain-fall and temperature of Surat is under publication in Mr. Chambers' work on the meteorology of the presidency.

[1] Of the Mándvi climate the proverb says In Máldha and Limdha the water is covered with much oil. If you do not die there, then go on to Devgarh. Devgarh says, "I will make you green, I will make you yellow. If you do not die, then what can I do?" Of the Párdi climate the proverb runs Bagwára is half death, Mándvi is whole death The Gujaráti proverbs are "Máldhá, Limdhá motifál, nahi maré tó Devgarh chál; Devgarh kéhé hu hilo karu, pilo karu, nahi maré tó hu shu karu." "Bagwáré jivé addhoji, pan Mándvi má maré puroji"

[2] Letter of the Civil Surgeon to the Collector of Surat, No. 24, dated 30th July 1849.

[3] Sanitary Commissioner's Report for 1873, p. 44.

CHAPTER II.

PRODUCTIONS.

Chapter II. Productions.

MINERALS.

From the distribution of hills and rocks over so large a portion of its surface, Surat, as compared with Broach, Kaira, and Ahmedábád, is well supplied with stone for building purposes. The following details show the character and cost of the stone available in the different parts of the district: In the Mándvi sub-division, at Tadkesar, nummulitic limestone; at Majláv, calcareous sandstone; and at Nogáma, laterite,—are, at a cost of 7½*d* (as. 5) the cubic foot, used for the metalling and masonry work on a considerable portion of the Kim and Tadkesar road. From Bodhán up the bed of the Tápti, at the cost of 1*s.* (as. 8.) the cubic foot, trap can be quarried either from the river bed itself or from the land on either side. In the Bárdoli sub-division, at Goji and Wághecha, trap can be quarried at the cost of £1 14*s.* (Rs. 17) for one hundred cubic feet. In the Olpád sub-division, at Jáfarábád, Kosád, and Warácha, nodular limestone, or *kankar*, used for metalling roads, can be had at rates varying from 3*s.* to 4*s.* (Rs. 1-8 to Rs. 2) the hundred cubic feet. In the Chorási sub-division, from Dumas, Magdala, and Athwa, the city of Surat is generally supplied with sand and nodular limestone. The Dumas limestone costs 7*s.* (Rs. 3½) the hundred cubic feet, while the price of the Magdala and Athwa sand varies from 1*s.* 6*d.* to 2*s.* (as. 12 to Re 1). In the Balsár sub-division trap is quarried at Párdi at a cost of £2 10*s.* (Rs 25) the hundred cubic feet, and at Dungri at from £1 to £2 (Rs. 10 to Rs. 20). Trap gravel is also brought from Wápi at the cost of 12*s.* (Rs. 6) the hundred cubic feet. Of these the Dungri stone is the most used, especially as metal for the Surat city roads. At Chikhli, in the sub-division of the same name, trap is to be had at prices varying from 16*s.* to £1 4*s.* (Rs. 8 to Rs. 12) the hundred cubic feet. Besides stones for building purposes, iron-stone is, as far as present (1876) information goes, the only mineral product of the Surat district. Iron-stone is said to be found in the Balsár and Párdi sub-divisions, and there, as well as at Bodhán in the Mándvi sub-division, specimens of slag, evidently from native furnaces, have been picked up. Of the manufacture no traces remain. It is supposed to have been the work of wandering blacksmiths. Metallic sand accumulates at the mouths of all the rivers. It is purest on the Dumas side of the Tápti. The only use to which this sand is put is, instead of blotting-paper, for drying up ink.[1]

[1] Report of the Collector of Surat to Government, dated 20th September 1820.

Over the whole district the common toddy-yielding wild date tree, or *khajuri* (Phœnix sylvestris), grows more or less freely. Near village sites and on garden lands, clusters or groves of the mangoe, *ámbo* (Mangifera indica); the tamarind, or *ámli* (Tamarindus indica), the banian, or *wad* (Ficus indica); the *limbdo* (Azadirachta indica), the *piplo* (Ficus religiosa), and other fruit and shade-trees are commonly found. But, except in some of the eastern parts of the district, the fields and hedgerows are, as a rule, without any timber-yielding trees. The only exception is the *bábwal* (Acacia arabica), which in small bushes covers most parts of the district, freely springing up in fields set apart for the cultivation of grass

Shade and fruit trees

Besides from the wild date, toddy is drawn from the brab or *lád* (Borassus flabelliformis), a common tree in most parts of Surat. With the view of diminishing the consumption of spirituous liquors, many trees of both varieties were, about fifteen years ago, destroyed by order of Government The toddy-yielding trees fit for tapping were, in 1868, estimated at a total of 1,243,711. Of these, 47,810 were brab and 1,195,901 wild date trees The distribution of these trees in different parts of the district, and the approximate number tapped in 1868, appear from the following statement[1] —

Liquor yielding trees.

Statement of Toddy-yielding Trees, 1867-1868

Name of Sub division	Approximate number of trees fit for tapping		Approximate number of trees tapped in 1867 68	
	Brab	Date	Brab	Date
Olpád	33,599	100 792	15,739	45,000
Mándvi		125,000		50,000
Chorási	3,000	60,000	1,000	25,000
Bárdoli	2,000	105,265		45,088
Jalálpor	4,939	100,000		44,307
Chikhli	3,472	230 800		115,000
Balsar		355 044		120 000
Párdi	800	119,000		45,000
Total	47,810	1,195,901	16 739	489 395

The first step in starting a plantation of date trees is to have the land ploughed. This is done before the opening of the rainy season (June). When some rain has fallen, self-sown plants, of from one to two years old, are collected[2] and planted about eleven feet apart, or, on an average, three hundred and sixty trees to one acre During the rainy months (June to October), at times when no rain falls, young plants should be watered every day When the rainy season is over, the land is cleared of grass and weeds, and round each plant a space, large enough to contain about four gallons (one *man*), is

Culture of the wild date.

[1] Report of C W Bell, Esq., Bombay Civil Service, on the abkari system of the Bombay Presidency, dated 1st October 1869

[2] The produce of date trees grown from seed is said to be less than the produce of self sown plants The spontaneous plants are believed to spring from the stones of fruit that has been eaten by jackals

Chapter II. Productions. Trees.

hollowed out and filled with water. After an interval of ten days the ground round the tree is again cleared of weeds and grass. This process is, when ten more days have passed, repeated a third time, and near the close of the hot weather (May) the land is three times ploughed. This completes the round of the first year's cultivation. During the second rainy season the plants require no watering. At its close the ground is, as in the first cold season, three times watered and three times cleared. Before the beginning of their third rainy season the young trees are manured. In their next, the third, cold season watering and weeding are required only twice. After this, as a general rule, the young trees receive no more care, and when eight years old are ready for tapping. In some cases trees are watered for five years, and when this is done they can be tapped when six, instead of eight years old. When the plant is ready for tapping the juice is drawn twice a day, morning and evening. After ten days of tapping the tree requires five days to rest. When the five days of rest are over, another ten days of tapping begins In this way periods of rest and tapping alternate till the process has lasted over about three months and the tree has undergone from fifty-five to sixty days of actual tapping. When this is over, the tree is allowed to rest for a whole year The yield of a wild date tree varies, without watering, from 10 to 5 pints, and averages about 7½ pints of liquor a day, or a yield of 40 gallons during 55 days, the total average yearly number of tapping days. If the tree is watered before the juice is extracted, it will yield one-fourth more than the above estimate. The tree should be tapped only every second year. If well taken care of, and not overdrained, a wild date tree will yield juice until thirty years old. The price of the toddy and, therefore, the value of the tree, varies in different parts of the district. In Balsár, at from 1*d.* to 1½*d.* a gallon (as. 2 pies 8 to as. 4 a *man*), a wild date tree brings in from 3*s* to 4*s*. a year (Re 1½ to Rs. 2). At Surat, with rates varying from 1¼*d.* to 2½*d.* a gallon (as. 4 pies 8 to as 6 pies 4 a *man*), a wild date tree returns from six to eight shillings. Of unfermented juice, or *mio*, a wild date tree will yield from 5 to 2½ pints a day Except that unfermented juice can be obtained only in the early morning, and, therefore, the daily yield does not average more than 3¾ pints, the same rules apply for extracting unfermented juice, or *niro*, as for drawing fermented juice.[1]

During the first six years, when no profit is obtained, the cost of cultivating one acre of date trees in Balsár (1875) is estimated[2] at £40 16*s*. (Rs. 408). At a cost of about £6 (Rs. 60) for tapping and

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[1] One pint = a *ser* of 40 tolas, and a gallon = 10 *sers*.

[2] Rent, say, at 12*s*. (Rs. 6) a year, £3 12*s* (Rs. 36). 12*s*. (Rs 6) is calculated at double of the Government assessment, the ordinary sub-letting rate; cost of first year's ploughing, 4*s* (Rs. 2), collecting 360 young plants, 8*s*. (Rs 4); planting the above, 8*s*. (Rs 4), watering the newly planted young trees, 8*s*. (Rs 4); ploughing and clearing land for 12 times during the 6 years, £1 16*s*. (Rs 18); watering for seven months at 3 times a month for 5 years at 12*s*. (Rs. 6) a month, £21 (Rs. 210); price of 10 cart-loads of manure, 5*s* (Rs 2-8), and their conveyance and other charges, 5*s*. (Rs. 2-8); cost of digging an unbuilt, or *kacha*, well, £1 10*s*. (Rs. 15); cost

general management, the 360 trees should at the end of the seventh year have yielded a sum of at least £40 (Rs. 400), or within less than £1 (Rs. 10) of the total amount expended. Deducting the cost of management the trees should in future years yield revenue at the rate of about 2*s.* (Re 1) each. In and near the city of Surat, where their juice is in constant demand, the date trees yield a much more considerable profit, and instances occur of wild date plantations being let at the rate of 6*s.* (Rs. 3) a tree

Date tree sugar.

With the double object of introducing a new industry and of checking the manufacture of liquor, the government of Bombay in 1874 (November 25) authorized the collector of Surat to spend a sum of £150 (Rs. 1,500) in an attempt to introduce the Bengal system of manufacturing sugar from the juice of the wild date tree. Skilled workmen brought from Jessor, in Bengal, succeeded in making sugar of a marketable value. But the returns of the first set of experiments show that the juice of a date tree which, sold as toddy, brings in a yearly profit of 3*s.* (Rs. 1-8), would, if manufactured into sugar, yield only 1*s.* 3*d.* (as. 10). The experiments have been repeated, and the results may be more satisfactory. But so far (1876) there would seem to be little reason to expect that the manufacture of sugar will take the place of the manufacture of toddy.

Profits from fruit trees.

Any attempt to estimate the ordinary value of the produce of a fruit tree is beset with difficulties The following details have been supplied by the superintendent of revenue survey: An ordinary sized tamarind tree will, in an average season, yield four hundred pounds weight of fruit. But on account of the dangerous nature of the work, the men engaged in collecting the pods have to be paid as much as 1*s.* (as. 8) a day. Cultivators, therefore, generally prefer to dispose of the crop by contract. In one case seven trees, on a field of five acres, were let for £1 8*s.* (Rs. 14). A crop of wood-apples, on the same field, realized 3*s* (Rs. 1-8), and twenty-seven small *báwals* (Acacia arabica), scattered over the field, were valued at £1 7*s* (Rs.13-8). These *báwals* were about nine years old, so their value represented a yearly profit of about 3*s* (Rs. 1-8). The produce of a mango tree is estimated at from 4*s.* to £1 10*s.* (Rs 2 to Rs. 15) a year; of a jack tree, at from 2*s.* to 10*s* (Re. 1 to Rs. 5); of a cocoanut tree, at from 2*s.* to 6*s.* (Re. 1 to Rs. 3); of a wild date, at from 9*d.* to 4*s.* (as. 6 to Rs. 2); of a brab tree, from 1*s.* to 6*s.* (as. 8 to Rs. 3).

Forests.

Though on the whole well clothed with trees, the district does not possess much revenue-yielding forest. A few hills[1] in the southern sub-divisions and a strip of land along the banks of the Pár river

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of well apparatus, £1 10*s* (Rs. 15), cost of making hedge in the first year, £1 (Rs 10), and in the following 4 years, at 10*s* (Rs 5) annually, £3 (Rs 30); cost of keeping the well in repair for five years, £4 (Rs 40); other contingent charges, at the rate of 10*s* (Rs. 5) a year, £2 10*s* (Rs 25) total £40 16*s.* (Rs. 408). These and other details of the culture of the wild date have been supplied by Ráv Bahádur Keshavlál Nathubhái, late mámlatdár of Balsár.

[1] Morái, Bahta, Kalsár, and Bagwára, in the Párdi sub-division, and Párnera, in the Balsár sub-division.

Chapter II. Productions. Forests.

are covered with teak coppice. Along the borders of the Ambika river, near the villages of Gandeva, Seria, and Chitáli, in the Chikhli sub-division, a total area of about 809 acres, partially covered with a natural growth of teak, has been set apart as a forest reserve. In two places, at Gandeva and Goima, teak plantations—the one of about 189 acres, and the other of 315 acres—have been established; but, owing to the bad quality of the soil, the Goima plantation has not proved a success. The only part of the district where there is any considerable area of land suited for forests, is a rough hilly tract in the east and north-east of the Mándvi sub-division. This land, covered with teak and general forest, has recently been divided into seven demarcated reserves, with a total area of forty-six and a half square miles. At present the produce of this tract has but little market value. But as they contain teak, blackwood, *kher* (Acacia catechu), bamboos, and many other varieties of forest timber, these reserves are, after a few years of rest and protection, expected to yield a good revenue. Forest products other than wood exist in abundance in the Mándvi reserves. But few of them have any commercial value. Some of the forest tribes eke out a living by weaving bamboo mats; by collecting the fruit of the *bordi* (Zizyphus jujuba) and *jámbu* (Eugenia jambolana), and by gathering the leaves of the *khákhra* tree (Butea frondosa) for dinner plates, or those of the *asindro*, to be rolled into cigarettes. The Bhils eat the flower of the *mahura* (Basia latifolia) tree, and occasionally exchange it for liquor, but they do not collect it for sale. They also gather honey and collect bees-wax into rough lumps, bartering both honey and wax for intoxicating drinks.

When employed by the forest department, the tribes of the Mándvi forests, chiefly Chodhrás, Bhils, and Gámtás, are (1876) generally paid by the piece, not by the day. For cutting and preparing large rafters, workmen receive from 5*s*. to 6*s*. (Rs. 2½ to Rs. 3) a score, and about half as much for a score of small rafters. In other work, such as felling large logs, or clearing underwood, a good workman earns 6*d*. (4 as.) a day. But, when it can be managed, the system of payment by piece-work is preferred. In the heavy parts of wood-cutting women and children are not employed. As weeders, or on plantations, women and children are generally paid by the day; the women receiving from 3¾*d*. to 4½*d*. (as. 2½ to as 3), and the children from 2¼*d*. to 3*d*. (as 1½ to as. 2). Timber for building and other purposes is plentiful. The Dáng forests[1] supply the district with teak, blackwood, *kher* (Acacia catechu), *aladhwán* (Nauclea cordifolia), *sádro* (Terminalia glabra), and many other varieties of useful and durable timber. The three chief timber markets in the Surat district are Karod in the Bárdoli sub-division, and the ports of Balsár and Bilimora. Supplies are brought to these depôts either by the country people or by timber merchants. From Balsár and Bilimora timber goes in considerable quantities both by rail to the inland marts and

[1] A description of the Dáng forests will be found in the Statistical Account of Khándesh.

by sea to the Káthiáwár and other ports of northern Gujarát. The prices in 1874 were: at Karod, for rafters from 4*s.* to 16*s.* (Rs 2 to Rs. 8) the score, and for teak logs from 8*d.* to 2*s.* (as. 5½ to Re. 1) the cubic foot; at Balsár, for timber from 3*s.* to 4*s.* 8*d* (Rs. 1½ to Rs. 2½); and at Bilimora, for rafters from 1*s.* 4*d* to 2*s.* (as. 10½ to Re. 1), and for teak logs from 2*s.* to 2*s* 6*d.* (Re. 1 to Rs. 1-4).

Domestic Animals.

The domestic animals of the district are oxen, cows, buffaloes, horses, sheep, goats, and asses. The oxen, of which the total number was in 1875 returned at 127,711, belong to two breeds. Of these, the indigenous, or *talabda*, bullock of middle size, is used chiefly for agricultural purposes, and costs from £3 to £10 (Rs. 30 to Rs 100). The large muscular oxen, or *hedia*, brought by travelling herdsmen from northern Gujarát, and purchased by traders and the better class of cultivators, cost from £12 to £20 (Rs. 120 to Rs. 200) the pair, and are generally employed in drawing carts. Though not so strong as the north Gujarát animals, the local bullock lasts considerably longer. Its average lifetime being about fifteen years, as compared with ten years the ordinary term of a hard-worked bullock of the larger breed. A third, very diminutive bullock, many of them not more than three feet high, is driven generally in pairs, but sometimes singly in the towns of the district in light riding-carts. So hardy and swift are these little animals that, for a short distance, they will keep up with an ordinary two-horsed carriage. The cows and buffaloes of some of the sub-divisions of Surat, especially of Chorási, Olpád, and Jaláipor, are much esteemed, the cows for the neatness of their forms, the cow-buffaloes for the large quantities of milk they yield. A good cow costs from £2 to £3 (Rs 20 to Rs. 30); a good cow-buffalo from £6 to £7 (Rs. 60 to Rs. 70). In the rural parts of the district only a few, even among the well-to-do village headmen and large landholders, keep a horse; and, except in the city of Surat, where horse vehicles may be had to hire, and where many of the richer merchants and traders drive animals of considerable value, horses are seldom seen. Little care is given to the breeding or the feeding of sheep and goats. When the harvest is over, flocks of sheep and goats, herded by a single man or boy, graze over the empty fields. In the coast villages, where the sheep's only enemy is the jackal, the herd is at night driven together and surrounded by a hedge of thorn bushes. In inland parts, as there is some risk that a panther may prowl about the fold, the sheep and goats have at night the shelter of a hut.

Domestic Fowls.

Hens are reared by Musalmáns, Pársis, and several of the lower classes of Hindus, Kolis, Máchhis, Wághris, Bhils, Dublás, and Dhers. Hens are kept for sale chiefly by Wághris. The other classes use them for their own food, and only occasionally sell them. Ducks are reared for sale by the Máchhis of the sea-coast districts.

Wild Animals.

The chief wild animals of the Surat district are the tiger, *wágh* (Felis tigris); the pard or panther, *dipdo* (Felis pardus); the bear, *rinch* (Ursus labiatus); the boar, *dukar* (Sus indicus), and the wolf, *waru* (Canis pallipes).

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WILD ANIMALS.

Year by year the tiger is becoming scarcer. Tigers are now to be found only in the Mándvi sub-division, and occasionally in river-beds along the eastern frontier, where they have strayed from the wilder parts of the Bánsda and Dharampor states. The panther is found throughout the Surat district. In the Mándvi, Bárdoli, and Jaláipor sub-divisions panthers are common, nor are they unknown in Chorási and Balsár. Surat panthers are of two sorts,—the larger or hill variety, Jerdon's panther or Felis pardus, and the smaller or field variety, Jerdon's leopard or Felis leopardus. The former measure up to nine, the latter rarely more than seven feet. Except on rare occasions, neither sort of panther kills any animal larger than a goat. Bears are now found only in the Mándvi sub-division. During the day time they live in rocks and ravines; at night they come down into the plains, feeding chiefly on roots, fruit, white-ants, and honey. When dead the bear measures about six feet in length and about twenty-five to thirty inches in height. Wild boars are found only in the Mándvi and Bárdoli sub-divisions. The wolf is said to have been met with in the Mándvi forests. But even there he is very seldom seen, and is not known in other parts of the district. Of the smaller sorts of wild animals, the hyena, or *taras* (Hyæna striata), and the jackal, or *sygál* (Canis aureus), are common everywhere. The otter, *pánini biládi*, or "water cat" (Lutra vulgaris), is to be found in most of the Surat rivers The otter frequents pools, living in the banks amongst the roots of trees and in holes. It feeds on fish, eating only the head and shoulders. The fox, or *lokni* (Vulpes bengalensis), is very much smaller than the English fox, of a slate grey and with a bushy brush His whole length rarely exceeds twenty-four inches, and his height six or eight inches Of the deer family, the samber stag (Rusa aristotelis), the spotted deer, *chital* (Axis maculatus), and the four-horned antelope, *bekri* (Tetraceros quadricornis), are found only in the Mándvi sub-division, and there in no great quantity. During the last few years the number of antelope, or *kalvár* (Antilope bezoartica), has been very much on the increase They are now to be found in almost every part of the district.

GAME BIRDS

The only goose is the spur-winged goose, or *nukta*. This, during the cold weather, is found over the whole district in parties of from eight to fifteen. There are many sorts of wild duck, also cold-weather visitants, of which the following are the most common the gadwall, shoveller, pintail, pink-headed duck (Anas caryophyllacea), wigeon, common and garganey teal, the tufted duck or golden eye (Fuligula cristata), and the red-crested and red-headed pochard. The teal are the earliest to arrive, the pochards the last to leave. Large bags of duck are made on ponds in various parts of the district, sometimes by stalking them, and at others by the sportsman concealing himself in the rushes, and shooting the birds as they circle round and round overhead. The full, jack, and painted snipes are also common, but the pintail has not yet been noticed. The great Indian bustard (Eupodotis Edwardsii) is sometimes found, but rarely. The lesser

The notes on wild animals and game birds are contributed by Captain R. Westmacott.

florican (Sypheotides auritus) is tolerably common, coming in at the first fall of rain. At times it is rather dangerous to eat them, owing to their fondness for feeding on the blisterfly. They are very easily dropped, a single pellet knocking them down at very long distances. Both the grey and painted partridge (Ortygornis pondicereana and Francolinus pictus) are common. The grey quail (Coturnix communis) is a winter visitor, coming in November and leaving in March. It is not so plentiful as it is in northern Gujarát. The rain or black-breasted quail (Coturnix coromandelica) remains all the year round. Of the other quails, three have been noticed. Perdicula erythrorhyncha is believed to be found sometimes, but specimens have not yet been properly identified. Perdicula asiatica, or the rock bush-quail, is common, and so is Turnix dussumieri, the larger bustard quail. Of rock-grouse the only one that has been observed is Pterocles exustus, the commonest Indian variety, which is met with whenever there are extensive sandy plains. The painted rock-grouse (Pterocles fasciatus) will probably be obtained in the hills on the eastern frontier. Pea-fowl are found wild in the forests of the Mándvi sub-division, and in a semi-domesticated state in the outskirts of many villages and towns in the plain country. The red spur-fowl (Galloperdix spadiceus) and the grey jungle-fowl (Gallus sonneratii) are also found in the forests to the east of the district. The green pigeon (Crocopus chlorigaster) is common in the plains towards the north, feeding principally on the fruit of the banyan tree. A rare cold-weather visitant is the demoiselle crane (Anthropoides virgo), and probably the common crane (Grus cinerea) will also be identified at a future time. In the list of game birds, the spoonbill (Platalea leucorodia), the bittern (Botaurus stellaris), and the stone plover or bastard florican (Œdicnemus crepitans) may also be included, but they are seldom thought worth shooting. On the whole, small game in the Surat district is not so plentiful as it is further north, around Kaira and Ahmedábád, or in the tract south of Deesa.

Though there are no regular fresh-water fisheries in the district, fish are found in most of its rivers and in some of the larger ponds. They are caught in the rivers all the year round, but chiefly during the rainy months and in the beginning of the cold weather (June—November). The fishers belong to two classes, *Máchhis*, or fishers by profession, who fish generally for retail sale, and *Dublás* and other aboriginal castes, who fish for their own consumption. Except in the Tápti, where baited hooks are used, fish are caught almost entirely by nets. The fishers seldom succeed in netting large fish, though several of the ponds, and, among the rivers, at least the Tápti, are known to contain fish of great size. As a rule, fishers have to be content with the fry which come up in May and September, and are caught indiscriminately. There are said to be no private rights in

Fisheries.

The paragraph on the fresh-water fisheries is taken from Dr. Day's report on the fresh-water fish and fisheries of India. The account of the salt-water fisheries is contributed by A. Faulkner, Esq., Assistant Collector of Salt Revenue. Details of the names of fish and the different modes of fishing will be found in the Broach Statistical Account.

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FISHERIES.

fisheries, nor does the State derive any rent or revenue from this source. The Surat salt-water fisheries are of more importance than its river fisheries, and employ a fleet of 325 boats. Of these, two-thirds are canoes, and the rest fishing boats of from two to eight tons burden. Near the mouth of the Tápti, in the open sea between Dumas and Bhimpor, are the stake-nets which supply the Surat market. South of this, off the mouths of each of the rivers,—the Purna, Ambika, and Auranga,—are rows of stake-nets. In the Párdi sub-division stakes are placed in the open sea, opposite the villages of Umarsári and Dungri. The fish caught at these places is chiefly salted, and either sold or bartered at the weekly fairs held in the interior. Oysters are found at Kolak, in the Párdi sub-division. Some of the beds are situated at the mouth of the Kolak river, and some along its rocky banks. The oysters are left entirely to their natural growth.

CHAPTER III.

POPULATION.

According to the census returns of 1822 the total population of the district, exclusive of Mándvi, at that time an independent state, was 454,431 souls Deducting the figures for Mándvi the census returns for 1872 give a total population of 558,720 souls, or an increase in fifty years of 22·94 per cent.[1] Details of the census of 1846 are available. But the results of this enumeration were not at the time considered trustworthy ; and as only five years later a second census was taken, it seems best to limit comparisons to the particulars recorded for 1851 and 1872.

Census of 1822 and 1846.

According to the census of 1851 the total population of the district was 492,684 souls, or 332·44 to the square mile : the Hindus numbered 433,267, or 87·94 per cent; the Musalmáns 46,608, or 9·46 per cent; the Pársis 12,633, or 2 57 per cent; or otherwise eight Hindus to each Musalmán, and three Musalmáns to each Pársi. There were besides 146 Christians

Census of 1851.

The census of 1872 gives a total population of 607,087 souls, or 382·29 to the square mile. Of these, 541,738 were Hindus, 52,157 Musalmáns, 12,841 Pársis, 334 Christians, one Jew, two Sikhs, nine Brahmos, and five others not included in any of the above classes. The percentage of the Hindu inhabitants on the total population is 89·23 ; of the Musalmán 8 59 ; and of the Parsi 2·11 ; or about ten Hindus to each Musalmán, and four Musalmáns to each Pársi. The percentage of males on the total population is 50·12, and of females is 49·88.

Census of 1872.

From the following statement, which, in tabular form, contrasts the results of these two enumerations, it would seem that in the twenty-one years between 1851 and 1872 the population advanced from 492,684 to 607,087, or an increase of 23·22 per cent. During the same time houses have increased from 108,579 to 137,613, or 26·73 per cent; ploughs from 39,944 to 46,643, or 16·77 per cent; and carts from 29,067 to 32,477, or 11·73 per cent. Under the head of agricultural live-stock the statement shows, in the number of oxen, an increase from 118,950 to 144,546, or a rise of 21·51 per cent; in that of cows from 93,443 to 105,397, or of 12·79 per cent; in that of buffaloes

Comparison of 1851 and 1872.

[1] The only reference to this, 1822, census that has been traced, is in a report of J. M. Davies, Esq., Collector of Surat, No. 311, of 29th May 1851, to the Revenue Commissioner, N.D.

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from 69,184 to 82,482, or of 19·22 per cent; and in that of sheep and goats from 85,298 to 93,727, or of 9·88 per cent. In the number of horses alone there is a falling off from 1,072 to 976, or of 8·95 per cent :—

Contrasted Statement of the Population of the Surat District in 1851 *and* 1872.

Year.	Population						Houses
	Hindus	Musalmans.	Pársis	Christians	Others	Total.	
1851	433,267	46,608	12,663	146	..	492,684	108,579
1872	541,738	52,157	12,841	334	17	607,087	137,613
Increase per cent in 1872 .	25 03	11 04	1 4	128 76		23 22	26 73
Decrease per cent in 1872 .	..	.				..	..

Contrasted Statement of the Agricultural Stock of the Surat District in 1851 *and* 1872.

Year.	Agricultural Stock							
	Implements.		Live-stock					
	Ploughs	Carts	Oxen	Cows.	Buffaloes.	Horses	Sheep and Goats.	Total.
1851	39,944	29,067	113,950	93,443	69,184	1,072	85,298	367,947
1872	46 643	32,477	144,546	105,397	82,482	976	93,727	427,128
Increase per cent in 1872	16 77	11 73	21 51	12 79	19 22		9 88	16 08
Decrease per cent in 1872	..	.	..	..	..	8 95	..	..

Sub-divisional details.

The following tabular statement gives for the year 1872 details of the population of each sub-division of the district according to religion, age, and sex :—

Sub-divisional Details of the Surat Population in 1872.

Sub-division.	Hindus								Grand Total.
	Not exceeding 12 years.		Above 12 and not exceeding 30 years		Above 30 years.		Total		
	Males	Females	Males.	Females	Males	Females	Males	Females	
Surat City	12,633	10,974	14,027	13,906	14,266	13,270	40,926	38,150	79,076
Olpád .	11 580	11,082	9,856	10,080	9,037	8,934	30,473	30,096	60,569
Mándvi	9,411	8,299	7,572	7,381	6,043	5,820	23,026	21,500	44,526
Chorási .	7,496	6,673	6 691	6,716	6,385	6,481	20,522	19,870	40,392
Bárdoli ..	14,786	13,947	12,348	11,734	10,903	10 554	38,017	36,035	74,052
Jalálpor	13,772	13,291	9,225	10,545	8,941	10,629	31,938	34,465	66,403
Chikhli .	11,302	10,484	8,701	8,485	7,228	7,606	27,231	26,555	53,786
Balsár . .	15,021	13,793	11,068	12,578	9,747	11,418	35,836	37,789	73,625
Párdi . ..	10,289	9,597	7,697	9,005	6,483	6,488	24,249	25,060	49,309
Total	106,250	98,140	87,185	90,410	78,733	80,970	272,218	269,520	541,738

Sub-division	Not exceeding 12 years.		Above 12 and not exceeding 30 years.		Above 30 years		Total.		Grand Total.
	Males.	Females	Males	Females	Males	Females	Males.	Females	
MUSALMA'NS.									
Surat City .	3,257	3,234	3,678	3,969	3,734	3,370	10,687	10,573	21,260
Olpád . .	739	679	678	748	611	671	2,019	2,093	4,117
Mándvi .	622	574	664	612	490	526	1,776	1,712	3,488
Chorási .	1,169	1,031	816	1,120	847	1,291	2,812	3,442	6,254
Bárdoli .	567	519	542	568	422	472	1,531	1,559	3,090
Jalálpor .	664	621	600	591	520	451	1,784	1,665	3,449
Chikhli .	1,071	949	877	899	700	789	2,648	2,637	5,285
Balsár . .	619	561	661	660	580	511	1,860	1,732	3,592
Párdi	257	227	272	234	208	224	737	685	1,422
Total	8,956	8,398	8,786	9,600	8,112	8,305	25,854	26,303	52,157
PARSIS. (a)									
Surat City	1,058	948	789	1,054	1,164	1,503	3,011	3,505	6,516
Olpád	287	275	175	248	248	331	710	854	1,564
Mándvi	65	51	61	60	59	57	185	168	353
Chorási . .	269	281	178	259	283	325	710	865	1,575
Bárdoli	66	48	65	75	53	50	184	173	357
Jalálpor	40	43	39	46	53	39	132	128	260
Chikhli	45	31	55	40	34	35	134	106	240
Balsár .. .	163	158	145	168	145	196	453	522	975
Párdi . .	171	170	156	171	142	209	468	550	1,018
Total	2,164	2,005	1,662	2,121	2 161	2,745	5,987	6 871	12,858
CHRISTIANS									
Surat City .. .	46	60	52	54	60	25	158	139	297
Olpád .			3	..	3		6		6
Mándvi .			..						
Chorási ..		2	4		6	2	10	4	14
Bárdoli .					1		1		1
Jalálpor									...
Chikhli			1				1		1
Balsár . .		1	7	1	4	2	11	4	15
Párdi .									
Total	46	63	67	55	74	29	187	147	334
TOTAL.									
Surat City .	16,904	15,216	18,544	18 983	19,244	18 168	54,782	52,367	107,149
Olpád .	12,597	12,036	10,712	11,076	9 899	9 936	33 208	33,018	66,256
Mándvi .	10,098	8,924	8,297	8,053	6,592	6,403	24,987	24,380	48,367
Chorási .	8,934	7,987	7 689	8,295	7,431	8 099	24 054	24 381	48,435
Bárdoli .	15,399	14,514	12 955	12 477	11,379	10,876	39,733	37 767	77,500
Jalálpor ..	14,476	13,958	9 864	11,181	9,514	11,119	33 854	36 258	70,112
Chikhli .	12,118	11,461	9,634	9,404	7 962	8 430	30,014	29 298	59,312
Balsár	15,803	14,513	11,881	13,407	10,476	12,127	38,160	40,047	78,207
Párdi .. .	10,697	9,994	8,124	9,410	6,633	6,891	25,454	26 295	51,749
Total	117,416	108,606	97,700	102,186	89,130	92,049	304,246	302,841	607,087

(a) These totals include 17 persons who are not Párs.

From the above statement it appears that the number of Hindu males was in 1872, 272,218, or 50·25 per cent of the entire Hindu population; Hindu females numbered 269,520, or 49·75 per cent; Musalmán males numbered 25,854, or 49·57 per cent, and Musalmán

Proportion of males to females.

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females 26,303, or 50·43 per cent of the total Musalmán population. Of 12,841 Pársis, 5,972, or 46 51 per cent, were males, and 6,869, or 53·49 per cent, females.

Insanes.

The number of insanes in the district is returned at 103 males, 48 females; total 151, or 0 02 per cent of the whole population. Idiots, 266 males, 172 females; total 438, or 0·07 per cent. Deaf and dumb, 515 males, 316 females; total 831, or 0 13 per cent. Blind, 535 males, 585 females; total 1,120, or 0·18 per cent. Lepers, 390 males, 189 females; total 579, or 0·09 per cent of 607,087, the entire population of the district.

Division by religion.

The following tabular statement gives the number of the members of each religious class of the inhabitants according to sex at different ages, with, at each stage, the percentage on the total population of the same sex and religion. The columns referring to the total population discard the distinction of religion, but retain the difference of sex:—

Statement of Population according to Religion.

Age.	Hindus				Musalma'ns			
	Males.	Percentage on total Hindu male population	Females.	Percentage on total Hindu female population	Males	Percentage on total Musalman male population	Females	Percentage on total Musalman female population.
Up to 1 year	11,186	4	12,087	4	1,057	4	1,134	4
Between 1 and 6	51,076	19	48,713	18	3,890	15	3,780	14
Do. 6 and 12	43,988	16	37,340	14	4,009	16	3,484	13
Do. 12 and 20	39,415	14	38,377	14	3,989	15	4,168	16
Do. 20 and 30	47,770	18	52 033	19	4,797	19	5,432	21
Do 30 and 40	37,929	14	37,171	14	3,754	15	3,661	14
Do 40 and 50	22,296	8	21,795	8	2,246	9	2,230	8
Do 50 and 60	12,032	4	13,599	5	1,344	5	1,415	5
Above 60 .	6,526	2	8,405	3	768	3	999	4
Total	272,218		269,520		25,854		26,303	.

Age.	Christians				Parsis (a)				Total			
	Males	Percentage on total Christian male population	Females	Percentage on total Christian female population	Males	Percentage on total Pársi male population	Females	Percentage on total Pársi female population	Males.	Percentage on total male population	Females	Percentage on total female population.
Up to 1 year ..	6	3	8	5	272	5	260	4	12,521	4	13,489	4
Between 1 and 6 .	25	13	40	27	931	16	903	13	55,922	18	53,436	18
Do 6 and 12 ..	15	8	15	10	961	16	841	12	48,973	16	41,681	14
Do 12 and 20 .	23	12	32	22	798	13	958	14	44,224	15	43,535	14
Do 20 and 30 ..	45	24	23	16	864	14	1,163	17	53,476	18	58,651	19
Do. 30 and 40 ..	41	22	16	11	746	12	934	14	42,470	14	41,782	14
Do 40 and 50 ..	20	11	7	5	628	10	795	12	25,190	8	24,827	8
Do 50 and 60 ..	7	4	4	3	443	7	551	8	13,826	5	15,569	5
Above 60 . ..	6	3	2	1	344	6	465	7	7,644	3	9,871	3
Total..	187	.	147	.	5,987	.	6,871	...	304,246	...	302,841	...

(a) The totals under Pársis include 17 persons who are not Pársis

According to occupation the census returns for 1872 divide the whole population into seven classes :—

Division by occupation.

I.—Persons employed under government, or municipal, or other local authorities, numbering in all 7,675 souls, or 1·26 per cent of the entire population.

II.—Professional persons, 6,298, or 1 03 per cent.

III.—Persons in service, or performing personal offices, 9,210, or 1·51 per cent

IV.—Persons engaged in agriculture and with animals, 178,857, or 29·46 per cent.

V.—Persons engaged in commerce and trade, 7,796, or 1·28 per cent.

VI.—Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles manufactured, or otherwise prepared for consumption, 74,278, or 12 23 per cent.

VII.—Miscellaneous persons not classed otherwise—(*a*) wives 90,440 and children 209,929, in all 300,369, or 49·30 per cent.; and (*b*) miscellaneous persons 22,604, or 3·72 per cent—total 322,973, or 53·2 per cent.[1]

The general chapter on the population of Gujarát includes such information as is available regarding the origin, customs, and condition of the people of Surat. The following details show the strength of the different castes and races as far as it was ascertained by the census of 1872.[2]

Bráhmans.

Under the head of Bráhmans came, exclusive of sub-divisions, forty-three divisions, with a strength of 49,991 souls (males 26,304, females 23,687), or 9 18 per cent of the total Hindu population. Of the Bráhmans, the Anávla Bráhmans, in number 26,153, or 52·31 per cent of the whole Bráhman population, are the most prosperous agriculturists of the district, owning good houses and cattle, and culti-

[1] Minute details of each of these main classes will be found in the 1872 Census Report, vol II, pages 236-265. The classification of occupations there adopted is so minute that, to distinguish between the different sub-divisions, requires considerable intelligence and skill as well as great care The following instances, taken entirely from class VI. (mechanics and manufacturers), would seem to show that the Surat census compilers were unequal to this part of their work. Makers of salt, of whom there are probably more than 3,000 adults (collector of salt revenue, dated 24th March 1877), are returned at 35; potters, of whom there are over 5,000, at 85; and workers in leather at 990, instead of about 7,000 Again, manufacturers of indigo, of whom there is not one in the district, are entered at 107, manufacturers of tea, of whom there are none, at 31; gold-washers, of whom there are none, at 37; and sword and gun makers, of whom there are very few, at 273. Instead of republishing these details, a special occupation statement has, under the orders of Government, been prepared from the original enumeration returns For Hindus—as caste is, with few exceptions, a guide to occupation—caste only is given, but in the case of Musalmáns and Pársis, their distribution among the main branches of labour has been shown.

Division.	Census Report of 1872	Return prepared by the collector.
Hindus ..	541,738	541,732
Musalmáns ..	52,157	52,163
Pársis	12,841	12,858
Others ..	351	334
Total..	607,087	087

[2] These details have been compiled for the Gazetteer from the original enumeration returns of the census of 1872. As will be seen from the marginal statement, the results do not altogether agree with the totals published in the Census Report.

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vating the better varieties of crops. At the beginning of the present century some of the Anávla Bráhmans, under the name of *desáis*, held a high position as farmers of the land revenue.[1]

Writer classes

Under the head of writers came three classes, Brahma-Kshatris (536), Káyasths (984), and Parbhus (241), with a total strength of 1,761 souls (males 845, females 916), or 0·32 per cent of the total Hindu population.

Mercantile classes.

Under the head mercantile, trading, and shop-keeping classes, came 18,939 Wánias, belonging to sixteen divisions; 5,935 Márwári Shrávaks of two divisions; 3,584 Gujaráti Shrávaks, belonging to four divisions; and 1,476 Bhátiás and Luwánás,—giving a total strength of 29,934 souls (males 13,987, females 15,947), or 5·49 per cent of the total Hindu population. The chief occupation of the Márwári Shrávaks is that of rural money-lenders. Some details of their condition and practices are given below in the chapter on capital.

Cultivators.

Under the head of cultivators came four classes, with a total strength of 60,441 souls (males 29,372, females 31,069), or 11·09 per cent of the whole Hindu population[2] Of these, 47,157 (males 22,463, females 24,694) were Kanbis; 8,439 (males 4,433, females 4,006) Rajputs; 4,103 (males 2,192, females 1,911) Káchhiás; and 742 (males 284, females 458) Mális. The Kanbis are not, as in Kaira, the highest cultivating class. As far as wealth and position go, they rank second to the Anávla or Bháthela Bráhmans Nor among Surat Kanbis does the division into *Pátidárs*, or village shareholders, and *Kanbis*, or ordinary cultivators, prevail. Besides agriculture, Kanbis are engaged in money-lending, trade, weaving, and a few in the manufacture of vermilion In Jaláipor and Bárdoli is found a subdivision of this class known as Matia Kanbis. These men are followers of the Musalmán saint whose tomb is at Pirána, near Ahmedábád. As regards their customs and their way of living, they are still Hindus. Though, as a farmer, he is inferior in skill, there is nothing in the dress or habits of the cultivating Rajput to distinguish him from a Kanbi The Káchhiás sell vegetables, and the Mális flowers.

Manufacturers.

Of manufacturers there were five classes, with a strength of 20,804 souls (males 10,843, females 9,961), or 3·81 per cent of the total Hindu population. Of these, 9,705 (males 4,941, females 4,764) were Khatris, weavers of silk and cotton; 8,598 (males 4,344, females 4,254) Ghánchis, oil-pressers; 1,188 (males 830, females 358) Bhávsárs, calico-printers; 1,078 (males 604, females 474) Chhipás, calenderers; and 235 (males 124, females 111) Galiárás, dyers.

Artizans.

Of artizans there were seven classes, with a total strength of 30,565 souls (males 15,279, females 15,286), or 5·61 per cent of the

[1] Particulars regarding the *desáis* will be found under the head "Administration of the Land."

[2] All the cultivators of the district do not belong to one of these four classes. The names of the different classes of cultivators will be found below in the chapter on Agriculture, p 67.

total Hindu population. Of these, 5,926 (males 3,373, females 2,553) were Sonis, gold and silver smiths; 7,871 (males 4,036, females 3,835) Suthárs, carpenters; 1,342 (males 479, females 863) Kansárás, coppersmiths; 794 (males 340, females 454) Kadiás, bricklayers; 129 (males 49, females 80) Saláts, masons; 2,939 (males 1,530, females 1,409) Luhárs, blacksmiths; 5,461 (males 2,478, females 2,983) Kumbhárs, potters; and 6,103 (males 2,994, females 3,109) Darjis, tailors.

Bards and actors.

Under the head of bards, songsters, and actors, came three classes, with a total strength of 555 souls, or 0·10 per cent of the whole Hindu population. Of these, 412 (males 127, females 285) were Bháts, bards, and Chárans, genealogists; 98 (males 92, females 6) Bhawáyás, strolling comedians; and 45 (males 38, females 7) Ghandraps, songsters.

Personal servants.

Of personal servants there were three classes, with a total strength of 5,395 souls, or 0·99 per cent of the total Hindu population. Of these, 3,851 (males 2,148, females 1,703) were Hajáms, barbers; 1,485 (males 688, females 797) Dhobhis, washermen; and 59 (males 33, females 26) Bhistis, water-drawers.

Shepherds.

Of herdsmen and shepherds there were three classes, with a total strength of 7,639 souls, or 1·40 per cent of the total Hindu population. Of these, 6,689 (males 3,665, females 3,024) were Bharwáds; 730 (males 367, females 363) Rabáris; and 220 (males 74, females 146) A'hirs.

Fishers and sailors.

Of fishers and sailors there were three classes, with a total strength of 20,749 souls (males 8,568, females 12,181), or 3·81 per cent of the whole Hindu population. Of these, 5,887 (males 2,481, females 3,406) were Khárwás, seamen; 639 (males 247, females 392) Bhois; and 14,223 (males 5,840, females 8,383) Máchhis. Besides their regular occupation as fresh-water fishers, the Bhois are engaged as palanquin-bearers; the Khárwás, as tile-turners as well as sailors; and the Máchhis, as fish-sellers as well as boatmen. During the rainy season men of all these classes, to a limited extent, act as cultivators.

Labouring classes.

Of labourers and miscellaneous workers there were fourteen classes, with a total strength of 92,606 souls (males 49,257, females 43,349), or 17·09 per cent of the whole Hindu population. Of these, 78,651 (males 41,865, females 36,786) were Kolis; 5,088 (males 2,589, females 2,499) Golás, rice-pounders; 2,214 (males 1,266, females 948) Maráthás; 3,133 (males 1,620, females 1,513) Bhandáris, toddy-drawers; 126 (males 86, females 40) Rájbharás, makers of the warp, *ráj*; 268 (males 162, females 106) Gondha, labourers; 1,009 (males 648, females 361) Wághris, fowlers and hunters; 883 (males 439, females 444) Rávalia, cotton-tape-makers; 452 (males 228, females 224) Bhádbhunjás, grain-parchers; 373 (males 162, females 211) Kámaliás, makers of blankets, *kámli*; 219 (males 93, females 126) Wánsforás, or bamboo-splitters; 51 (males 19, females 32) Timaliás, makers of iron nails; 23 (males 12, females 11) Pomlás, beggars; 40 (males 24, females 16) Odiás, diggers; and 76 (males 42,

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females 34) miscellaneous. The Kolis differ both in features and manners from the aboriginal tribes of the district. They rank above the other Hindu labouring classes, and, in intelligence, manners, and way of living, are in no way inferior to the members of the artizan classes. One Koli family in Surat have acquired wealth as money-lenders; and in the service of government a Koli, as a supervisor of public works, receives a yearly salary of £240 (Rs. 200 a month). As cultivators the *talabda*, or indigenous, Kolis rank next to the Kanbis. They are hard-working and possess moderate resources. On the other hand, many of the Kolis are in very poor circumstances, and some of them are to be found among the *hális*, or hereditary servants, of the Anávla Bráhmans. Besides following their regular occupation of rice-pounding, some of the Golás are artizans, and a few are weavers of brocade and silk cloth. Under the head of Maráthás, men of several castes, engaged chiefly as domestic servants, messengers, and labourers, are included. Besides drawing toddy, the Bhandáris work as labourers and cultivators.

Aboriginal tribes.

Of aborigines there were nine classes, with a total strength of 180,107 souls (males 89,800, females 90,307), or 33·07 per cent of the total Hindu population. Of these, 69,759 (males 33,860, females 35,899) were Dublás; 45,259 (males 22,696, females 22,563) Dhondiás; 29,923 (males 15,839, females 14,084) Chodhrás; 18,449 (males 8,731, females 9,718) Náikás; 8,241 (males 4,098, females 4,143) Gámins; 5,835 (males 3,102, females 2,733) Bhils; 1,728 (males 1,002, females 726) Kukna; 819 (males 421, females 398) Mángelás; and 94 (males 51, females 43) Káthodiás. Of the condition of this class of the population some details are given in chapter VII.

Workers in leather.

Of workers in leather there were two classes, with a total strength of 7,955 souls (males 4,242, females 3,713), or 1·46 per cent of the total Hindu population. Of these, 4,860 (males 2,487, females 2,373) were Mochis, shoe-makers; and 3,095 (males 1,755, females 1,340) were Khálpás, tanners. Under the head of Mochis came three subdivisions,—the Chánlágars, or spangle-makers; the Dhálgars, or shield-makers; and the Dabgars, or drum-makers.

Depressed castes.

Of depressed castes,—those whose touch is considered by Hindus a pollution,—there were four, with a total strength of 31,643 souls (males 15,380, females 16,263), or 5·81 per cent of the whole Hindu population. Of these, 585 (males 341, females 244) were Garudás, priests to the Dhers; 29,375 (males 14,143, females 15,232) Dhers, sweepers; 1,626 (males 870, females 756) Bhangiás, scavengers; and 57 (males 26, females 31) Mhárs, or sweepers from the Deccan. The Dhers of Surat are an active and intelligent set of men. Many of them are employed by Europeans as butlers, grooms, and house servants. A few are educated, and in one of the government offices in Bombay a man of this class draws as a clerk a salary of £72 a year (Rs. 60 a month). As the work of removing the night-soil is done only by people of that class, the condition of the Bhangiás of the city of Surat has improved since the introduction of municipal conservancy arrangements.

Religious beggars.

Devotees and religious mendicants of various names—Brahmachárís,

Wairágis, Gosáis, Sádhus, and Jogis—numbered 1,587 (males 1,097, females 490), or 0·29 per cent of the entire Hindu population.

Musalmáns.

Of the total Musalmán population of 52,157 souls, 21,260 were returned as settled in Surat city, 4,117 in Olpád, 3,888 in Mándvi, 6,454 in Chorási, 3,090 in Bárdoli, 3,449 in Jaláipor, 5,285 in Chikhli, 3,592 in Balsár, and 1,422 in Párdi. With the exception of the Bohorás of both classes, the ordinary Surat Musalmáns are generally in a depressed state. In government service they act chiefly as messengers and policemen. The cultivating Bohorás, for the most part Sunnis by religion, are found chiefly in the northern sub-divisions. The town or trading Bohorás, who number 4,577 souls, have their head-quarters in Surat, where their chief priest, the Mulla Sáheb, resides. Exclusive of females 16,982 and children 16,687,—in all 33,669, or 63·45 per cent of the Musalmán population,—the male adult population (18,494) was engaged in 1872 in the following professions: (1) persons engaged in government or other service, 1,124; (2) professional persons, 847; (3) persons in service, or performing personal offices, 1,406; (4) persons engaged in agriculture, 4,084; (5) persons engaged in commerce or trade, 1,472; (6) persons engaged in mechanical arts and manufactures, 8,465; and (7) miscellaneous persons, 1,096.

Pársis.

Of the total Pársi population of 12,841 souls, 6,500 were settled in Surat city, 1,564 in Olpád, 353 in Mándvi, 1,575 in Chorási, 357 in Bárdoli, 260 in Jaláipor, 240 in Chikhli, 974 in Balsár, and 1,018 in Párdi. As a rule, the Surat Pársis are educated and well-to-do. Exclusive of females 4,321 and children 4,743,—in all 9,064, or 70·68 per cent of the Pársi population,—the male adult population (3,794) was in 1872 engaged in the following professions: (1) persons engaged in government or other service, 116; (2) professional persons, 339; (3) persons in service or performing personal offices, 392; (4) persons engaged in agriculture, 645; (5) persons engaged in commerce and trade, 178; (6) persons engaged in mechanical arts and manufactures, 1,403; and (7) miscellaneous persons, 721.

Religious divisions

The Hindu population of the district belonged, according to the census of 1872, to the following sects:—

Statement showing the Strength of the different Hindu Sects.

Waishnavs.					Shaivs.		Mixed.			
Bámánuj.	Walabháchári.	Kabirpanthi.	Mádhaváchári	Swámi-Náráyan	Shankar.	Lingáyat	Ascetics, religious mendicants.	All who worship simply some god or goddess without knowing anything of theology.	Jains or Shrávaks.	Total.
132,721	19,343	4,746	20,664	3,723	47,351	32	942	300,884	11,332	541,738

From this statement it would seem that of the total Hindu population the Waishnavs numbered 181,197, or 33·45 per cent; the Shaivs

Chapter III. Population. 1872.

47,383, or 8·75 per cent; the mixed classes 301,826, or 55·71 per cent; and the Shrávaks 11,332, or 2·09 per cent.

The Musalmán population belongs to two sects, Sunni and Shia; the former numbered 47,719 souls, or 91·49 per cent of the total Musalmán population, and the latter 4,438, or 8·51 per cent. The Pársis are divided into two classes, Sháhanshábi and Kadmi; the number of the former was 11,964, or 93·17 per cent, and that of the latter 877, or 6·83 per cent. In the total of 334 Christians, representatives of five sects are included. Of these, 140, or 41·92 per cent, were Protestants; 98, or 29·34 per cent, Roman Catholics; 3 were Armenians; and 96, or 28·74 per cent, Native Christians. Among Protestants 93 were Presbyterians, and 44 Episcopalians. Other religions were represented by nine Brahmos, two Sikhs, and one Jew. Besides these, five persons, under the head "all others," remained unclassified.

Town and country population.

With the exception of the townspeople of Surat (107,149), Balsár (11,313), and Ránder (10,280),—a total strength of 128,742 souls, or 21·20 per cent of its entire inhabitants,—the population of the district, according to the census returns of 1872, lived in villages with, on an average, a population of 780·31 souls. Exclusive of 986 hamlets, there were 776 inhabited state and alienated villages, giving an average of 0·49 villages to each square mile. Of the whole number of villages there were 150 with less than 200 inhabitants, 296 with from 200 to 500, 204 with from 500 to 1,000, 92 with from 1,000 to 2,000, 17 with from 2,000 to 3,000, and 14 with from 3,000 to 5,000. Of towns with a population of more than 10,000 souls there were three. As regards the number of houses, there was in 1872 a total of 137,613, or, on an average, 86·65 houses to each square mile, showing, as compared with 108,579 the corresponding total in 1851, an increase of 26·73 per cent. Of the total number 19,737 houses, lodging 93,711 persons, or 15·44 per cent of the entire population, at the rate of 4·74 souls to each house, were buildings with walls of stone or fire-baked brick, and with roofs of tile, cement, or sheet iron. The remaining 117,876 houses, accommodating 513,376 persons, or 84·56 per cent, with a population per house of 4·35 souls, included all buildings covered with thatch or leaves, or whose outer walls were of mud, or of bricks dried only by the sun.

Village communities.

Except in the Mándvi sub-division, where the villages are for the most part only settlements of the aboriginal tribes, the organization of village communities is the same throughout the Surat district. In regularly established communities the village servants belong to two classes: (1) those useful to government; (2) those useful to the village community. Under the first head come: 1, the village headman, or *patel;* 2, the village accountant, or *taláti;* 3, the village peon, or *haváldár;* 4, the watchmen, *wasáwás, wartania,* or *rakha,* who carry remittances of treasure, and do miscellaneous revenue and police work; and 6, the *dhers,* who, in addition to scavenging, perform police duty. Except the *taláti* and *haváldár,* who receive only money, village servants are paid either in cash, or land, or in both. In the Surat district, unlike the districts of northern Gujarát,

there are very few hereditary village headmen. Under the second head come: 1, the village priest, *ghámot* and *bhat*; 2, the village astrologer, *joshi*; 3, the *puráni*, who reads and expounds the sacred books; 4, the *mulla*, *káji*, or *fakir*, for the Musalmáns; 5, the barber, or *hajám*; 6, the carpenter, or *suthár*; 7, the blacksmith, or *luhár*; 8, the potter, or *kumbhár*; 9, the shoe-maker, or *mochi*; 10, the tanner, or *khálpo*; 11, the water-drawer, *kosio* or *hawádo bharnár*; 12, the washerman, or *dhobhi*; 13, the *parabio*, who supplies water to travellers; and 14, the tailor, or *darji*.

Every village has its headman, its accountant, its messenger, its priest, and its dhers.[1] The extent to which any village supports the other members of the complete staff depends on its size and its distance from other large villages or country towns. The barber, the potter, and the tanner are commonly found; the others only in large villages. In villages inhabited only by families of aboriginals, except the headman, who, as a rule, belongs to one of the aboriginal tribes, the accountant and the village peon, there are no village servants. In other villages the headman is either a Hindu, by caste a Kanbi, Anávla or Bháthela Bráhman, or Koli; a Musalmán, or a Pársi As a rule the population of Surat villages includes some families of Musalmáns or Pársis, as well as Hindus of several castes and tribes The only exception is in the case of the Bhil and Chodhra villages, found chiefly in the Mándvi sub-division, where the whole population generally belongs to one class. A few of the Surat villages are enclosed by hedges of prickly-pear, but none of them are walled. Occasionally a rich man, in honour of some high domestic festival, feeds the whole village But this is unusual The invitations are generally confined to the families who belong to the same caste as the entertainer. In many cases artizans receive from the other villagers a yearly allowance of grain. But this system has in great measure been replaced by cash payments. Few of the Surat village artizans are men of any skill in their craft. Most of them would find it difficult to compete with the better trained workmen of the larger towns. Further details of the position and duties of the different classes of village servants will be found in the Broach Statistical Account.

Movements of the people.

During the first half of the present century, from about 1810 to 1850, in consequence of the decline of its trade and importance, large numbers of the people of Surat left their homes, and, in search of employment, went to Bombay. These emigrants belonged both to the town and the country population, but came chiefly from the city of Surat. They were of all classes and occupations. Of Hindus the greater number were traders, townsmen of the Wánia and Shrávak castes. But, besides merchants, many artizans, and considerable numbers of the depressed classes, chiefly of the Dher caste, both townsmen and from the villages, left Surat in search of employment. Of Musalmáns many of the trading Bohora townsmen, chiefly Shiás, followers of the Mulla Sáheb, and of Pársis, both towns-

[1] The accountant and the village peon have sometimes charge of more than one village.

Chapter III. Population. 1872.

people and many from Navsári and other rural parts where the Pársis muster strong, merchants and artizans, especially weavers and ship-builders, left Surat for Bombay. As regards their connection with Surat, these emigrants belong to three classes: i, those who have established themselves permanently in Bombay and severed their connection with Surat; ii, those who have settled in Bombay, but still look upon Surat as their home, and on all great domestic occasions, to celebrate a marriage or to hold a ceremony in honour of the dead, visit Surat; and iii, those whose men only live in Bombay and at intervals come to Surat to visit their families. A considerable number of Pársis, some Musalmáns, and a few Hindu traders, belong to the first class. But of the Hindus and Musalmáns, the greater number belong to the second class, keeping up a connection with Surat. Those among whom the men only go to Bombay, leaving their families in Surat, belong to two classes: i, men of good position who are in Bombay, either for their education, in search of employment, or as clerks; and ii, the members of the depressed classes who, engaged in Bombay as servants, find it more convenient to leave their families behind them in Surat. Among Musalmáns the trading Bohorás, both of the Sunni and Shia sects, go great distances for purposes of trade. The Mulla or Shia Bohorás of Surat, leaving their families in Surat, visit, and sometimes settle for several years in, China and Siam. The Sunni Bohorás of Ránder go westwards as far as Mauritius, and eastwards to Burmah, Siam, Rangoon, and China. Among the seamen there are some, chiefly Musalmáns of Ránder, who not only go to Siam, Rangoon, and China, but take employment in ships sailing to Europe, and in some cases remain for several months in England.

Other classes of the population, who move from place to place, are the wandering tribes and the carriers. Of the wandering tribes found in the Surat district some account is given in the chapter on the population of Gujarát. Of carriers, though their number and importance have, since the introduction of the railway, much decreased, there are still two classes of some consequence,—the Wanjárás, or pack-bullock-drivers, and the Nágoris, a class of Musalmán cart-men. Finally, of the aboriginal tribes, many of whom at the time of the introduction of British rule were of very unsettled habits, most are now permanently established in villages. Only among the rudest tribes near the eastern frontier, and occasionally in other parts when too closely pressed by their creditors, do men of this class leave their homes and pass beyond the borders of the district.

CHAPTER IV.

AGRICULTURE.

Agriculture is the most important industry of the district, supporting 334,919 persons, or 55·18 per cent of the entire population.[1]

Soil.

The soils of the district, all more or less alluvial in character, belong, for agricultural purposes, to three chief classes,—the black or cotton soil, called *káli;* the light soil, called *gorát;* and the *besar*, a soil uniting the characteristics of the black and light varieties Besides in the Olpád sub-division, where it is most common, two broad belts of black soil run through the district. Of these, one passes along the sea-coast, the other through the Párdi and Chikhli sub-divisions near the foot of the eastern hills. Between these two belts of black soil, the light, or *gorát*, and the medium, or *besar*, varieties are chiefly found. Light, or *gorát*, is commonest near the banks of the Tápti, Ambika, and Auranga rivers. This is the richest soil of the district, producing, in rapid succession, the most luxuriant crops. Patches of the medium, or *besar*, considered a good and productive soil, are to be found in almost every part of the district Each of the three chief classes of soil are again divided into several varieties. Under the general name of black are included, besides the ordinary black, or *káli*, the inferior black, or *molia;* the gritty-black, or *káli kokra;* and a soil called *kháníporan*, which, under the influence of rain, opens into a number of small holes. Under the general name of light are included, besides the ordinary *gorát*, a rich yellow soil called *talia*, found on the banks of rivers, and a sandy variety called *retál*, a soil of little value. Under the general name of medium, or *besar*, come varieties known as *dádriwáli*, or *kánkriwáli*, soils more or less charged with lime Besides the different varieties included under some one of the three main classes there are, of peculiar soils along the

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[1] This total (334,919) is made up of the following items.—

1. Adult males engaged in agriculture as per census of 1872	108,269
2. Wives of ditto calculated on the basis of the proportion the total adult female population of the district bears to the total adult male population	110,836
3. Children of 1 and 2 calculated on a similar basis	115,814
Total	334,919

This calculation is necessary because the census returns, including many of the women under VII. (miscellaneous), show a total of only 70,572 under the special head adult agricultural females.

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coast, the marshy lands known as *khár* and *khájan*, and in the extreme south of the district, in the Párdi sub-division, tracts of land in character more like the soil of the Konkan than the soil of Gujarát. As compared with other parts of the province, Surat is conspicuous for the large proportion which fertile soils bear to intrinsically poor soils. Of the entire culturable area, nine-sixteenths is black soil, five-sixteenths light soil, and two-sixteenths medium.

Culturable lands.

The state, or *khálsa*, villages of the district contain 1,023,377 acres, of which 71,635 acres, or 7 per cent, are alienated, paying only a quit-rent to the state, and 213,435 acres, or 20·85 per cent, are unarable waste land, including the area of village-sites, roads, rivers, reservoirs, and the tracts of salt land, or *khár*, in the neighbourhood of the sea. The total area of state arable land is, therefore, 738,307 acres, of which 615,682 acres, or 83 40 per cent, are occupied, and 122,625, or 16 60 per cent, unoccupied Of this 122,625 acres of unoccupied arable land, 53,423 acres, including homesteads, grazing lands, and open spaces in forest reserves, cannot be taken up for cultivation The total area of unoccupied arable land is, therefore, reduced to 68,202 acres, or 9·23 per cent of the total state arable land. Of the 615,682 occupied acres, 25,715, or 4·18 per cent, consist of garden land; 531,443, or 86 32 per cent, of dry crops; and 58,524, or 9·50 per cent, of rice land. Of the rice land 16,159 acres are irrigated, and 42,365 acres unirrigated.

Salt marsh lands.

The remains of stone buildings in the Olpád sub-division, at a spot in the village lands of Dándi now subject to tidal inundation, and further north in the district of Broach, the ruins of the ancient city of Gandhár, the site of which is below the present mean sea-level, would seem to prove that in some parts along the eastern shores of the Gulf of Cambay the sea has been gaining on the land. In the Olpád sub-division two dams, one near the village of Olpád, and the other further south at Barbodhan on the Tena creek, show that the Marátha government were alive to the need of restraining the advance of the sea. Both these works have, however, long been in ruins, and, with the exception of the construction of a small embankment at Bhagwa, in the Olpád sub-division, and the grant to villagers of isolated patches of easily reclaimed land, the British government would seem, till of late years, to have taken no steps to protect the culturable lands lying along the coast or on the borders of the rivers which fall into the Gulf of Cambay.

The general question of the drainage and embankment of salt marshes appears to have been first taken up about the year 1864, when reclamation projects were popular in Bombay, and afterwards the result of the introduction of revenue survey operations into some of the coast districts led to the subject receiving at the hands of government a larger share of attention than was formerly the case.

In his account of the Balsár sub-division, the settlement officer, in the year 1868-69, reported "that the salt-water was year by year steal-

ing along river-beds far back into garden lands, and finding its way into springs which had hitherto yielded an unfailing supply of fresh water; that tracts, which some years before might have been saved, were now at the mercy of the sea; and that cultivators were abandoning lands, rendered unprofitable by the increasing clouds of salt drift blown over them from the outlying wastes." Further north from Olpád the same story was repeated. Writing in the year 1869, the officer specially employed to examine the salt tracts of the Surat district, says: "In the past year, on account of the advance of the salt water, 160 acres of arable land have been given up by the cultivators, and during the past twenty years 100 wells, or more than one-sixth of the entire fresh water-supply of the sub-division, have become brackish and unfit for use."

Grant of reclamation leases.

Under these circumstances government authorized the collector of Surat to invite tenders for the reclamation of the salt wastes in his district. The collector was not to consider himself bound to accept the highest tenders, but was to take care that no contract should be entered into except with persons possessed of the means of fulfilling it, and who, from their character and position, might be assumed to intend to carry out their agreement. At the same time the following terms were laid down as the most favourable on which government were prepared to grant reclamation leases: I. The reclaimed land to be held free for ten years. II. Rent at the rate of sixpence (four annas) an acre to be paid for the following twenty years. III. Full assessment after thirty years. IV. That if half the area were not reclaimed at the end of the first five years, and the whole at the end of the first ten, the concession should be cancelled, the lessee being further liable to a certain pecuniary penalty.

These concessions have proved sufficiently attractive to bring forward many candidates for the lands in question; and within the last ten years so considerable has been the competition, that in the Surat district alone 51,943 acres, or more than one-half of the entire estimated area of reclaimable salt waste, have been taken on lease. The different properties, which vary in extent from 9,850 to 30 acres, have generally been granted on the most favourable terms authorized by government, though in the case of some of the less difficult undertakings something short of the full concession has been found to be a sufficient inducement. Energetic measures have in some instances been taken to exclude the salt water and bring the reclaimed area under cultivation. These have, on the whole, been successful. But much difficulty has been found in sweetening the land thus reclaimed. Four methods have been tried: i, flooding with sweet water; ii, encouraging the growth of plants which subsist chiefly on salt; iii, the application of lime and other chemical substances; and iv, the working in of manure.

Size of a 'plough of land.'

Though light soil is more easily worked than black, yet, to keep the light soil in proper order, so many more ploughings and so much more cleaning are required that, with the same appliances, a much larger area of black soil than of light soil can be cultivated.

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So much is this the case, that while in light soils a plough of land,—that is, as much land as one pair of bullocks can properly till,—contains only nine acres, a plough of cotton land means twenty, and of wheat land thirty acres. Rice land is an exception to this rule, as a 'plough,' or full sized field where rice is grown, does not usually contain more than five acres. The following statement shows in acres the average size of a farm and the average area to each plough in each of the sub-divisions of the district.—

Comparative Statement of the size of Farms and the acreage of a plough of land in different parts of the Surat District.

Size	Chikhli	Párdi	Bal-ár	Olpád	Mándvi	Jalálpor	Chorási	Bárdoli
Average acreage of farms	$16\frac{18}{40}$	$14\frac{24}{40}$	$13\frac{7}{40}$	9	$8\frac{28}{40}$	$8\frac{7}{40}$	$6\frac{34}{40}$	$5\frac{1}{40}$
Average acreage to a plough	$15\frac{10}{40}$	$16\frac{14}{40}$	$13\frac{10}{40}$	$20\frac{17}{40}$	$10\frac{7}{40}$	$14\frac{28}{40}$	$16\frac{35}{40}$	$16\frac{1}{40}$

Size of a 'holding.'

The total area of land held for cultivation in the district is returned as parcelled into 78,186 distinct holdings, or *khátás* These farms, of which the largest is forty-five acres, and the smallest is two acres, contain, on an average, slightly less than nine acres each. The average area under occupation to each plough is $16\frac{12}{40}$ acres. Except under rice or garden cultivation, five acres of black soil would be considered a small farm. A peasant holding only two acres must add to his income from other sources. In the coast villages many fishermen and sailors supplement the profits of their regular calling by cropping an acre or two of land. A man holding five acres of fresh alluvial loam, or *bhátha* land, would be considered a substantial farmer. All his resources might profitably be spent on the high culture of condiments and sugar-cane. In average dry-crop light soils no holding of less than nine acres can support a peasant in a position of tolerable comfort.

Stock.

According to the collector's administration report for 1874-75, the stock in the possession of the cultivators of state, or *khálsa*, villages during that year amounted to 46,674 ploughs, 31,148 carts, 127,711 bullocks, 100,215 cows, 76,461 buffaloes, 1,042 horses, 93,782 sheep and goats, and 236 asses.

As the details of processes, crops, and cost of cultivation given in the general chapter on the agriculture of Gujarát apply to Surat, only a few points of local importance need be noticed in this place.

Aboriginal tillage.

The most marked general feature in the cultivation of Surat is the striking contrast between the tillage of the *ujli*, or fair, and the *káli*, or dark, cultivators. The agriculture of the dark races is of the rudest description. They grow only the coarser kinds of grain, *kodra* (Paspalum scrobiculatum) and *nágli* (Eleusine coracana), seldom millet or wheat. They have no tools for weeding or clearing the fields, and when the seed is sown they leave their fields, never

returning till, after three or four months, the time for harvest draws near. Meanwhile wild mint and other weeds have been growing apace, and by harvest time make more show in the field than the crop. When the early, or *kharif*, harvest is over (October—November), they barter their grain for supplies of liquor. They possess little or no agricultural stock, and are the only people who use the male buffalo for ploughing and for drawing carts. In the villages on the eastern frontier a buffalo and an ox yoked together is a proof that the owner is somewhat better off than his neighbours. Occasionally men of this class, chiefly of the Dhondia tribe, are tempted by an Anávla Bráhman to cultivate a little sugar-cane in partnership with him. In such cases the Anávla Bhábman, who provides the capital, takes the lion's share of the profits. In the mode of tillage followed by skilled cultivators there are no points of special local interest Almost all the crops mentioned in the provincial chapter on the agriculture of Gujarát are cultivated in Surat.

Details of produce.

The following details show the extent to which the different varieties of produce were raised in 1874-75. Of 584,190 acres, the total area of land returned as cultivated in that year, 190,654 acres, or 32·63 per cent, were fallow or under grass. Of the 393,536 acres under actual cultivation, grain crops occupied 247,224 acres, or 62 82 per cent, of which 86,448 acres were under rice, *dángar* (Oryza sativa); 72,521 acres under *juvár* (Sorghum vulgare), 21,533 acres under wheat, *ghau* (Triticum æstivum), 7,638 acres under *bájri* (Holcus spicatus), and 59,084 acres under miscellaneous grain crops, the chief of which were *kodra* (Paspalum scrobiculatum), occupying 43,973 acres; *nágli* (Eleusine coracana), occupying 13,853 acres, and *banti* (Panicum spicatum), occupying 1,249 acres. Pulses occupied 61,633 acres, or 15 66 per cent, of which 19,940 acres were under *tuver* (Cajanus indicus) and 41,693 acres under miscellaneous pulses, the chief of which were *wál* (Dolichos lablab), occupying 22,925 acres; peas, *watána* (Pisum-sativum), occupying 5,434 acres; *udid* (Phaseolus mungo), occupying 3,273 acres; *mug* (Phaseolus radiatus), occupying 3,113 acres; *láng* (Lathyrus sativus), occupying 2,803 acres, *guvár* (Dolichos fabœformis), occupying 2,295 acres, and gram, *chana* (Cicer arietinum), occupying 1,232 acres Oil-seeds occupied 43,039 acres, or 10·93 per cent, of which 39,200 acres were under castor-oil seed, *divela* (Ricinus communis); 3,701 acres under *tal* (Sesamum indicum); and 138 acres under *kharsáni* Fibres occupied 61,835, or 15 71 per cent, of which 59,234 acres were under cotton, *kapás* (Gossypium indicum), and 2,601 acres under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 11,066 acres, or 2 81 per cent, of which 5,628 acres were under sugar-cane, *serdi* (Saccharum officinarum); 768 acres under tobacco, *tambáku* (Nicotiana tabacum); and 4,670 acres under miscellaneous vegetables and fruits.[1]

[1] These figures are taken from the collector's huzur form No. 17. The discrepancy between 393,536 acres, the whole area shown under actual cultivation, and 424,797, the sum of the totals of the five classes included under this head, is due to the fact that 31,261 acres were twice cropped,

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The following statement shows the area of government assessed land cultivated with crops[1] in 1859-60 and in 1872-73 :—

Contrasted cultivation statement, 1859-60 and 1872-73.

Contrasted Cultivation Statement for the years 1859-60 *and* 1872-73.

Description of Crops		Acres cropped in 1859-60	Acres cropped in 1872-73	Increase per cent	Decrease per cent
Grain crops	Rice (in husk) ..	60,190	90,455	50 28	..
	Wheat	27,109	28,804	6 24	
	Juwár .. .	61,368	71,789	16 98	..
	Bájri .	6,017	9,789	62 68	
	Common grains .	33,548	64,401	91 96	.
Pulses[2]	Tuver and gram ..		18,863		
	Common pulses		49,596		
Oil seeds ..	Sweet-oil seed . ..	1,669	1,485		11 02
	Castor oil seed .	17,149	36,912	115 24	
Fibres	Cotton (Kapas)	36,567	48,990	33 97	
	Hemp	1,317	1,961	48 89	
Dyes .. .	Safflower .. .		285		
	Al (Morinda citrifolia)		70		.
Miscellaneous crops	Vegetables and condiments	21,385	2,811 / 1,035		82·01
	Sugar cane	3,462	7,742	123 62	
	Tobacco	511	929	81 80	
	Bháng (Cannabis sativa)		18		.
	Fruit .. .		263		
Fallow and grass lands		161,250	223,609	38 67	
	Total .	431,542	659,804	52·89	
Deduct twice cropped land.. .. .			44,122		
	Net . ..	431,542	615,682	42 67	.

A comparison with the area cropped in the year 1859-60 shows that during the thirteen years ending with 1872-73 no less than 184,140 acres of waste land were taken up for cultivation. The most remarkable advance is in the breadth of rice land with an increase of 30,265 acres, equal to 50 per cent of the former area Other kinds of cereals and pulses have in the aggregate increased by 103,398 acres, or 81 per cent. The areas of sugar-cane and tobacco have more than doubled. Cotton has increased by 12,423 acres, equal to 34 per cent of former cultivation The most remarkable decrease is in the breadth of land sown with vegetables and condiments, but it is more than balanced by 19,763 acres taken up with the castor-oil plant, which has doubled its former area. Fallow and grass lands have increased by 39 per cent. Since 1872-73, owing chiefly to the fall in the value of agricultural produce, there has been a decrease of 31,444 acres in the area under cultivation.

[1] The produce returns obtained from village officers show, for the year 1872 in government land, a value per acre of £2 10*s.* (Rs 25), calculated at the current market rates. This gives, for the whole produce of the government land of the district, an estimated value of £1,520,000 (Rs. 152 lakhs). To ascertain the value of the total out-turn of the district, the value of the crops grown on alienated lands must be included. For these lands there is no special return of produce. But on the basis of the proportion that the area of alienated lands bears to the area of government lands, the value of their agricultural produce may be calculated at about £290,000 (Rs. 29 lakhs), or, for the whole district, an estimated out-turn of £1,810,000 (about 181 lakhs). These estimates are given in a foot-note, as, from the nature of the subject, and the way in which the information is obtained, but little trust can be placed in the accuracy of the returns.

[2] Pulses were in 1859-60 given under common grains.

Irrigation. Irrigation is carried on from rivers, reservoirs, and wells, both unbuilt, or *kácha*, and built, or *páka*. The water is distributed either by lifts, or *dhekuris*, by leather bags called *rámio* or *sundio*, or by Persian wheels. The country is abundantly supplied with ponds, wells, and springs of water. According to the statistics of 1873-74 there were in that year 139 wells with steps, 10,013 wells without steps, 497 water-lifts, or *dhekuris*, 1,662 ponds, and 866 rivers, streams, or springs. This list does not include the unbuilt, or *kácha*, wells, of which there are great numbers in all parts of the district. These are simply holes of from ten to twenty-five feet deep, and about three in diameter, dug in the alluvial soil, without brick-work or masonry of any kind, and each costing, on an average, about £1 (Rs 10) These wells last only for one year. When one falls in, a fresh hole is dug in some other part of the field. Built wells vary considerably in cost. An average brick-built well about thirty feet deep, large enough for one water-bag, or *kos*, and faced with mortar only on the water side, and with a cement platform and trough, costs about £40 (Rs. 400). For purposes of irrigation it is not necessary that the reservoir should retain water during the whole year. It is enough if the pool covers a large surface, and is so situated that the land to be irrigated lies around and slightly below it. In the event of a scanty rain-fall, the cultivator has recourse to his reservoir in September and October, and by watering them saves his early, or *kharif*, crops. For the ordinary late, or *ravi*, crops it is enough if the supply of water lasts through November and December. So that, except in the case of sugar-cane, if the reservoir contains a supply of water to the end of December, the cultivator is independent so far as his crops are concerned. Ponds of the above description are easily made, and at a small cost.

Details of cultivation. The following are some of the details of the cultivation of the chief varieties of crops :—

Rice. Rice holds the first place with, in 1874-75, 86,448 acres, or 21·96 per cent of the total area. As rice is a very remunerative crop, and is adapted to the soil, climate, and habits of the people, its cultivation receives considerable attention. The area of embanked rice land during the thirteen years ending with 1872-73 increased twenty-five per cent. As regards the cultivation of rice, the different parts of the district occupy the following order: Chikhli, Bárdoli, Jalálpor, and Balsár. Light, or *gorát*, soil is not suited for rice cultivation. The field should be either of black or red soil. In position it should be near to some pool or hollow, well supplied with water. No fewer than fourteen varieties of rice, varying in price from 2*s.* 6*d.* to 5*s.* (Rs 1-4 to Rs. 2-8) for forty pounds, are raised in the district.

Millet. Millet, *juwár* (Holcus sorghum), holds the second place with, in 1874-75, 72,521 acres, or 18·52 per cent of the total area under cultivation. *Juwár* is very extensively grown north of the Tápti, but is less grown towards the south until, in the sub-divisions of Balsár and Párdi it is almost entirely superseded by rice, *nágli*, and *kodra*. Along with rice *juwár* forms the common food of the people of the district.

Chapter IV.

Agriculture.

Details of cultivation.

Cotton.

Cotton holds the third place with, in 1874-75, 59,234 acres, or 15·05 per cent of the total area under cultivation Excepting a few isolated shrubs of the *narma-kapás* (Gossypium religiosum) grown in hedges, and used in temples for lamp-wicks, the annual of black soil, or *kália*, is the only variety of cotton cultivated in Surat. Though to the eye no difference in texture or colour is apparent, the cotton of the Olpád sub-division is considered, on the whole, to have a superior staple to that produced in the adjoining districts of Broach. Until very recently cotton was seldom raised south of the Tápti. But its cultivation now (1875) extends about forty miles further south to the banks of the river Auranga. Beyond the Auranga the character of the soil and the heavier rain-fall are less suited to the plant. Rice is in many cases sown in the same field with cotton. The practice has this in its favour, that the rice helps to absorb moisture, which in excess hurts the cotton plant. The details of the mode and cost of cultivation given in the Broach Statistical Account apply to the culture of cotton in Surat In 1819, and again in 1866 and 1867, efforts were made by government to improve the cultivation of cotton in Surat. These experiments were, in their character and results, similar to those made in the district of Broach. A detailed description of them will be found in the Statistical Account of that district. As in Gujarát cotton can be grown only in rotation with other crops, except as a consequence of the general extension of cultivation, a rise in price does not directly affect the area cropped.

Kodra

Kodra (Paspalum scrobiculatum) and *nágli* (Eleusine coracana) hold the fourth place with, in 1874-75, 57,626 acres, or 14·69 per cent of the total area under cultivation. *Kodra* and *nágli* are consumed by the poorest classes, and are extensively cultivated in the southern parts of the district and along the sea-coast.

Sugar-cane.

Sugar-cane is the staple product of the garden land, chiefly of the Jaláipor and Balsár sub-divisions The white or Mauritius cane was introduced in 1831-35, and although it requires more water than the indigenous red variety, and also suffers more severely from the attacks of jackals, the greater quantity and better quality of the juice it yields have made this the favourite variety of sugar-cane As sugar-cane flourishes better in the Surat district than in any other part of Gujarát, molasses, or *gol*, manufactured by the cultivator, forms a large item of export to northern Gujarát and Káthiáwár[1]

Castor-oil plant.

The castor-oil plant, *divelo*, is very extensively cultivated in the southern parts of the district. In 1874-75, 39,200 acres were under castor-oil, or 9·96 per cent of the total area under cultivation. The oil extracted from this plant is of the greatest purity, and is used for burning. It is also, even without refinement, adapted for medicinal purposes. As a rule, the castor-oil plant is not sown by itself, but with pulse.

Millet.

Millet, *bájri* (Holcus spicatus), belongs to a drier climate, and requires light sandy soil and manure. But little of it is raised in

[1] The export of molasses from the railway stations south of the Tápti amounted in 1875 to 5,381 tons, valued at £86,096 (Rs. 8,60,960).

Surat. Tobacco is grown in the beds and along the banks of rivers, though not in sufficient quantities to supply the wants and consumption of the people. It is, therefore, largely imported into the Surat district. Of pulses, *wál* (Dolichos lablab) and *watána* (Pisum sativum) are extensively produced.

A point worthy of note in connection with the agriculture of Surat is that, in spite of the skill and intelligence of the cultivators, some crops well suited to the district are very scantily grown. The chief of these are indigo, tobacco, and wheat. All of these crops might, it is believed, be raised with profit. But their cultivation is neglected, apparently for no better reason than it has for many years been unusual.

Cultivating classes.

Among the cultivators of the district, the Anávla or Bháthela Bráhmans, an active and industrious class, hold the first place. With the assistance of their hereditary servants, or *hális*, they give much labour and care to their fields. Though they cultivate to a large extent, Kanbis do not hold the same position as they do in northern Gujarát. With few exceptions, the Rajputs are slovenly and careless cultivators Next in skill to the Kanbis come the indigenous, or *talabda*, Kolis, who, except for their excessive love of liquor, are intelligent and hard-working. Those of the labouring and artizan classes who engage in agriculture are not, as a rule, altogether dependent on the produce of their fields. Their mode of tillage is, therefore, often wanting in skill and care. Most of the Musalmán cultivators belong to the class of Sunni, or country Bohorás, are sturdy and industrious men, with whom perseverance makes up for want of skill. The few Pársis who engage in agriculture are said to be industrious cultivators. Mr. Hope, collector of Surat, describes, in his administration report for 1873-74, the condition of the people "as far from prosperous. The extraordinarily high prices which prevailed in 1863 and for some years subsequently have disappeared, but have left their mark behind them. The people, intoxicated by a prosperity they assumed would last for ever, in a majority of cases spent up to their receipts, and incurred debt besides, the interest of which now presses heavily upon them. The money-lenders, fearful of losing their capital, have for the last two years seemed to press their creditors with unusual activity, and have been aided, first, by the law itself, and, secondly, by the abuses which necessarily creep into its working The land assessment, though not at all more than the state may justly demand, is not so light as to afford a margin sufficient to maintain the improvident."

Except in the beginning of the season, and at harvest time when hired labour is required, holders of land are, with the help of their families, generally able to cultivate their fields by themselves. The chief exception to this is in the sugar-cane villages in the south of the district. Here a large number of labourers, chiefly servants, or *hális*, are employed. Besides doing the share of work required of them by their masters, the *hális* generally cultivate a small plot of land of their own. Cultivators who are unable themselves to take their produce to market realize considerably less than the market

Chapter IV Agriculture.

rates. These men dispose of their crops in one of two ways, either to the village *vánia*, or grain-dealer, who, as a rule, has some hold over them in money matters, and for the grain he receives credits them with from twenty-five to fifty per cent less than market rates, or, in some parts of the district, they sell to an itinerant cloth-dealer called *chhipa*.[1] The large number of small holdings in Surat would seem to show that the majority of the cultivators are in poor circumstances. But three considerations combine to modify such a conclusion. First, many of the small holdings consist of garden land, of which a very limited area can support the cultivator in easy circumstances, second, besides what they make from their land many cultivators earn considerable sums in the fair season by carting timber and grain from the eastern parts of the district to the railway and sea-coast, third, in the south of the district some of the cultivators advance money to the people of Konkan villages for the cultivation of sugar-cane. Almost all of the dark races, or *káliparaj*, are, from their love of drink and their careless habits, in a poor state Many of the fair men, or *ajliparaj*, are also in debt But, as a rule, the people of this class are well-to-do Their houses are roomy and well built, with walls of brick and roofs of tile, worth from £20 to £200 (Rs 200 to 2,000), their stock of cattle is sufficient and well fed, the people are well clothed, and spend large sums of money in holding marriage feasts and on other domestic entertainments.

Years of scarcity.

Details of the famines of 1623, 1717, 1747, 1790, and 1803, by which the whole province was affected, will be found in the general account of Gujarát Since the acquisition of Surat by the British government (1800-1817), no famine has occurred sufficiently widespread or intense to seriously affect the condition of the people of the district Of seasons marked by more or less general dearth, when grain prices rose abnormally high, the chief are 1824-25 (S. 1881), when a general remission of the land revenue was granted, and government spent a sum of £10,000 (Rs 1,00,000) on public works for improving the water-supply of the district; 1831-32 (S 1888), when remissions to the extent of £37,040 (Rs. 3,70,100) were granted, and 1838-39 (S. 1895), when, besides remitting £19,612 (Rs. 4,96,120) of revenue, the poor were employed on public works.

[1] This *chhipa*, during the fair season, travels about from village to village bartering cloth and other articles of dress for grain, and sometimes buying grain at prices slightly more favourable than those offered by the village grain-dealer.

CHAPTER V.

HISTORY.

Section I.—Early History.

There are four main periods in the history of Surat,—I The early history up to 1573, II. The period of Moghal rule, 1573-1733; III The period of independent government, 1733-1759; IV. Since 1759, the period of British ascendancy.

Sacked by Musalmáns, In 1194.

Most accounts of Surat agree that it is not an old town[1] Some of the Musalmán local historians[2] state that in 1194 Kutb-ud-dín, the general of Muhammad Shaháb-ud-dín Ghori (1193-1205), after his defeat of Bhim Dev, the Rajput king of Anhilwára[3] in northern Gujarát, penetrated as far south as Ránder[4] and Surat. Surat was then part of the possessions of a Hindu chief whose head-quarters were at Kámrej, about thirteen miles to the east of Surat. This chief took refuge in a garden at Surat, but finding resistance hopeless submitted, and was by Kutb-ud-dín restored to his possessions at Kámrej.

In 1347.

The next mention of Surat is in 1347 in connection with the rebellion of Gujarát during the reign of Muhammad Toghlak (1325-1351).

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[1] On the other hand, Sir T Herbert (1626) identifies Surat with the Muziris of Ptolemy (Harr, I, 411), and Ogilby (1660-1685) with Ptolemy's Syrastra (Atlas, V, 211) More lately Surat has been supposed to be Hiouan Thsang's (625-640) Sou-ra-ta, 'a trading city on the western shore near Gujarat' But this, according to Remaud (Mem Sur l'Inde, 156) is not Surat on the Tápti, but Sorath or Káthiawár, and this view is now generally received Remaud (as above) states that the Persian and Arab writers do not begin to speak of Surat till after the 12th century Abbé Reynal (Settle E and W Indies, II, 28) says, 'at the beginning of the 13th century Surat was nothing more than a mean hamlet', and in this statement he is supported by D'Anville (Eclairt Sur la carte de l'Inde, 74) At the same time, the fact that the city of Surat is still by learned Bráhmans called Suryapur, and that the common story to explain the origin of the name Suryapur refers to a time (1500-1520) when Surat was already a city of great trade (see Barbosa quoted below), would seem to make it possible that modern Surat is built on the site of the old Hindu town of Suryapur This Suryapur is mentioned (Rás Mála, I, 61) along with Broach as one of the places through which (about 990) the Anhilwára troops passed on their way south to attack the chief of Láth Again, the name Suryapur resembles Surabaya, Ibn Istakhri's (951) form of the name generally written Subára or Sufara. This post is placed by him four days south of Cambay, and about five days north of Sindán (Sanján), and three miles (½ parasang) from the sea (Elliot's India, I., 30.) The references to Suryapur and to Sufára are, however, confused, and seem scarcely sufficient to show that in the 10th century there was already a town on the site of the modern city of Surat.

[2] This is mentioned in two local histories—one by Bakshi Mir walad Sháh Ahmad, the other by Munshi Ghulám Mohi ud dín.

[3] Anhilwára (North lat 23° 48 East long 72° 2'), Nehrwala, or Pátan, 65 miles north-east of Ahmedábád

[4] Rander, on the right bank of the Tápti, about two miles above Surat

Chapter V. History. 1194-1573.

On this occasion the town of Surat is said to have been given up by the emperor to be plundered.[1] In 1373 the emperor Firoz Toghlak (1351-1388) is said to have built a fort at Surat to protect the town against the Bhils.[2] Again, towards the end of the fourteenth century (1391), Zafar Khán, when sent to manage Gujarát, is said to have chosen his son Maste Khán to be governor of Ránder and Surat. But, it is added, Surat was not then well populated.[3] During the fifteenth century no notice of Surat has been traced either in the annals of the Musalmán kings of Ahmedábád, or in the accounts of European travellers.[4]

Story of Gopi, 1496-1521.

So far the notices of Surat are unsatisfactory. That it was the site of an old town is possible But that it was a place of little consequence seems certain. The local histories are agreed in fixing the establishment of its prosperity as a modern city to the last years of the fifteenth century. About this time (1496-1521) a rich Hindu trader settled in Surat. His caste is disputed, some accounts making him out to be a Nágar Bráhman, others an Anávla Bráhman But his name is known to have been Gopi. This man induced other merchants to settle at Surat, and built a large house and a garden. He founded one of the quarters of the town called, in his honour, the Gopi ward, or Gopipura, and enlarged (1516) a pond, lining it with stone and making it the chief ornament of the city.[5] In reward for the improvements at Surat, the king of Gujarát honoured Gopi with the title of Malik; and his wife, known as the Ráni, founded a second ward, the Ránichakla, and built a reservoir, still known as the Ráni taláv. So far, runs the story, Gopi's town had no name, and was simply spoken of as the 'new place' Gopi, consulting with the astrologers, fixed on the name Surai, or Suryapur. He sent to the king of Gujarát for leave to have the town called by this name. But the king, perhaps not altogether liking that a new town in his dominions should bear a purely Hindu name, by slightly changing the word to make it agree with the heading of the chapters of the korán, called it Surat.[6]

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[1] Briggs' Ferishta, I., 437 This sack of Surat is not, however, mentioned in the Táríkh i Firoz Sháhi —Elliot's India, III., 254-265.

[2] Munshi Abdul Hakim's History

[3] Bakshi Mia's History

[4] This refers only to the European travellers given in Major's India in the XV. Century Of these Nicolo Conti (1420-1444), Nikotin (1468-1474), and Hieronimus (1499), visited Gujarát

[5] This is the Gopi taláv, now only a hollow used as a garden

[6] The accounts differ slightly as to this Gopi's date Some say he flourished under Mahmud Begara (1459-1511), others under Mahmud's son, Muzafar II. (1513-1526). Of Gopi and the origin of his wealth several stories are told One runs that Gopi, the son of a Bráhman widow, had studied Persian, and, anxious for employment, went with his mother to Delhi For some days he attended at the government offices offering his services, but without success Determined to let no chance slip, Gopi spent all his time near the chief office One day, after the regular clerks had left, an important Persian letter came. The governor called for his reader, but the reader was gone One of the officers thought of Gopi, who was sleeping near, and called him in The governor was spelling over the letter to himself, holding it up to the light When he had done, he handed it over to Gopi to read Before taking the letter the boy said he had read it, and told the governor what was in it The paper was thin, and as the governor was reading the letter Gopi had made out its contents from the other side The governor was delighted with the boy's cleverness, and Gopi's fortune was made. Other stories seek to explain why

This naming of the city is said to have taken place about 1520.[1] But, if the story is true, the name must have been chosen some years before, as in 1514, when the Portuguese traveller Barbosa was in Gujarát, Surat was under that name a place of importance He describes it as "a city of a very great trade in all classes of merchandize, a very important seaport, yielding a very large revenue to the king, and frequented by many ships from Malabar and all other ports."[2]

Account of Surat, 1514.

In 1512, shortly before Barbosa was in Gujarát, Surat is said to have been burnt by the Portuguese[3] In consequence of this attack the merchants complained to the king, and he ordered a fort to be built.[4] But, in spite of this protection, before many years passed, Surat was, in 1530, a second time sacked by the Portuguese. The assailants were opposed by a guard of 300 horse and 10,000 foot, but at the first charge the defenders fled, and the town, a 'place of 10,000 inhabitants, mostly Banians and handicraftsmen of no courage,'[5] was taken and burnt. In the following year, as they were still at war with the Gujarát king, the Portuguese again burnt Surat 'already beginning to recover.'[6]

Three burnt by the Portuguese, 1512-1531.

Annoyed by the destruction of Surat, the Ahmedábád king gave orders for the building of a stronger castle. The work was entrusted to Safi A'gha, a Turk who had been ennobled with the title of Khudáwand Khán, and in spite of the efforts of the Portuguese, who, both by force and by bribery, are said to have tried to prevent its construction, the castle was finished about 1546.[7] Ferishta praises

Fort built, 1540-1546.

Gopi asked to have his town named Suraj The mistress of a rich merchant of Ránder quarrelled with her lord and determined to go on a pilgrimage to Mecca Stopping for some time at a fishing village on the Tápti, a mile or so below Ránder, she employed a Bráhman widow as a servant Finding this woman faithful, the lady, on starting for Mecca, left all her jewels in the widow's keeping. On her return the widow restored the jewels. But the lady, won from her former life of pleasure, gave all her fortune to the widow and her son, asking only that, in return, something might be done to commemorate her name The lady's name was Suraj, and it was for this reason that Gopi was anxious that the new town should be known as Surajpur. Another story tells that a lady named Suiata, deserting the seraglio of the emperor of Constantinople, was befriended by a great merchant of that city Escaping together to Gujarát, the merchant was struck with the site of a fishing village near Ránder Here he settled, and, succeeding in trade, raised the village into a town and called it by his lady's name.

[1] See Narmadáshankar's Gujaráti account of Surat

[2] Barbosa (1501-1517), Stanley's Ed, 67 There is some confusion in Barbosa's notice of Surat He describes it as at the mouth of a river twenty leagues south of the river of Ravel. Ravel is apparently Ránder, and the mistake perhaps arose from supposing that Ránder was on the Narbada Barbosa was in Gujarát shortly after the death of Mahmud Begara (1513). Varthema (1503-1508) does not mention Surat.

[3] This plunder by the Portuguese is on the authority of Lafitou, in his Conquests des Portugais quoted in the Cal. Rev, IX., 108., and Milburn's Or Com, I., 303

[4] Narmadáshankar A casual mention of a castle at Surat in 1527 confirms the building of this first fort (Bird's Gujarát, 235.) Narmadáshankar also mentions an older fort used by the merchants of Ránder as a place of confinement for pirates.

[5] Faria, in Kerr., VI., 220.

[6] Faria, in Kerr, VI., 223.

[7] Briggs' Ferishta, IV., 147 About the exact date there is some uncertainty. Bird mentions both 1540 and 1530 as dates of the building of the castle (244). The author of the Mirat-i-A'hmadi (1748-1762) gives the following account of the building of Surat fort · They say that in the time of the Gujarát kings of Ahmedábád the port and population were in the town of Ránder. This continued until 1540 (947 H.) when Safar Aka,

Chapter V. History. 1194-1573.

Khudáwand Khán's fortress, calling it strong and well constructed. On the two landward sides was a ditch sixty feet wide, and the curtain, sixty feet high, had a rampart thirty-five yards wide. The whole of the masonry was connected by bars of iron or lead. After the tower was completed the city quickly increased in size; and Ferishta specially mentions one beautiful building, four storeys high, said by the Europeans to be like a Portuguese palace.[1]

Disturbance at Surat, 1560.

About the year 1560 the people of Surat asked Imád-ul-Mulk Rumi, to whom Surat was at that time assigned, to remove their governor Khudáwand Khán. As Khudáwand refused to resign, Imád-ul-Mulk advanced against him, and on his reaching Surat Khudáwand Khán agreed to submit. But he planned treachery, and, inviting Imád-ul-Mulk to an entertainment, had him assassinated. Changiz Khán, Imád-ul-Mulk's son, marched against Surat, and, engaging the Portuguese as allies, took the fort and slew Khudáwand.[2]

Taken by Akbar, 1573

In 1572 Surat fell into the hands of the Mirzás, then in rebellion against the emperor Akbar. The Mirzás strengthened the fort and prepared for resistance. In the beginning of 1573 (January 19th) Akbar arrived before Surat, and after a vigorous siege, which lasted for about six weeks, the fort surrendered.[3] During the progress of the siege the Mirzás wrote to the Portuguese offering to surrender the castle to them as the price of their assistance. The Portuguese accordingly sent an armed force up the Tápti But on reaching Surat, and seeing the strength of the besieging army, they gave up all thoughts of fighting, and, assuming the name of ambassadors, paid their respects to the emperor.

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a Turk or Rumi, who in the reign of Mahmud Begara (1459-1511) received the title of Khudawand Khán, built a fort of great strength This he did to put a stop to the incursions of the Portuguese, who, coming there in boats, committed all kinds of injury and gave much annoyance to the inhabitants To prevent its construction, the Portuguese came with several vessels armed with cannon But they could not prevail The fort was built with walls of 15 cubits broad and 20 cubits high, of much strength, and was armed with great cannon, like huge serpents, and all necessary munitions of war. A commander was appointed, and the attacks of the Portuguese were stopped —Extract by Major Watson

[1] Briggs' Ferishta, IV, 147 Khudáwand is said to have submitted three plans to the king. The king chose the one that placed the castle on the bank of the river, and under this plan wrote the word *mubarak*, or 'the prosperous' Hence the city up to this day is called Surat bandar mubárak —Bakshi Mia's History.

[2] According to their own account, the Portuguese came to Surat as allies of Khudáwand. But finding that, contrary to his promise, he showed no signs of giving up the castle, they abandoned his cause (Faria, in Kerr., VI, 414) This Khudáwand Khán is also called Ikhtiyár Khán He is not the Safar Aka Khán or Khudáwand Khán who built the Surat fort Safar, the builder, called Khojáh Zofar by Faria, commanded the Gujarát troops at the second siege of Diu (March 1545) According to Faria (in Kerr, VI, 392) Zofar was killed not long after the siege began. If this is correct, there must have been a third Khudáwand Khán, who, in 1554, was one of the victims of the assassin Burhán.—Bird's History, 271

[3] Bird's History, 322 On entering the fort, Akbar found a beautiful cannon which had come to Surat in the Turkish fleet that was wrecked on the Gujarát coast in the stormy season of 1554 (Sidhi Ali, in Bom. Lit Soc. Trans., II., 10.) This gun, called Sulman, in honour of the Turkish emperor Suliman I (1520 1566), was of so exquisite a model that Akbar ordered it to be taken to Agra. But as there were no means at hand for transporting it, the gun was allowed to remain at Surat.—Bird's History, 322.

At the time of its conquest by Akbar, the district, or *sarkár*, of which the port of Surat was the head-quarters, contained nine hundred and ninety-three towns or villages. Including the receipts from port dues and from a provision tax, this territory was estimated to yield a yearly revenue of £40,000 (Rs. 4,00,000).[1]

Section II.—Moghal Rule (1573-1733).

1573-1733.

From the year 1573, when Akbar conquered Surat, to 1733, when, in the decay of the Moghal empire, its governor began to act as an independent ruler, Surat was administered by officers appointed by the court of Delhi. This term of 160 years may be divided into three sections, the first, of about eighty-five years (1573-1658), when, under the emperors Akbar, Jahángir, and Sháh Jahán, Surat enjoyed peace and rose to be one of the first cities in India; the second, the forty-nine years of Aurangzeb's reign (1658-1707), when Surat's prosperity was checked, 1, by Marátha raids (1664-1685), and, 11, by the growing importance of Bombay (1677-1707); and the third, about twenty-seven years of increasing disorder, when the Surat governors were, in little more than in name, subject to the court of Delhi.

Surat attacked, 1573.

On the capture of Surat, Akbar (1573, March) appointed Kalij Khán commander of the fort.[2] In the same year (April) Muhammad Husain Mirza marched from Daulatábád and besieged Surat. Kalij Khán was prepared for defence, and the Mirza, finding the siege made no progress, abandoned Surat and went on to Broach.[3]

Condition of Surat, 1590.

In Akbar's time Surat is (1590) called an emporium,[4] or first class port. It was of sufficient consequence to induce Akbar to appoint two distinct officers for its administration. Of these, one was a military officer who, with the title of *kiledár*, commanded the castle and river; the other, a civil officer who, with the title of *mutsadi*, or revenue writer, administered the district of Surat, and had charge of the city and the collection of the customs revenue. The *mutsadi* was not subordinate to the chief civil officer, the *diwán*, at Ahmedábád, but held direct from the Delhi court. Along with some other parts of Gujarát the lands of Surat were, about the year 1576, surveyed by Rája Todar Mal. The whole area of the district, as given in the Ain-i-Akbari, is 770,985 acres (1,312,315 *bighás*), and the yearly revenue £47,588.[5] It furnished 2,000 cavalry and 5,500 infantry.

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[1] Bird's History, 119. (5,00,000 *chanyzis.*)

[2] Bird, 324.

[3] Bird, 326

[4] Gladwin Ain-i-Akbari, II., 65 Ránder, Gandevi, and Balsár are mentioned as ports subordinate to Surat. Abul Fázal also speaks of the very fine fruits of Surat, especially its pine-apples. Its freedom from any share in Muzafar's rebellion (1583-1591) increased the prosperity of Surat. Had Muzafar succeeded in making his way to Surat, he would have found the Portuguese ready to help him. In 1589 the viceroy of Goa received orders from Europe to take advantage of the disturbances and seize Surat —Arch. Port. Orient. Fas., 3, 201.

[5] The amount given in the Ain-i-Akbari (Gladwin, II., 241-242) is 1,90,35,177 *dáms*, that is, Rs. 4,75,879.

Chapter V.

History.

1573-1733.

The events of most importance in the history of Surat at the beginning of the seventeenth century are connected with the arrival and settlement of certain companies of European merchants.

The English in Surat, 1608-1609.

Since 1573, when they concluded a treaty with the emperor Akbar, the Portuguese had remained undisputed masters of the Surat seas. The first sign of opposition to their power was in August 1608, when an English ship arrived at the mouth of the Tápti.[1] As the commander, Captain Hawkins, came provided with letters from the English king to the emperor Jahángir, he was allowed by Mukarab Khán, the governor of Surat, to bring into the city his merchandize, lead, iron, and some treasure. Though his ship sailed from Surat in October, Hawkins remained behind; and in February 1609 started for Agra, leaving in Surat an English merchant and some English servants to sell the rest of his goods. In September 1609 a second English ship, the 'Ascension' by name, arrived in Gujarát waters, but was wrecked off the Surat coast. Her crew landed at Gandevi,[2] and about seventy of them came to Surat. The Portuguese used their influence with the governor to prevent the English from being allowed to settle in the city of Surat, and in consequence the shipwrecked crew were ordered to remain at the village of Umra, about three miles west of the city.[3] At the end of September they left Surat, most of them with their captain, or general as he was then called, starting for Agra.

The city plundered, 1610.

In October (1609) Surat was thrown into a panic by the approach of Bahádur, the son of Muzafar, the last of the Musalmán kings of Ahmedábád, who was at that time attempting to recover Gujarát from the Moghals. But by the timely arrival of strong succours from the Moghal viceroy of Ahmedábád, Bahádur was forced to withdraw without causing any damage. Finch, the English merchant whom Hawkins left in Surat, was (1610, January 18th) called to Agra by his superior, and the English factory in Surat was closed.[4] In this same year Malik A'mbar, a noble of Nizám Sháh's court, and governor of Daulatábád, invaded Gujarát at the head of 50,000 horse, and plundered Surat.

English in Surat, 1608-1618.

At the close of the stormy season of the following year (1611, September 26th), three English ships came to anchor at the mouth of the Tápti.[5] A Portuguese fleet occupied the coast and the entrance of the river, so that the English ships were forced to remain outside. The governor of Surat, Khojáh Násar, and his brother Mukarab Khán, the governor of Cambay, professed to be anxious to trade with the

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[1] During this time, 1573-1608, Portuguese power in eastern waters had sustained two severe blows: in 1580, by the absorption of the kingdom of Portugal in the Spanish empire; in 1595, by the arrival of the Dutch, 'the scourge of the pride and insolence of the Portuguese in the east.'

[2] Gandevi, about 30 miles south-east of Surat, at that time a port and manufacturing town of some consequence. Coverte, in his account of this voyage, speaks of it as a city of which a great man was governor.—Kerr, VIII., 331.

[3] Finch (1609), in Kerr, VIII., 274.

[4] Finch, in Kerr, VIII., 275.

[5] These ships were the 'Trades Increase', 1,000 tons; the 'Pepper Corn', 250 tons; and the 'Darling', 90 tons.—Sir H. Middleton, in Kerr, VIII., 361.

English. But as nothing could be done so long as the Portuguese held the mouth of the river, they advised Sir Henry Middleton, the English admiral, to move his ships to the port of Gogo, Middleton refused to leave Surat, and detained some Indian craft, then lying near him, till he should receive on board all the English from Cambay and Surat. He then passed over the bar and anchored in Suwáli roads.[1] In October and November the English and Portuguese fought one or two petty skirmishes on the shore, but no engagement of consequence took place either by sea or by land. The governor occasionally came to the shore and had some small trade dealings with the English. In December 1611 Mukarab Khán was deposed from the management of Cambay, and Khojáh Násar from that of Surat. The new governor, like his predecessor, entered into some trifling transactions with the English. But the change of governors would not seem to have materially affected the position of the English at Surat. In the beginning of the next year (1612, January 26th), the English who had come from Cambay went on board one of the English ships, but Sir H. Middleton waited for a few days hoping still to obtain leave to establish a factory at Surat. Mukarab Khán, who was then the commissioner of customs, or *sháh-bandar*, refused to have any further dealings with the English, and, blaming them for causing much loss to the revenues of the port, ordered them to leave at once. The fleet accordingly set sail on the 13th January (1612).[2]

English in Surat, 1608-1618.

In September (5th) 1612, two English ships, the 'Dragon' and 'Osiander', under the command of Captain Best, arrived at the mouth of the Tápti. One of the merchants, sent to Surat, was welcomed by the governor and was allowed to trade.[3] On the 13th September a Portuguese fleet of sixteen small vessels[4] entered the Tápti and captured some of the crew of one of the English ships. In retaliation the English commander, Captain Best, seized a Gujarát ship, refusing to give it up till the English were allowed to establish a factory at Surat. About the same time news reached Gujarát of the great power and the moderation of the English in the Red Sea.[5] Accordingly, on the 17th October, the viceroy of Gujarát came from

Establish a factory, 1612

[1] Kerr, VIII., 401. Suwáli road was a little way north of the mouth of the Tápti.

[2] Sir H. Middleton, in Kerr, VIII., 402. Among the English who were taken off by Sir H. Middleton were Captain Hawkins and the wife he had married at Agra, Captain Sharpey, of the 'Ascension', and a carpenter of the 'Ascension', Bangham by name, who, when the rest of the crew went to Agra, would seem to have stayed in Surat and built a ship in English fashion.—See Middleton, in Kerr, VIII., 393, and Fryer (1673).

[3] Best (1612), in Kerr, IX., 99. This governor was probably not Mukarab Khán, but his successor.

[4] These small vessels of war were by the English writers of this time called frigates, a term then apparently meaning much the same as pinnace.

[5] The reference is to the measures taken by Sir H. Middleton in the Red Sea (May 1612) when, though he had been badly used both in the Red Sea and at Surat, he refrained from harming the Indian shipping, contenting himself with forcing the captains of the Musalmán ships to trade with him (Kerr, VIII., 466-491). According to Purchas (quoted in Kerr, IX., 143), this strong action on Middleton's part procured the privileges granted to Captain Best, lest the Moghals should 'have the sea shut up to them and all their trade stopt.'

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Ahmedábád to Suwáli to treat with the English captain. Articles were drawn up for the settlement of English trade in Surat, Cambay, Ahmedábád, Gogo, and any other part of the Moghal dominions.[1]

Fight the Portuguese, 1612.

On the 28th November, a Portuguese fleet of four large ships and forty small barks appeared off the mouth of the Tápti, and on the following day (29th) the English and Portuguese vessels engaged each other. The fight was renewed more fiercely on the 30th. But next day the Portuguese held aloof The English then put out to sea, and for some weeks (December 1-22) cruised about the western shore of the Cambay gulf On the 22nd, when the English ships were at Mahuwa harbour,[2] the four Portuguese ships came towards them Fighting began on the morning of the 23rd, and lasted till between ten and eleven, when the Portuguese retired The engagement was renewed on the 24th, and on this occasion the English were the first to retire. The Portuguese followed them for a time. But before long, desisting from the pursuit, after three days (27th), they allowed the English to come back and anchor at Suwáli.

Obtain a charter, 1613.

In the beginning of 1613[3] a charter came from the emperor confirming the treaty between the English and the viceroy of Gujarát. The charter was sent down to Suwáli on the 6th of January as a private letter. But the English captain refusing to take it in this form, on the 11th the manager of the customs, or *sháhbandar*, and several other leading officers went to Suwáli and made a public and formal presentation of the charter. On the 17th the English ships sailed away. Towards the close of the year (1613) the Portuguese appeared off the mouth of the Tápti, and, in retaliation for the favour shown to the English by the Moghal government, seized and carried off to Goa a great Gujarát ship.[4] In consequence of this act the Moghal government declared war against the Portuguese. Mukarab Khán was restored to the office of governor of Cambay, and two armies were equipped, one to act against Daman, and the other to attack Diu.[5] No English ships came to the Tápti in this year (1613)[6]

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[1] The chief provisions were (1) that the people of Surat were to be allowed to trade freely with the English; (2) that English commodities should pay a duty of 3½ per cent, and (3) that the factory should not be made responsible for the robberies of English pirates.—Best, in Kerr, IX, 101.

[2] Mahuwa (Mhowa) near Gopnáth Point (opposite to Surat), still a place of trade. In 1612 there were the ruins of a great town, but few inhabitants —Best, in Kerr, IX, 105.

[3] Best, in Kerr, IX, 106 The dates differ from those given by Orme (Historical Fragments, 330) by about six weeks. Probably they have been altered by the Editor of Kerr's Voyages to suit the 'new style.'

[4] This ship is said (Orme's Hist. Frag, 334) to have had on board five hundred persons, and a cargo valued at £100,000 sterling. Withington says seven hundred persons —Kerr, IX, 126.

[5] Orme's Hist Frag., 341. Mokarab Khán is said at this time to have received the title of *nawab*, and the government of Surat, Broach, Baroda, and Nariád.—(Orme's Hist Frag, 343).

[6] The 'Expedition' (Captain Newport) had started for Surat (January 7th, 1613). But at the Cape of Good Hope, hearing from the 'Hector' that the factory at Surat was closed, they went to Diul in Sind.—Kerr, IX., 143.

English in Surat, 1608-1618.

In 1614 (October 15th) four English ships arrived at Suwáli. The commissioner of customs, Khojáh Násar, went to Suwáli to try and induce Captain Downton, the English admiral, to join with the Moghals in attacking the Portuguese.[1] But as Captain Downton refused to act against the Portuguese, the governor ordered that no one from Surat was to trade with the English. The governor was severe against the English because he feared there was a secret alliance between them and the Portuguese. But when he found that this was not the case, he allowed the lading of the English ships to be carried on.[2]

Downton's expedition, 1614.

In December, 1614, the Portuguese caused a great loss to Surat by burning in Gogo the large pilgrim-ship, the 'Rahimi'.[3] While Captain Downton still refused to join the governor of Surat against the Portuguese, news came that a great fleet was sailing north from Goa to destroy the English. On the 17th of January (1615) first sixty small barks, and then on the 18th nine ships, six of them very large, appeared off the Tápti. The governor of Surat, thinking that the English stood no chance against so strong a force, tried to enter into terms with the Portuguese viceroy But the viceroy, confident of victory, rejected his offer. At this time the English ships were lying in the Suwáli roads, separated from the open sea by a spit of sand about seven miles long. Early in the morning of the 20th December, Captain Downton arranged that one of his ships should drop down to the south end of the roads, and that the other three ships should also move in the same direction. The Portuguese, taking for granted that the English were planning an escape, though the tide was then low and their larger vessels could not pass the sand bank, sailed against the English ship nearest the mouth of the harbour. Three of their ships and many small barks reached the English vessel and made a furious attempt to board her. Seeing this the other English ships came down closer firing against the Portuguese, who, failing in their attack on the English, while at the same time their own ships caught fire, were forced to take to the water and escape as they could. The three Portuguese ships were destroyed, floating ashore and burning there. But the English vessel, though much injured in its masts and rigging, was saved The Portuguese viceroy now offered to accept the governor's proposal for peace. But he, seeing the valour of the English, refused, and helped the English with timber and provisions. After their attack, on the 20th January, the Portuguese held off, and the English continued to load their ships. Nothing more was done till the 3rd February, as the Portuguese viceroy was waiting for supplies. The supplies he wanted were materials for fire-ships. These he got ready, and first on the 8th, and again on the 10th, towing them in the dusk of evening up the gulf, let them float down the passage towards the English

Defeats the Portuguese, 1615.

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[1] Downton (1614), in Kerr, IX., 173.

[2] Downton, in Kerr, IX., 175.

[3] The 'Rahimi' is said to have been 1,500 tons burden, and to have been able to carry 1,500 pilgrims. Her measurements were-length 153 feet, breadth 42 feet, and depth 31 feet.—Saris (1611), in Kerr, VIII., 487. This ship was the property of Jahángir's mother.

ships. Both attempts failed, and the viceroy retired to the roads south of the mouth of the Tápti. The English ships continued at Suwáli completing their lading, leaving finally on the 3rd March.[1]

English in Surat, 1608-1618.

During the rainy season of 1615 Mukarab Khán was recalled from his government in Surat, and the post given to the emperor's third son, Prince Khurram, afterwards Sháh Jahán (1626-1658). The prince chose his favourite Zulfikár Khán to act as his manager at Surat This officer, tracing to the English the war between the emperor and the Portuguese and the consequent loss of revenue at Surat, determined to oppose the English and make friends of the Portuguese. With this object he concluded a treaty with the Portuguese, one of the provisions of which was that the Moghals and Portuguese should unite in driving the English and Dutch from their ports.[2] But before the treaty could be acted on, or even be confirmed by the emperor, another English fleet arrived off the Tápti.

Arrival of Sir Thomas Roe, 1615.

In this fleet came Sir Thomas Roe, an ambassador from the English king to the emperor Sir Thomas Roe reached Surat on the 26th September 1615, and after remaining for about a month in the city, started (October 30th) for Ajmir, where Jahángir then was. At Ajmir Sir Thomas Roe was received with honour, and by his bearing gained the respect and good-will of the emperor. But there was at court a strong party hostile to the English, some from distrust of foreigners, and others from friendship to the Portuguese, so that the English ambassador's negotiations went on but slowly. In October 1615, a large Portuguese fleet arrived near the Tápti But as the governor Zulfikár Khán was not in a position to act with them against the English, the Portuguese would seem to have contented themselves with escorting the trading vessels from Goa to Cambay.[3] In 1616 (September 24th) another English fleet came to Suwáli and remained there till March 1617. In that month there was a dispute in the city, and a body of armed men came up from the English ships threatening to plunder the town They, however, retired without doing any damage.[4] But in case of any similar attempt in the future, the governor gave orders to strengthen the fortifications of

[1] Before they sailed the governor of Surat paid Captain Downton a visit, and went on board his ship The day after leaving Suwáli the English ships were followed by the Portuguese. But, after sailing in pursuit for a day, the Portuguese retired Downton proceeded to Bantam, where, on the 6th August, he died, 'lamented, admired, and unequalled' (Orme's Hist Frag., 356) "His disposition,' says Purchas, "savoured of the true heroic, piety and valour being in him seasoned by gravity and modesty" (Quoted in Kerr, IX., 196) The details of the English and Portuguese armaments engaged in this fight were as follows The English four ships—Downton's ship, the 'New Year's Gift', 650 tons, the 'Hector', 500 tons, the 'Hope', 300 tons, and the 'Solomon', 200 tons. (Kerr, IX, 167) The Portuguese had sixty small war boats, rowing eighteen oars aside, and each manned by twenty soldiers; two galleys, with fifty men each, a pinnace of 120 tons, two ships of 200 tons each, and six great ships called galleons, one of 400 tons, one of 500 tons, two of 600 tons, one of 700 tons, and the viceroy's ship of 800 tons.—See the Examination of Domingo Francisco (1615), in Kerr, IX, 204.

[2] Faria quoted in Orme's Hist. Frag, 361.

[3] Orme's Hist. Frag, 369.

[4] Roe, in Kerr, IX., 337.

Surat.[1] Early in 1618 Sir Thomas Roe returned to Surat, having obtained the grant of important privileges in favour of the English.[2]

Meanwhile another European nation had come to Surat anxious to trade. In 1616 (August 2nd) a Dutch merchant[3] arrived and was well received by the governor. But without the authority of the emperor, the Dutch could not be allowed to establish a factory like that of the English. The chief merchant went away, leaving four Europeans in Surat to dispose of his goods. In the next year (1617) two Dutch ships were wrecked at Gandevi, near Surat, and a few of the merchants were allowed to remain in Surat to dispose of their goods. In 1620 another Dutch ship came, bringing the merchant who had visited Surat in 1616 He was now appointed to manage the affairs of the Dutch in Surat. As they had in 1618 received a charter from the emperor allowing them to settle at Surat, the Dutch were now allowed to establish a factory like that of the English.[4]

Dutch in Surat, 1616.

In 1608, when the English began to trade with Surat, the city is described as 'of considerable size, with many good houses belonging to merchants.' On the bank of the river were two chief buildings, the castle moderately large, handsome, well walled, surrounded with a ditch, and having a small postern opening towards the river. Many cannons, some of them of vast size, were on its ramparts Further up the river was the custom-house, from which a flight of steps ran down to the water. Behind the custom-house was the market-place, divided into two parts, one for goods, the other for horses and cattle, and towards the right, behind the castle, an open space or *maidán*, 'a pleasant green, having a maypole in the middle, on which at high festivals was hung a light and other decorations'[5] From the top of the castle, though the town was of considerable size, with many good houses most closely set, so numerous and thick were the trees that it seemed a wood or thicket[6] In front of the castle the city was open, but was fenced on all other sides by a ditch and thick hedges. In the hedge were three gates, one leading north to Waráv, one east to Burhánpur, and one south to Navsári. To

Aspect of Surat, 1608-1620.

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[1] Roe, in Kerr, IX, 338.

[2] The chief provisions were 1, That the English should be well treated; 2, that they should have free trade on payment of customs dues, 3, that their presents to the emperor should not be subject to search at Surat, 4, that the effects of any one who died should be handed over to Englishmen (Roe, in Kerr, IX, 292) Roe would seem also to have found it advisable to make a separate agreement with prince Kharram, in whose hands Surat then was The chief articles of this agreement were (1) that the governor of Surat should lend ships to the English, (2) that resident English merchants might wear arms, (3) that the English might be allowed to build a house in Surat, (4) that they should have free exercise of their religion, and (5) that they should be allowed to settle their disputes among themselves —Kerr, IX, 253

[3] This was Van den Broeck, afterwards (1620) director of Dutch trade in Surat. —See his voyage quoted in Anderson's Western India, 16.

[4] The Dutch were at the Moghal court, 1618 (Jan 13) But Roe does not mention how their mission succeeded (Kerr, IX 364) Of the ships lost at Gandevi (September 1617), one was a vessel of 1,000 tons, the other a small pinnace.—Pring, in Kerr, IX, 453.

[5] Finch (1610), in Kerr, VI., 275.

[6] Terry (1618), in Kerr, IX., 391.

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the south, beyond the Navsári gate, was the great reservoir called Gopi's pond, three-quarters of an English mile in circuit, and beyond the lake some fine tombs, with a handsome paved court. Near the tombs was a small mango grove 'where the citizens resorted to banquet,' and about a mile (½ *kos*) further was a great tree much venerated by the Banians[1] Near the city were 'goodly gardens abounding in pomegranates, pomicitrons, lemons, melons, and figs, to be had at all times of the year, the gardens being continually refreshed with curious springs and fountains of fresh water.'[2]

Course of trade, 1608-1620.

The city was very populous and full of merchants.[3] The people were 'tall, neat, and well clothed in garments of white calico and silk, and very grave and judicious in their behaviour'[4] Goods were brought up the river in boats The boats were moored at a flight of steps that ran down to the water's edge near the castle. Their cargoes were taken up the steps, and laid in the custom-house, where were store-rooms for stowing goods till they were cleared. After passing through the custom-house, merchandize was carried into the market-place on one side of the castle green, and there offered for sale.[5]

Custom rates.

Custom dues at that time are said to have been levied at the rate of 2½ per cent for goods, 3 per cent for provisions, and 2 for money[6]

From Akbar to Aurangzeb, 1608-1658.

The fifty years between the settlement of the English and Dutch in Surat, and the close of the reign of the emperor Sháh Jahán (1608-1658) was a time of increasing prosperity at Surat. During these years few events of any great importance to Surat are recorded. In the year 1622 the traders complained to the governor that some of their ships had been seized by European pirates. The governor suspected the English, and placed them in confinement. But, after a few months, finding they were not to blame, he set them at liberty.[7]

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[1] Finch, in Kerr, VIII, 276.

[2] Copland (1612), in Kerr, IX, 119.

[3] 'At this time (1614) an addition was made to the population of Surat by the arrival of many hundred Banians and others who, sent away from the Portuguese towns, then under siege by the Deccanis, sought refuge in Surat and Cambay.'—Withington, in Kerr, IX, 126

[4] Finch, in Harris' Voyages, I, 84, and Copland as above.

[5] Finch, in Kerr, VIII, 276 At this time the two great branches of Surat foreign trade were westwards with Mocha in the Red Sea, and eastwards with Acheen in Sumatra Of the Mocha trade, Terry (1614-1620) says, this is the chief market for Surat goods, cotton cloth, and cotton wool To buy these, merchants come to Mocha from many parts of the Turks' dominions, from Abyssinia (Prester John's country), and from grand Cairo in Egypt (Terry's Voyages, 130) Of the trade to the east mention is made (1599) that in Acheen a quarter of the city was set apart for Gujarátis. (Captain John Davis, in Kerr, VIII, 52.) Gujarátis were (1603) found in Java (Scott, in Kerr, VIII, 147), and in 1611, as far south as the island of Banda (S lat 5°), Captain Saris, in his voyage to Japan, noticed that Gujarát (Cambay) cloth, black and red calicoes, and calico lawns, were in request (Kerr, VIII, 188) Their competition with the old Gujarát carrying trade to the eastern archipelago was one of the reasons why the English found themselves so much disliked in Surat.—See Hawkins (1608), in Kerr, VIII., 223.

[6] Finch, as above.

[7] De la Valle and Bruce's Annals, I., 236.

In 1629 (April 6) the English got an order, or *farmán*, from the emperor to act against the Portuguese Accordingly, when the Portuguese fleet arrived off the Tápti, it was attacked by the English. At this time the English and Portuguese not only engaged at sea, but, sending bands of men ashore, they fought on the sand hills In these skirmishes the Portuguese suffered severely [1] The year 1631 was a time of famine and pestilence in Surat [2] A few years later (1636) Surat ships were again attacked and injured at sea by Europeans. On hearing complaints of this, the governor imprisoned the different European factors, and only released them on the payment of £17,000 [3] In 1642 the French came with a great show of wealth and established a factory at Surat [4] In 1664 the Dutch and English were at war. At this time the Dutch were very strong in Surat Enraged at some act of the governor, they seized the great Musalmán pilgrim-ship and refused to give her up Complaints of this reached the emperor, and the governor was compelled to restore the Dutch a sum of £5,000 (Rs 50,000) [5] In 1652 the governor of Surat was favourable to the English, and in the next year, when a Dutch fleet appeared off the Tápti, they refrained from attacking the English through fear of enraging the Moghal During the struggles between the sons of the emperor Sháh Jahan, by which Hindustán was disturbed in 1657, one of the competitors seized the fort of Surat and pillaged a great part of the town [6]

Famine in Surat, 1631

Throughout this period the form of administration at Surat remained unchanged. There were still the two governors, the civil ruler of the city and district, and the military commander of the castle. The list given below shows that in the thirty-two years ending with 1658 the office of city governor changed hands as often as eleven times [7]

Administration of the city, 1608 1658.

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[1] Bruce s Annals, I , 301

[2] Bruce's Annals, I , 304.

[3] Bruce's Annals, I , 341

[4] Macpherson's European Commerce with India, 259

[5] Baldæus (1660 1680), in Churchill, III , 512

[6] Bruce's Annals, I , 534 The actual sack of Surat seems doubtful, but it was a time of much disturbance Industry was paralyzed and trade at a stand still "It does not a little trouble us," wrote one of the Company s chief servants, "to pay nine per cent interest for what money we shall be forced to take up for your account towards providing of goods for the next year, and at that rate little to be had, every one rather burying their money than adventuring to trust it out in this time of war —Surat Despatches for 1658 59, quoted in Kaye's Administration of the E I Co , 38

[7] The following is a list of the city governors of Surat between 1628 and 1657 —

(1) Mir Arab	1628
(2) Moiz ul Mulk	1630
(3) Jám Kuli	1635
(4) Muhammad Khán	1639
(5) Mowázaz Khán	1644
(6) Mowázaz Khán	1645
(7) Mazi Huz Zamán	1648
(8) Jám Kuli (2nd time)	1651
(9) Mustafa Khán	1653
(10) Muhammad Sádek	1655
(11) Roshan Zamir	1657

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Trade arrangements.

As compared with the accounts given by the early travellers, the rate of customs charged on Europeans would seem to have been raised. In 1638 all goods belonging to Europeans are said to have paid three and a half per cent imports and exports alike, except gold and silver, coined and in bars, which (when imported) paid only two per cent.[1] With the increase of wealth the appearance of the city improved One addition of some importance was the building, in 1644, of the travellers' resting-house, now used as a municipal hall and offices. The town is also described as enclosed on the landward side by a mud wall, which is not noticed in the earlier accounts.[2] In 1623 Surat is described as 'moderately large, and for India well built.'[3]

Aspect of the city, 1608-1658.

Later on, the town is said to be adorned with 'many fair houses built with flat roofs'[4] As regards the population of Surat at this time, of natives there were Hindus, Muhammadans, and Pársis; the Muhammadans the fewest, and the Wániás the richest. Of foreigners, there were, besides the few European merchants, Turks and Jews, and traders of Arabia, Persia, and Armenia.[5] Though the city was (1623) full of inhabitants, the number of people varied greatly at different seasons of the year. During the rainy season (June—October) many of the people were absent from the city. But in the busy months,—January, February, and March,—so crowded was Surat, that lodgings could scarcely be found either in the city or in the suburbs.[6] The country people would seem to have been less prosperous than the townsmen. "Much of the land lies fallow," says Mandelslo (1638),[7] "and this because from one-third to one-half of the crop is taken by the governor, so that few think it worth their while to cultivate the fields at so excessive a rate."

Trade, 1608-1658

Surat was already 'one of the most eminent cities for trade in all India'[8] By land, caravans went and came by the Tápti valley south-east to Golconda; east to Burhánpur in Berár, and from that on to Agra, and north through Ahmedábád to Agra, Delhi, and Láhor. By sea, ships came from the Konkan and Malabar coasts, and from the west, besides the great trade with Europe, from the ports of eastern Africa, Arabia, and the Persian Gulf; south they came from Ceylon; east from the Madras and Bengal coasts, from Pegu and Malacca, but, above all, from Acheen in Sumatra. By land, merchandize came and went to Surat during the fair-weather months in caravans of wagons, camels, and bullocks; and by sea,

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[1] Mandelslo's Travels (1638), French Ed., 59. There seems to have been a special customs duty at the rate of one in 40, or 2½ per cent, on Musalmáns, and two in 40, or 5 per cent, on Hindus The 2½ per cent levied on Musalmáns was the *Zakát*, or charitable contribution paid by the faithful

[2] Mandelslo (1638) mentions a good stone rampier on the land side (Harris, II., 120), but this seems incorrect

[3] De la Valle (1623), I, 25.

[4] Ogilby's (1660 1685) Atlas, V, 211. Ogilby quoted from travellers up to about 1650.

[5] De la Valle, I, 25, and Ogilby's Atlas, V., 211.

[6] Tavernier (1642-1666), in Harris, II., 350.

[7] In Harris, II, 128.

[8] Ogilby's Atlas, V., 211.

the larger ships, anchoring in the Suwáli roads, unladed there and sent the goods twelve miles by land in bullock-carts.[1] Of the articles of trade in the Surat markets there were: Of MINERAL SUBSTANCES —iron, copper, and alum; and of PRECIOUS STONES—diamonds, rubies, rock-crystal, and excellent cups of agate and carnelian. Of VEGETABLE PRODUCTS—wheat 'in great abundance, the best in the world;'[2] infinite quantities of peas, beans, and lentils; many medicinal drugs; butter and oils of different sorts, to eat, to burn, and to anoint the body. Of MANUFACTURED ARTICLES—black and white soap, sugar, preserves, paper, wax, much opium, of which the Indians, both Muhammadans and Hindus, make great traffic and use; and indigo, 'to buy which the English and Dutch came to Surat.' But the principal article exported from Surat was cloth, both silk and of cotton. This cloth was used by all people from the Cape of Good Hope to China. Some of it was rough, and some of it as white as snow, very fine and delicate. Other kinds were 'most artificially' painted with different figures of silk, 'very neatly mingled either with silver or gold, or both.' There were also excellent quilts of stained cloth, or of fresh coloured taffeta, filled with cotton wool and stitched as evenly and in as good order as if the pattern had been traced out for their direction. Though with a thinner and shorter pile than those made in Persia, their carpets of cotton wool were excellent in fine mingled colours, some of them more than three yards broad, and of a great length. Of the richer carpets some were all of silk, 'with flowers and figures lively represented in them.' Of others the flowers were silken, but the ground silver and gold.[3] The wood-work, too, was famous; bedsteads, painted and lacquered with different colours and forms, and other articles of house furniture, beautifully worked. Writing-desks, as well made as those of Germany, most skilfully inlaid with mother-of-pearl, ivory, gold, silver, and precious stones. Little boxes of tortoise-shell, 'so brightly polished that there is nothing prettier.' And all 'wonderfully cheap.'[4]

Trade, 1608-1658.

The merchants by whom this great commerce was carried on belonged to three classes: I, Natives of India; II, Foreign Asiatics; and III, Europeans. Under the first class came Hindus and Muhammadans.[5] Under the second, Persians, Tartars, Arabians,

Merchants.

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[1] Mandelslo (1638), 59.

[2] The wheat, of which they are said to reap two crops in one year, was chiefly exported to Goa.—Pyrard de Laval, I., 210.

[3] At the same time, in certain materials and colours, the cloths of Europe would seem to have been more highly prized at the Delhi court than those of India. Rich scarlet and violet coloured cloth of gold is (1630) spoken of as a suitable present for the emperor.—Briggs' Cities of Gujaráshtra, 67.

[4] Viagem de Francisco Pyrard de Laval (1601-1620), II, 210. The same writer adds, "in these crafts all engage, nor are they behind the men of this country (Portugal), but, on the contrary, far superior, having a more active spirit and a finer hand. It is enough for them to hear and see anything once not to forget it, and, being so intelligent, they do not deceive nor are easily deceived. I never saw people so courteous and good as the Indians. They have nothing of the savage as we think. They would not imitate any Portuguese customs. Mechanical work they are easily taught, so much so that the Portuguese learn more from them than they from the Portuguese."

[5] Ogilby (Atlas, V., 218-219) speaks of a few Pársis being traffickers. But this was at that time unusual. They were then almost all cultivators or artizans.

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Armenians,[1] and many others, except Chinese, Japanese, and Jews, who were seldom found. Of Europeans there were English, Dutch, French, and Portuguese.

English in Surat, 1618-1658.

The chief events in the private history of the English company in Surat during the first half of the seventeenth century were the establishment of a trade with Persia in 1615, and an alliance with the governor of Mocha in 1618.[2] In 1619 an agreement between the English and Dutch companies put a stop to the contest for the spice islands, which had been raging for several years. The Dutch in the East did not, however, respect the terms of this agreement, and in 1623, by driving the English out of Amboyna, engrossed to themselves the whole of the spice trade.[3] At Surat, in 1623, on account of some piracies committed by the Dutch, the English factors were thrown into confinement and kept prisoners for seven months. In the same year the English joined with the Persians, and together drove the Portuguese out of Ormuz, and established Gombroon, now called Bunder Abbás, as the chief seat of trade in the Persian Gulf From 1627 to 1630 were years of good trade. The English were on friendly terms with the Moghal and entered into large cloth contracts In 1630 the Dutch, failing to injure the English with the Moghal, took to depressing their stock, by selling European goods at a loss, and giving such high prices for Indian articles as to make the markets almost impracticable.[4] In this year the company's settlement at Bantam in Java was placed under the Surat factory.[5] Between 1630 and 1660, while their connection with Surat became of increasing consequence to the English company, their trade suffered much by the competition of Sir William Courten's association. The first of this company's ships

[1] The Armenians did not become great merchants in Surat till towards the close of the 17th century

[2] Both of these advantages were at least in part due to Sir Thomas Roe The first effort to start a trade connection with Persia was in 1615, when for this purpose Richard Steele and John Crowther were sent overland from Surat to Persia. Sir T. Shirley, who was sent as ambassador, also helped Besides this, the offer fitted in with Shah Abbás' wish to have an ally by whose help he might drive the Portuguese from Ormuz (Orme's Hist Frag , 359) This project had Sir Thomas Roe's support, and in 1618, before leaving India, he appointed an agent to treat with the king of Persia. (Sir Thomas Roe, in Kerr, IX , 255) The treaty with Persia was concluded in 1619. (Milburn's Or Com . I , XVII) With regard to the opening of trade with Mocha, the first treaty with Mocha was made by Captain Shillinge in 1618. Roe wrote to get this agreement confirmed by the Grand Seignior, and, as an inducement, promised that the English would undertake to clear the sea of pirates (Kerr, IX., 255 and 491) One of the chief advantages to the English of opening a trade with the Red Sea was, in Roe's opinion, that Gujarát merchants would send their goods in English ships, the freight would yield profit, friends would be made, and it would save the export of bullion.—Roe, in Kerr, IX , 356

[3] Milburn's Or Com., I , XX. Some slight compensation for their losses was awarded to the English company in 1654, at the close of the Dutch war.—Kerr, IX., 471.

[4] Bruce's Annals, I., 300

[5] In 1634 indigo was not paying, and pepper seemed a better investment, so the Agra agency was withdrawn and a treaty made with the viceroy of Goa. (Bruce's Annals, I., 326) At this time, also, the cloths of Coromandel came to be considered more valuable than formerly, and Bantam was again made a Presidency.—Bruce's Annals, I , 331.

came to India in 1635, and though they did not succeed as traders, by their acts of piracy they were the cause of much injury to the affairs of the old company at Surat.[1] Besides the losses from the competition of this rival association, the profits of the original company were much reduced by the arrival in India of ships belonging to private traders[2] In 1640 so depressed were their affairs that the English thought of leaving Surat, and, instead, of establishing a factory at Rájápur on the Konkan coast. Two years later their dealings at Surat, especially those in Agra indigo, were again prosperous, and, in spite of the ascendancy of the Dutch in 1645, the years between 1644 and 1648 were successful. The Bussorah trade, started in 1640, proved remunerative, and so large were the company's profits that in 1648 the English were able to pay off their debts and recover their former position.[3] This period of prosperity lasted till, in 1653, the Dutch declared war on the English, and though, out of respect for the Moghal, the Dutch did not attack the English at Surat, their trade suffered severely[4] But in the following year (1654) their position was recovered by the concessions the Dutch were forced to make in their favour[5] On the other hand, they suffered during the last three years of this period by the trade between England and India being made open and free (1654-1657).

During this period the European ships did not complete the lading and unlading of their cargoes at Surat. But having disposed of a portion of their European goods, and laid in a stock of indigo for the English market, took a supply of Gujarát manufactures for the eastern trade, and sailing to Acheen and Bantam, in exchange for spices, disposed of what was left of their original cargoes and of the bulk of the Gujarát goods.[6] After the expulsion of the English from the spice islands (the Moluccas and Banda), the practice was continued by calling at Bantam[7] and taking in there a stock of pepper.

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[1] This Courten's company in 1635 (December 12) gained a charter from King Charles I. (1625-1649). Their charter was renewed (1637), but their attempts to develop a trade with India failed Both their settlements at Madagascar and at Rájápur on the Konkan coast were soon closed. Finally, they had to stop with a loss to themselves of £151,612, and to the original English E I. Co of £100,000.—Macpherson, 115.

[2] In 1617 (September 12th) two English interlopers of 160 and 120 tons burden seized the great Surat pilgrim-ship Fortunately they, with their prize, were captured by the company's fleet (Kerr, IX., 453) Roe (1618) wrote to the company, "you must stop (English) piracies, or bid adieu to all trade at Surat and the Red Sea" (Kerr, IX , 357) , and in 1631 King Charles issued a proclamation to restrain the excess of clandestine trade —Milburn's Or. Com , I., XXIII.

[3] Bruce's Annals, I., 442.

[4] Bruce's Annals, I , 482.

[5] See above, Note 3, p. 84.

[6] The European articles originally (1613) recommended for the Surat market by the company's factors in that city were broad-cloth, sword-blades, knives, and looking-glasses ; and for presents, toys and English bull-dogs (Despatch of 25th January 1613, quoted in Briggs' Cities of Gujaráshtra, 60.) After some experience, the factor's (1616) mention quicksilver, good crooked sword-blades, light coloured broad-cloths, ivory, lead, vermilion, coral, and pearls. Tin and Muscovy hides did not sell. (Bruce's Annals, I., 171.) Cases of strong drink (1617) are also mentioned.—(Kerr, IX., 454.)

[7] At Bantam, in Java an English factory was established in 1602. In 1619 it was the greatest place of trade in the Indian seas. The English settlement at Bantam was

Chapter V. History. 1573-1733. English in Surat, 1618-1658.

In 1614 (October) there were only two men in the English factory at Surat.[1] In 1618 the company were allowed to build a house.[2] In 1630 the president was dignified with the title of 'Chief of the Honourable Company of English Merchants trading to the East,'[3] and with the increase of trade additions were made to the strength of the Surat factory. In 1633 there were at Surat from twenty to twenty-four merchants and officers, and once a year the agents of eight subordinate factories came to render an account to the president at Surat.[4] In 1642 the factory was fortified;[5] in 1646 its quick stock was valued at £83,600;[6] and in 1664 it is said, for space and furniture, to have excelled all houses in Surat except the Dutch factory. As early as 1623 the president of the English factory had begun to adopt considerable show. When he went out a banner and a saddle-horse were carried before him, and with him went a company of native servants armed with swords, shields, bows and arrows.[7]

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not disturbed either in 1621, when Acheen was given up, or in 1623, when they lost their hold on the spice islands, so important was Bantam to the English that until 1630 it was independent and a presidency. In 1630 it was made subordinate to Surat. But remained with the English till, in 1682, the Dutch took possession of it, transferring its trade to their own head-quarters at Batavia.—Milburn's Or. Com., I., XVI., and II., 353.

[1] Kerr, IX, 170.

[2] Roe, in Kerr, IX, 253. This was one of the provisions of Roe's treaty with prince Kharram.—See above, p. 79, Note 2.

[3] Anderson's English in Western India, 74. The use of the titles, chief and president, seems to have been changed from time to time.

[4] Mandelslo, 145. The eight subordinate factories were four in Gujarát; Ahmedábád, with an agent and six, Cambay, Baroda, and Broach, each with an agent and four. The other factories were Agra, with an agent and six, Masulipatam, with fifteen; and Dábul on the Konkan coast, with two, and in Persia Ispahan, with an agent and eight. In 1638, on the departure of president Methwold, fifty English merchants met together at Surat. Of these, besides Methwold and his successor Tremling, there were five consuls of different places in India, three ministers, two doctors, and twenty-five merchants.

[5] Bruce's Annals, I, 393.

[6] Milburn's Or. Com., I., XXVII.

[7] De la Valle's letters, I, 42. Of the inner life of the factory at this time a few details are preserved. At first some of the company's servants brought out their wives with them. But to this Roe strongly objected, telling Steele (1617) that he must live frugally and like a merchant, and send home his wife (Kerr, IX, 356). The Company adopted Roe's views, and, till the middle of the century, there would seem to have been no English ladies in Surat. De la Valle (1623), whose wife was with him, could not stay at the English lodge, because the president was not married. Mandelslo (1638) speaks of the president and one or two of the merchants drinking toasts to their wives in England.

In 1638 the factory would seem to have been well managed. The company's servants showed 'admirable respect to the president,' and the establishment was conducted 'in excellent order,' each man having his regular work assigned to him. About fifteen merchants and others dined together in the middle of the day, and again there was a supper at night. The routine of an ordinary day was—prayers at 6 A.M.; dinner at mid-day, to which about fifteen merchants sat down; prayers again at 8 P.M.; and then supper, at which the president did not appear. Tea was the ordinary drink, but on Fridays Spanish wine, and pale punch made of brandy, rose-water, citron-juice, sugar (and water) were allowed. On Sundays there was an extra service and sermon. But part of the day was generally spent, at one of the gardens, in shooting at the mark, or other amusements.—Mandelslo, 145.

Dutch in Surat, 1618-1658.

The leading events[1] connected with the Dutch trade at Surat at this time have been detailed above, either in the general history, or in connection with the record of the English company. The chief provisions in their charter of 1618 were: i, that their trade was to be free from any special custom-house exactions; ii, that their merchants were not to be molested; iii, that their chief was to decide disputes; and iv, that no one was to be compelled to become a Musalmán.[2]

On gaining a footing at Surat the Dutch determined to make the settlement in that city their chief factory in Hindustán, and next to Batavia, the head-quarters of their commerce in the east. Under Surat were placed fifteen subordinate factories. Of these, five, Gombroon, Bussorah, Lar, Schiras, and Ispahan, were in Persia; one, Mocha, in Arabia; and nine in India, at Vingorla, Agra, Ahmedábád, Cambay, Broach, Baroda, and Sirkhej. These factories did not, however, long remain under the director of Surat. Persia was subordinate for eleven years only (1622-1633). Then the smaller settlements were administered from Gombroon, and Gombroon placed directly under Batavia. Mocha, after remaining under Surat for sixty-six years (1620-1686), was then made subordinate to Batavia. Of the Indian factories Broach alone remained under Surat. Vingorla was in 1677 handed over to the commander of Malabar. The other settlements were gradually withdrawn, from Cambay, Sirkhej, and Baroda, before 1670; from Agra in 1716; and from Ahmedábád in 1774.[3]

At Surat Dutch ships came from Batavia in the end of August or in October After unlading and taking in a fresh cargo, they were sent to Persia about January, returning to Batavia in March.[4] The imports at Surat were lead, quicksilver, cinnabar, ivory, tin, copper, cumeta, cloves, nutmeg, mace, pepper, and porcelain. During this time the position of the Dutch in Surat was as high, if not higher than the position of the English. Their lodge was as handsome as the English factory; and when he went abroad the director's retinue was as

[1] Milburn's Or. Com., II., 370 The chief events in the history of the Dutch company, not directly connected with Surat, were 1596, the original company trades to Sumatra and Java, 1602, the rival Dutch companies unite, 1602-1614, the Dutch fight with the Portuguese in the eastern islands; 1619, Batavia is made the Dutch head-quarters, 1623, the English are driven out of the Moluccas, 1658, the Dutch get possession of Ceylon.

[2] During little more than a century (1618-1729) the Dutch found it necessary to renew their charter no fewer than twenty-eight times, paying on each occasion considerable sums for the fresh grant of privileges. Their charter was confirmed in 1618, 1631, 1632, 1633, twice in 1634, in 1638, thrice in 1643, once in 1645, in 1650, in 1654, in 1657, four times in 1662, in 1664, in 1690, in 1709, six times in 1712, and once in 1729, when the plot of land on the river bank, between the outer and inner walls, still called the *Walanda Bandar*, or Dutch wharf, was granted to them to build and store merchandize. (Stavorinus' Voyages (1774), III., 101.) This and the changes introduced from time to time in the customs rates show how entirely the Delhi emperors felt themselves free to alter or cancel the charters granted by their predecessors.

[3] Stavorinus (1774), III., 110. The Dutch had also (1638) a factory at Ránder.—Mandelslo, 61.

[4] Baldæus (1660-1680), in Churchill, III., 514.

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large and gay as that of the English president. Unlike the English many of the Dutch factors were married.[1]

French in Surat, 1620-1658.

In 1620 Admiral Beaulieu, trading to Sumatra, sent an agent to the court of the Moghal to gain leave to establish a French house at Surat. He had found no market for his European goods at Sumatra, and seeing that the people of Achoen 'could as little do without their rice as want their Surat cloth,' he determined, if possible, to establish a French factory at Surat.[2] Beaulieu would seem to have succeeded in this attempt, as De la Valle, in 1623, mentions French merchants settled at Suwáli.[3] But the French house at Surat did not prosper, and a second attempt on a larger scale in 1642 also proved a failure.

Portuguese in Surat, 1611-1658.

In 1611 the Portuguese, taking advantage of their friendship with Mukarab Khán, governor of Surat, and of the influence their envoys the Jesuits had at the emperor's court, started a factory in Surat. No materials have been obtained to show the extent or character of the Portuguese trade at Surat.[4] But the factory would seem to have been maintained during the whole of this period. In 1629 mention is made of an assistant agent at Surat. In 1630 two Portuguese officers went to Surat to discuss with the Moghals, measures for driving away the other Europeans from Surat, Broach, and Cambay. In 1653 the head of the Portuguese house in Surat got leave to hoist one flag on the factory, and to carry another before him when he went out. At the same time his title would seem to have been changed from factor to director.[5]

Surat under Aurangzeb. 1658-1707.

In spite of the frequency of Marátha raids upon Surat, and the growing trade of its rival Bombay, Aurangzeb's reign (1658-1707), except the few years of disorder at its close, was a time of increasing wealth and importance at Surat. The silting of the head of the Gulf of Cambay, the disturbed state of the north of Gujarát, and the destruction of Diu by the Muscat Arabs in 1670, combined to centre Gujarát trade in Surat. At the same time its consequence as the 'Gate of Mecca' was increased by the strong religious feeling among Indian Musalmáns fostered by the emperor.[6] The points of

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[1] De la Valle and Herbert, quoted by Anderson, 45.

[2] Beaulieu's Voyage, in Harris' Travels, I, 243.

[3] De la Valle, I., 22. This was not the first attempt of the French to establish trading relations with Gujarát. As early as the year 1527, a French ship with 40 Frenchmen came to Diu. But on landing they were seized by order of king Bahádur (1526-1536) and put to death (Faria, in Kerr, VI., 231.) Some years later (1537) Francis I. tried to induce his subjects to start a trade with India, but without success.—Macpherson, 254.

[4] It appears from an order issued by the king of Portugal to the Portuguese viceroy, that in 1618 the captains of Portuguese ships traded privately from Surat to Japan and China.—Arch. Port. Orient. Fas., 6., 1145.

[5] Chronista de Tissuari, 75-76, and Tirocinio Litterario, No. 8 (1862).

[6] The pains taken to provide and protect the Mecca pilgrim ships, the lighter custom dues paid by Musalmán merchants, and (for a time) their complete exemption from all custom rates, the temporary banishment (1669) of Wánias and bankers from Surat on account of a religious dispute between Musalmáns and Hindus, are instances of the special favour shown at this time to the followers of Islám.

chief importance in the history of this time are: i, the connection of the Sidhis of Janjira with Surat; ii, the injuries caused to the city by Marátha raids; iii, the growing importance of its European trade.

Janjira Sidhis, 1660.

In 1660, in consequence of a quarrel with his former master the king of Bijápur, the chief of the Sidhis of Janjira, taking with him the Bijápur fleet, offered to become admiral to the emperor of Delhi. Aurangzeb accepted his services, and in return gave him a large stipend on the revenues of Surat.[1]

Marátha raids on Surat, 1664-1703.

In 1664 Shiwáji determined to make an attack on Surat. To conceal his design, he formed two camps, one at Chaul[2] and the other at Bassein. Taking four thousand horse from his camp at Bassein, and passing rapidly through the lands of Jawár and Dharampor, whose chiefs were friendly to him, Shiwáji suddenly appeared before Surat. The city had no protection but a mud wall, and, without offering any resistance, the governor, taking refuge in the castle, gave up the city to be pillaged The English and Dutch factories stood on the defensive, and together with their own property saved a considerable part of the town. Fearing the advance of troops from Ahmedabad, Shiwaji remained only three days in Surat. But before he left, he is said to have collected booty worth not less than one million sterling.[3] Soon after this exploit, and enraged at the treachery planned against him at Delhi, Shiwáji returned to Surat and levied a second contribution from its inhabitants [4] Encouraged by the success of his first attacks, Shiwáji returned in 1669 and again plundered the city. For several years a Marátha raid was almost a yearly occurrence at Surat. In 1670 (October 3rd) Shiwáji, and in 1671 (October 29th) Shiwaji's general, Moro Pandit, levied large contributions from the city Again, in 1674 and 1675, the Maráthas plundered the city, and in 1676, by the capture of the fort of Pámera, about forty-eight miles south of Surat, they for the first time established themselves permanently in southern Gujarát. But before this the outer wall, begun in 1664, was completed, and though in 1679, 1680, and 1684 the Maráthas were plundering round its walls, they seem to have failed to make their way into the city.[5] For about twelve years the city would seem to have

[1] The community of Sidhis, or Indian Musalmáns of Abyssinian descent, had their head-quarters at the island of Janjira, about forty-four miles south of Bombay. Several of them were in high military command under the king of Bijápur, and one of them, Sidhi Joreh by name, was admiral of the Bijápur fleet This chief, sailing in an expedition against Shiwaji, was suspected of treachery and put to death In revenge for his death, Joreh's successor, bringing with him the whole of the Bijápur fleet, offered his services to Aurangzeb (1660-1661) —Orme's Hist Frag, 10

[2] Chaul, now known as Revdanda, on the coast, twenty-four miles south of Bombay

[3] This is Orme's estimate. (Hist Frag, 13) Thevenot, who was in Surat two years after the sack, gives 30,000,000 *rupees*, or about £1,200,000 (Voyages, V., 87.) So well did Shiwáji show himself acquainted with the treasures of Surat, that he was believed, before attacking the city, to have himself visited Surat in disguise and found out its rich houses.

[4] Orme's Hist Frag., 10-15.

[5] In 1680 and 1684 so great was the alarm in Surat, that the European merchants sent their treasure on board of their ships, and the people of the town began to move to Suwáli. —Orme's Hist. Frag, 89 and 146.

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Marátha raids on Surat, 1864-1703.

been free from Marátha attacks till, in 1696, it was disturbed by the news that Rám Rája had advanced within fifty miles. The governor of Surat was on the alert. The town fortifications were strengthened, and the Maráthás, after remaining for some time near the city, were forced to retire.[1] In the last years of the emperor's reign the power of the Maráthás was on the increase. Towards the close of 1702 a Marátha army advanced within eighteen miles of Surat. In February 1703 they came still nearer the city, and in March burnt the suburbs and besieged the town, demanding one-fourth of the revenue as the price of their retreat. The Europeans retired to their factories and took up arms for their defence, endeavouring, at the same time, by every good office, to conciliate the Maráthás.[2] Towards the close of 1705 the Maráthás once more appeared before Surat, and in April 1706 for nine days invested the city. By throwing out entrenchments[3] beyond the walls, the progress of the besiegers, who were poorly supplied with cannon, was stayed, and the town preserved. But the blockade was continued for several weeks, and before the Maráthás finally retired (May 23rd) the prices of necessaries had risen from two to three hundred per cent.

Aspect of Surat, 1670-1707.

Surat in the latter part of the seventeenth century was a thickly peopled town, with a population estimated at 200,000 souls.[4] Compared with former times, its appearance was in many respects improved. The town walls were now of brick instead of mud. The city had been increased by the establishment of three new suburbs.[5] An *idga*, or Muhammadan place of prayer, had been built, and a garden laid out in one of the suburbs.[6] Of public buildings are noticed (1673-1681) the custom-house, 'with a good front,' and over against the custom-house the mint, with a 'stately entrance, in itself a large town of offices'.[7] Several mosques were built from time to time. But of these, only two, with long spires, were (1673-1681) objects of any special interest.[8] In the style of private buildings there was some improvement. There were (1673-1681) very many[9] lofty houses, some of them, a century after-

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[1] Bruce's Annals, III, 186.

[2] Bruce's Annals, III, 521.

[3] Bruce's Annals, III, 594, and Ham New Act (1690-1720), I, 164. These sconces were the beginning of the outer walls. But the work of building the walls was not actually begun for seven years later.

[4] Ham New Act, I, 164.

[5] These suburbs were I. Ghástipura, built by Gheyas-ud-din, governor, 1667. II. Salabatpura, built by Salabat Muhammad Khan, governor, 1687. III. Begampura, built by a sister of the emperor Aurangzeb, who lived in Surat between 1698 and 1707.

[6] The *idga* was built in 1687. The garden, known as the Begam's garden, was made by Aurangzeb's sister, the founder of Begampura.

[7] Fryer, 98.

[8] Fryer, 99. These two mosques would seem to have been close together near the city wall (now the inner wall), and not far from the governor's palace on the site of the present Kázi's hospital. The towers are said to have been thrown down in the great storm of 1782.—Munshi Abdul Hakim.

[9] The builders of these large houses were, as a rule, Muhammadan merchants, though a Pársi, broker to the king of Bantam, is said (1673-1681) to have 'turned the

wards, described as having gardens filled with the most beautiful flowers, subterraneous chambers contrived against the intense heats prevailing through part of the year, and saloons where fountains were playing in basins of marble'[1] On the other hand, the houses of the common people were still mean in appearance, 'the walls only of bamboos, placed a foot apart with reeds woven through them, and their covering palm leaves.'[2] The streets, though (1690) in many places 'of a convenient breadth,' were on the whole 'some too narrow,' unpaved, and in an evening, especially near the market-place, so thronged that it was not easy to pass No attempt would seem to have been made to keep the streets clean. They were (1690) in many places 'overspread with the excrement of men and beasts.'[3] Fryer (1673-1681) wonders that a city 'whose people make the streets opposite their dwellings a dung-hill should never have been visited by the plague' Within a year or two after Fryer left Surat the city was visited by the plague The first outbreak was in 1684, and for six years it raged without interruption But though during this time the city was never entirely free from the disease, at different seasons of the year the attacks varied in intensity. Lulling during the rainy months (June to September), the epidemic broke out with fresh fierceness in October, and again abating during the greater part of the cold and hot seasons raged with renewed fury towards the end of May The death-rate at times 'on a very modest calculation' amounted to three hundred a day. As late as 1689 no Englishman had been attacked [4]

The Plague, 1684-1690.

The form of administration remained unchanged. During this period sixteen officers held the post of civil governor of the city, giving on an average a term of about three years to each.[5] The

Administration of the city, 1658-1707.

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outside of his pockets on a sumptuous house, a spacious fabric, but ill contrived' (Fryer, 92) The Wánias (1690) continued to live in cells or sheds, partly from their love of frugality, partly through fear of the avarice of the Moghal (Ovington, 216.) As to the number of large houses there is some difference of opinion, as, according to Careri (1695), there were not more than twelve good houses belonging to French, English, Dutch, and Muhammadans —Churchill, IV, 188.

[1] Abbe Raynal (1780), II., 34

[2] Stone, bricks, and mortar were dear (1690); so wood, brought from Daman, was much used.—Ovington, 216

[3] Ovington, 316 Fryer, 113.

[4] Ovington, 347-348 This would seem to have been plague and not cholera Between 1684 and 1696 Persia as well as India was visited by the plague At Bussorah, in 1691, a pestilence raged so violently that more than 80,000 people died, and the rest fled. (Ham New Act, I, 84) In Western India, besides at Surat, several outbreaks of plague are about this time recorded At Goa, in 1684, Sultán Mosam's army was attacked and 500 men died a day (Orme's Hist Frag, 142), at Bombay, in 1690, a pestilential disorder reduced the garrison to thirty five English soldiers (Bruce's Annals III, 94); at Bassein, in 1695, its ravages had depopulated one-third of the town (Gemelli Careri, in Churchill, IV, 190), at Tátha in Sind, in 1696, 80,000 people died of the plague, and above one half of the city was desolate and left empty.—Ham. New Act, I., 123

[5] The following list gives the names and dates of the civil governors of Surat, clerks of the crown, or *mutsadi*, between 1658 and 1707 · Ináit Khán (1658-1664); Ráit Khán (1664), Muhammad Beg Khán (1666); Gheyás-ud-din Khán (1667), Zeinulabud din Khán (1669), Mukhtár Khán (1671), Moat Amird Khán (1673); Aitmel Khán

Chapter V. History. 1573-1733.

Administration of the city, 1658-1707.

governor had a body of troops 1,500 strong in his pay.[1] In civil matters the governor of the city was helped by the Musalmán judge, or *káji*, and by the public recorder, or *wákuavis*. For managing the customs there was a port officer, or *shábhandar*, who appeared at the custom-house at certain times to mark the goods as they were passed.[2] The charge of the town in criminal matters was entrusted to a police magistrate, or *kotwál*. This officer had a guard of soldiers, but had no capital powers. Three times during the night—at nine, twelve, and three o'clock—the *kotwál* went the rounds of the city. The police arrangements were effective, tumults seldom happened, and serious crimes were so rare that during the twenty years preceding 1690 no one had suffered a capital punishment.[3] Criminals were beaten by blows of a stick, and were sometimes punished in the street. To prevent crime in the country near Surat was the work of a separate officer called *faujdár*. He was allowed soldiers and servants under him to traverse the country, to look after the highways, to hunt out the robbers, and keep all suspected places quiet and safe for passengers.[4] Of the commandant of the castle, Ovington (1690) writes, "under the appearance of a high commander, he is a real prisoner, laid under a strict engagement never to pass beyond the walls of his castle." The term of the commandant's power seldom stretched beyond three years in all.[5]

Revenue, 1658-1707.

During this period, from time to time, changes took place in the rate of customs levied from the different classes of merchants. In 1664, in reward for their gallant defence against Shiwáji, Aurangzeb reduced the rate of custom dues charged to the English and Dutch from 3½ to 2 per cent.[6] With regard to the amount of revenue

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(1675); Kartaláb Khán (1677), Aitbar Khán (1680), Khalámat Khán (1683); Mirza Sheikh Alla (1685), Salabat Muhammad (1687), Nayábat Khán (1690); Dilawar Khan (1693), and Niyát Khan (1701-1707).

[1] Of these men (1673) some were armed with matchlocks, others with swords or javelins. There was a troop of 200 horse with quivers full of arrows at the bows of their saddles, lances at their right stirrup, and swords of an unwieldly bulk, bucklers hanging over their shoulders, and their bows curiously and strongly made with horn, and for that reason better in dry than in wet weather.—Fryer, 99.

[2] Fryer, 98.

[3] According to Ovington (1690) the cause of this freedom from crime was not so much the efficient police as the 'inoffensive conversation of the gentile Indians, who are very apt to receive, but seldom give an abuse.' "This," he adds, "keeps them at a distance from all heinous crimes, and for petty failures a drubbing is a sufficient atonement to public justice."—230.

[4] Ovington, 232.

[5] Ovington, 217.

[6] This concession would seem not to have been continued for any great length of time. In 1669 (Anderson, 156) natives (Hindus) paid five per cent and Christians four per cent. If this is correct, it may perhaps refer to Armenian Christians. That it did not apply to European Christians appears from a statement of Orme's (Hist., Frag., 96), that in 1680 Aurangzeb raised the import duty on European articles from two to three and a half per cent. Again, about the same time, Aurangzeb would seem to have allowed Musalmáns to trade free of dues, as Fryer (1673) says, "the revenues were somewhat fallen off of late through the Moghal too fondly, in a religious vanity, granting immunity to the Musalmáns" (98). Hamilton, writing in the beginning of the eighteenth century, says "Muhammadans pay two per cent., Christians three and a quarter per cent, and Hindus five per cent."—Ham. New Act., I., 164.

collected, it was estimated (1666) that the dues charged on goods imported by sea amounted to a yearly sum of £120,000 (Rs. 12,00,000).[1] If this estimate is correct, the resources of the city towards the close of this period must have considerably fallen off, as in the detailed financial statement given in the Mirat-i-Ahmadi, the revenue from the city and mint is entered at £37,500 (Rs. 3,75,000).[2] According to the same statement, details of which are given below, exclusive of the amount recovered from the city, the districts under Surat yielded a yearly revenue of £86,159 (Rs. 8,61,590).

Revenue, 1658-1705.

[1] Thevenot, V, 81

[2] It is difficult to say to what year the detailed financial statements in the Mirat i Ahmadi refer Apparently they are the current revenues (1748 1762) recovered when the author wrote But since, as early as 1720, the revenues of the districts round Surat were collected by the Marathas, these statements must have been taken from some earlier account The reasons for attributing them to the beginning of the eighteenth century, are i, that the total agrees tolerably closely with thirteen lakhs of rupees the total given by Hamilton in his New Account, I, 140, as the average Surat revenues for the fifteen years ending 1705 and ii, that after the close of Aurangzeb's reign, the Surat revenues rapidly fell off According to Hamilton, the total of thirteen lakhs was collected from three sources i customs at the rate of two per cent from Muhammadans, three and a quarter from Christians, and five from Hindus, ii, land tax of three fourths of the crop paid in kind, and iii, poll tax of about one crown a head - Ham New Act, I, 119 and 164

The financial details given in the Mirat i Ahmadi appear from the following tabular statement —

Statement of the Revenues of the Surat governorship about 1700 1710

Name of sub division	Yearly revenue in Dáms	£	Name of sub division	Yearly revenue in Dáms	£
			Brought over	3 06 11 648	76 534
1 City and mint	1 50 00 000	37 500	15 Anáwal	50 000	125
2 Chorásí	41 17 0	10 411	16 Umráli (Bulsar)	1 00 000	250
3 Ránder	2 0 0 0	502	17 Nándhár Bámáh (?)	1 44 000	1 800
4 Amroli	15 40 000	3850	18 Sisbhám	12 2 000	3 062
5 Bálsár	7 000	8 943	19 Kherdi (Kharod)	69 6 000	1 7 0
6 Chikhli	16 0 0 0	4 0 0	20 Sánh (Sujo)	16 4 000	4 100
7 Márasah (?)	6 0 0 0	1 5	21 Mhowáh (Mahuwa)	7 0 0 0	1 876
8 Bamroli and Momlah (Bardoli and Mota)	5 00 000	1 250	22 Bárdoli (Wárha)	8 36 12	2 091
9 Ghandevi (Gandevi)	2 0 0 0	5 0	23 Kosí ..	1 20 4 0	401
10 Hánosar (?)	1 80 000	450	24 Bárpál (?)	53 77 471	13 443
11 Málur (Walod)	3 94 803	987	25 Tárái (Idlári)	4 90 0 0	1 2 0
12 Ghadkah or Khadkah (?)	1 10 917	3 2	26 Kámoj	19 3 0 0	4 8 8
13 Sahrat (?)	1 60 000	400	27 Nanásri (Navsari)	6 0 1 20	1 5 8
14 Malwárah (Walwára)	1 98 88	4 6	28 Tálkeshwar (Talkeswar)	51 80 278	8 701
			Total	19 46 3 68	1 3 6 9
Carried over	3 06 11 648	76 534			

Note —40 dáms 1 rupi and 10 rupees £1

The territory known as the Surat *athvisi*, or governorship of twenty eight subdivisions, may be roughly described as the lands that lie between the Kim and the Damanganga rivers, and west of the Rajpipla, Bánsda and Dharampor states About one-half of this area is included in the existing district of Surat, the remainder forms part of the territory of His Highness the Gáekwar It is difficult to determine what twenty-eight sub divisions were originally included in the Surat governorship The map of the Surat *athavisi*, prepared in 1816, shows all lands south of the Kim, dividing the whole area into thirty administrative sub-divisions as follows .—

I —North of the Tápti River

British.		*Gáekwár*
1. Olpád		1. Wasrávi
2. Tadkeswár.	Modern Mándvi	2 Galla
3 Mándvi		

Among the native merchants of Surat there were during the seventeenth century men of very great wealth.[1] Of these (1673), some had their head-quarters at Surat; others, though only agents for trading houses in the interior, 'bore a port equal to the European companies.'[2] The rich Musalmán and Pársi merchants lived in great style. But the Hindus, however much money they might have, strove to conceal it, living frugally and keeping their dealings as secret as possible. This may partly have been done from fear of the exactions of the Musalmán officers. But it was probably to some extent their own choice, as at times they would seem to have openly made great display of wealth, loading their wives and children with ornaments, and spending large sums on the occasions of marriages and deaths in their families.[3] Of the skill of the Hindu merchants of Surat, Ovington (1690) says, "by the strength of his brain only he will sum up accounts with equal exactness and quicker despatch than the readiest arithmetician can with his pen."[4]

Merchants, 1658-1707.

Trade, 1658-1707.

This was the time of Surat's greatest commercial prosperity. It was (1695) 'the prime mart of India, all nations of the world trading there; no ship sailing in the Indian ocean, but what put into Surat to buy, sell, or load.'[5] The general course of its traffic was in most respects the same as in the previous period. At Surat itself some changes had taken place in the arrangements of the port On account of the opportunity it gave for smuggling, no vessels, except those belonging to Europeans, were allowed to lie at Suwáli, but were forced to remain off the bar, where the dues were paid.[6] Again, instead of bringing goods from the ships to Surat by land in carts, towards the close of the century (1690) the ordinary practice would seem to have been to unload the cargoes of great ships into boys,

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II.—Between the Ta'pti and the Damanganga Rivers

British				*Gaekwár*	
4. Chorásu.		11	Chikhli	3 Kámrej	10. Mahuwa
5 Karod	} Modern	12	Balsár } Modern	4 Timba	11 Wisanpur.
6. Sarbhon.	} Bárdoli	13	Párnera } Balsár	5 Balesar	12 Gandevi
7 Wálod.		14	Bhutsar } Modern	6 Wihára	13 Walwára.
8 Buhárí	}	15	Bagwára } Párdi	7 Songurh	14 Wewal
9 Párchol	} Modern			8 Maroli	15 Antápor.
10 Supa.	} Jalálpor			9 Telári	16 Anáwal.

[1] In 1664 two families in Surat are said to have been the richest merchants in the world (Orme's Hist Frag, 13) One Hindu merchant (1666) was calculated to be worth at least eight millions (Thev, V, 46) This is probably *livres*, and so would represent about £333,333 (see Abbe Raynal, II, 29), and in the shop of another Hindu, Shiwáji (in 1664) is said to have found twenty-two pounds weight of strung pearls. (Thev, V, 86) The English brokers are said (1690) to have been worth from £150,000 to £300,000 (15 to 30 lakhs of rupees) (Ovington, 319) Towards the close of the 17th century, Mulla Abdul Jáfar had begun to trade This merchant is said to have had nineteen ships laden with stock of his own, each of them worth from £10,000 to £25,000. (Ham New Act, I, 148) In 1695 some of the merchants are said to have been rich enough to load any great ship out of one of their warehouses.—Careri, in Churchill, IV., 189.

[2] Fryer, 115.

[3] Ovington, 317-319.

[4] Ovington, 279

[5] Gemelli Careri, in Churchill, IV, 188. Ovington also (1689) calls it the most famed emporium of the Indian empire.—218.

[6] Thevenot, V., 78.

yachts, and country boats, which at that time were said to pass up the Tápti with 'great convenience and expedition.'[1] In Surat (1690) the foreign merchants laid out their bales in the castle green, and prepared them as loadings for their ships. Near the market-place, especially of an evening, the local dealers thronged, standing in the streets with silks and stuffs in their hands or on their heads.[2] Thevenot (1666) thus sums up the articles of trade in the Surat markets:—All kinds of Indian cotton goods, all the wares of Europe and of China; diamonds, rubies, pearls, and all other kinds of precious stones; musc, amber, myrrh, incense, manna, sal ammoniac, quicksilver, lac, indigo, and the red dye rumas, and all kinds of Indian and other eastern drugs[3]

Trade, 1658-1707.

As in earlier times, the chief articles of export (1690) were agates, carnelians, desks, cabinets, and boxes neatly polished and embellished, silks, velvets, taffetas, satins,[4] and cotton cloth. Next to the manufacture of cloth, one of the most important industries of Surat at this time, would seem to have been ship-building. In (1688) mention is made of 'a very comely stout ship of over one thousand tons being built in the river at Surat; and the ship-carpenters are said to be able to take the model of any English ship in all the curiosity of its building as exactly as if they had been the first contrivers.'[5] As to the ordinary profits of trade, Ovington tells that (1690) in the trade between Surat and China profits of one hundred per cent were to be made, and that by simply sending out silver and bringing back gold a profit of twenty-five per cent might be cleared. With regard to the rates of interest, money could be borrowed by Englishmen of credit and esteem on private security at twenty-five per cent, this rate including all risk of loss at sea.[6]

Of European settlers the four most important were the English, Dutch, French, and Portuguese. The history of the English company at Surat during the reign of Aurangzeb contains two sections, —the first of twenty-seven years, from 1657 to 1684, when Surat

English in Surat, 1657-1684.

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[1] Ovington, 218 Some account of the state of the river is given under the head Tápti, pp 12-14 In 1666 there is said to have been so little water on the bar that, except at spring-tides, ships even unladen could not pass up the river At spring-tides they came opposite Surat, especially when they wanted repairs (Thevenot, V., 78) Again (1673) the Tápti is said at spring-tides to bear ships of one thousand tons burden up to Surat walls. But because of the sands, the ships had first to unlade —Fryer (1673-1681), 106.

[2] Ovington, 216-217

[3] Thevenot, V., 53 Tavernier (1642-1666) gives the same account of Surat trade (Harris' Voyages, II, 350.) On the subject of the import of money, Fryer (1673) says, "though treasure is not the growth of this country, yet the innate thrift of the gentiles, the small occasion of foreign expenses, and the humour of laying up their talent in a napkin, buries the greatest part of the treasure of the world in India."—Fryer, 112.

[4] Ovington, 218 Indigo is said to have been more in demand than ever. Raw cotton was now exported in some quantity, and as early as 1684 attention was turned to the pressing of it into bales.—Anderson, 76.

[5] Ovington, 200 and 280. In one passage Muscat Arabs, and in another Pársis, are mentioned as ship-builders.

[6] Ovington, 389-391.

Chapter V. History. 1573-1733.

English in Surat, 1657-1684.

was still the chief English settlement in India; and the second, c- twenty-three years, when, partly owing to the growing value of Bombay, and partly because of the disorders at Surat, the importance of their establishment in that city declined. In 1657 the English company at Surat, fearing an increased competition from private merchants, made all possible retrenchments. The grant of the charter of 1657 restored confidence, and Surat again became the head of all English factories, including Madras and Bantam [1] But at the same time, on account of the disturbances caused by the sons of Sháh Jahán, trade at Surat was unfavourable [2] In 1661, by the grant of a fresh charter, the affairs of the company were placed on a firm footing. But trade was not prosperous, and, with the exception of Agra and Ahmedábád and of Gombroon in Persia, it was thought well to confine the company's trade to the Malabar coast, Madras, Surat, and Bantam [3] In reward for the brave defence of their factory against Shiwáji (1664), the emperor granted the English for one year entire remission of customs, a boon worth £2,500 (Rs 25,000), and afterwards an abatement of one per cent in the rate levied.[4] On the other hand, there was at this time (1665-1667) war between the Dutch and the English; and the Dutch, sending strong fleets to Western India, blockaded the mouth of the Tápti, and, gaining a hold on the Malabar coast, they had for a time a monopoly of the pepper trade in addition to the command of the produce of the finer spices [5] Tidings of the formation of a new French company added to the embarrassment of the English. In 1666, the war with the Dutch and French, the Moghal's suspicions of English designs since their acquisition of Bombay, and the disturbances between Shiwáji and Aurangzeb, made trade 'precarious, if not hopeless' [6] But two years later (1668), by the transfer of the island of Bombay from the English crown to the English company, the company gained the position of independence they so much wished.[7] From England instructions came that, on the strength of the increase of their power, the company were determined to 'compete with

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[1] Bruce's Annals, I, 532.

[2] Bruce's Annals, I, 541

[3] Bruce's Annals, II, 108 In 1662 (March 19th) Sir George Oxenden was made president and chief director of affairs at Surat and all other factories in the north parts of India from Ceylon to the Red Sea (Bruce's Annals, II, 107) In 1662 the English troops that had been prevented by the Portuguese from taking possession of Bombay landed at Suwáli Their arrival caused so much alarm at Surat that the governor, threatening to destroy the English factory, forced them to re-embark.—Orme's Hist. Frag, 23.

[4] Bruce's Annals, II, 145 The charter reducing the custom rates from three to two per cent would seem not to have been received till 1667 —Bruce's Annals, II, 217.

[5] Bruce's Annals, II, 163 Before war was declared Sir G. Oxenden (1665) wrote: "Unless a sufficient naval force is despatched from England to counterbalance the Dutch, it will be impracticable for the presidency at Surat to proceed with the trade of that port"—Bruce's Annals, II, 158.

[6] Bruce's Annals, II., 174.

[7] The chief events in the history of Bombay before this transfer were Bombay received as part of Queen Katherine's dower (1661) Portuguese refused to give it up (1662) Governed by an officer under the English crown (1662-1668). Not paying, is handed over to the company (1668).

the Dutch and resist them as far as their means would allow' The interest in Bantam was strengthened, and subordinate factories were re-established at Kárwár, Rájápur, Batticolo, Calicut, and Acheen.[1]

English in Surat, 1657-1684.

In the following year (1669) a council of eight members, five of whom were to be constantly resident at Surat, was chosen to assist the president. The president was to be governor of Bombay, but was to stay at Surat. The management of the company's affairs in England was vigorous, more goods were sent out, instructions were received to keep open the Persian trade at all costs, and, by the establishment of the factory at Kárwár, the share of the English in the pepper trade was recovered[2] In 1670, seeing how exposed Surat was to the raids of the Maráthás, the English merchants sent the most valuable part of their property to Suwáli[3] More than once their factory was attacked, but on each occasion it was well and successfully defended In the next year, besides Marátha attacks, the company's servants had to contend against the hostility of the governor and the rivalry of the French, who, by their careless trading, seriously lowered the value of European goods and raised that of native products[4] About this time (1673-1675), in addition to the reduction in the margin of profit, the Surat trade in several particulars became less advantageous; the calicoes of the Coromandel coast were preferred to the piece-goods of Surat; West Indian competition was reducing the demand for indigo; and less lac was required, as wafers were taking the place of sealing wax.[5]

Under these circumstances, in spite of a better year in 1677, Surat was (1678) reduced to an agency, and the pay of the company's servants lowered[6] In 1681 Surat was, however, again raised to the rank of a presidency, and an attempt was made to revive the old route to Surat by way of Socotra, the Red Sea, and the Persian Gulf. But, owing to the competition of the Armenians, this attempt failed. Meanwhile the profits of the company were in 1680 reduced by an order of the emperor, raising import duties from two to three and a half per cent, an order which in 1682 was extended to the import

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[1] Bruce's Annals, II, 201-202.

[2] Bruce's Annals, II, 252-254 The following details show the extent of the company's trade at Surat at this period (1668-1673) In 1668 six ships came from England with goods and bullion to the value of £130,000, in 1669, 1,200 tons of shipping and stock valued at £75,000, in 1670, 1,500 tons of shipping, in 1672, four ships with cargo valued at £85,000, and in 1673 stock and bullion to the value of £100,000 (Anderson, 150) The following details show the state of the company's trade at Surat in 1670 · Dead stock, £18,151 (Rs 1,81,510), desperate debts £8,650 (Rs 86,500), good debts, £9,926 (Rs 99,260), investment for providing goods, £26,231 (Rs 2,62,310); goods embaled ready for England £61,108 (Rs 6,11,080), goods for sale, £13,004 (Rs 1,30,040). Total £136,473 (Rs 13,64,730) —Bruce's Annals, II, 287.

[3] Bruce's Annals, II, 286.

[4] So far did this depression in trade go, that in 1675 in Surat European goods had fallen below cost price, and money could not be borrowed, while in England the coarser Surat cloth was unsaleable —Bruce's Annals, II, 376 and 383.

[5] Bruce's Annals, II, 357.

[6] Bruce's Annals, II, 421. Profits would seem to have greatly decreased, as in 1618 an order was passed that money was not to be taken up in India at more than six per cent. interest —Bruce's Annals, II., 461.

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of bullion.[1] In 1683 (November 3rd) the number of the company's servants at Surat was increased by the arrival of the factors who in the previous year had been driven out of Bantam by the Dutch.

English in Surat, 1657-1684.

At the time of the revival of the English interest in 1668, some changes were made in the character of the English trade with Surat. The factory in Bengal now competed more than formerly with Western India, and orders were issued to ship saltpetre by way of Bengal instead of by Surat.[2] This would seem to have been one of the causes that led to the increased export of cloth from Surat to England, a change which raised up a new set of enemies to the company. In 1674, 1680, and 1697, the weavers of silk and cotton cloth in England objected so fiercely to this importation of foreign cloth, that in 1701 an Act was passed ordering that no silk or cotton cloth made in India was to be worn in England.[3] Though in 1660 the company retired from the country or coasting trade in India, leaving it in the hands of its own servants, it continued for some time (1673) to be the custom for the ships from Europe, after they had unladen their cargoes[4] at Surat, 'to go down the coast and, calling at Rájápur for fine cloth, at Kárwár for coarse cloth and the weightiest pepper, and at Calicut for spice, ambergriz, granates, opium, and saltpetre, to come back to Surat before the caravans from up-country had arrived there with their wares.'[5]

English in Surat, 1684-1707.

In 1684 orders were received to transfer the chief seat of the company's trade from Surat to Bombay. But at first, on account of the mutiny of troops at Bombay,[6] and afterwards because of the war between the English and the Moghal emperor, the actual transfer did not take place till 1687. In 1685 instructions were received from England that the company meant to establish themselves in a position of independence in Bengal by capturing Chittagong, and in Bombay by 'recovering Salsette and the other dependencies of Bombay originally ceded by the treaties between Charles II. and the crown of Portugal.'[7] Bombay was (1687) to be fortified in the strongest manner, and to become the capital of the company's Indian possessions and the residence of the governor-general. The ships from Europe were to clear out of Bombay and not from Surat, and the trade with Surat, still the residence of an agent and factory, was

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[1] Orme's Hist Frag., 96.

[2] Bruce's Annals, II., 201 The first English settlement in Bengal was made in 1636 in consequence of the privileges granted to Surgeon Boughton.

[3] Milburn's Or. Com., I., XL.

[4] These cargoes were (1669) chiefly green and red broad-cloth, large proportion of copper, tin, lead, and alum, small quantities of vermilion, quicksilver, and good ivory.—Bruce's Annals, II., 265.

[5] Fryer, 86

[6] The mutiny at Bombay broke out 27th December 1683, and ended 19th November 1684.—Bruce's Annals, II., 541

[7] Bruce's Annals, II., 558-561. By the home orders of 1685, Sir John Child had been made a baronet, and appointed captain-general and admiral of all the company's forces by sea and land in northern India.—Bruce's Annals, II., 552.

English in Surat, 1684-1707.

to be carried on through Bombay coasting vessels, taking English goods to Surat and bringing back the Gujarát exports.[1] Sir John Child did not leave Surat for Bombay till 1687 (April 25th). Some of the factors remained behind in Surat, and, on news of the capture of Musalmán vessels by Child's orders, were seized and imprisoned by the governor of Surat. Sir John Child now drew up a statement of the grievances he complained of at Surat,[2] and to enforce his demands for redress, in 1688 (October 9th) appeared at the mouth of the Tápti with an English fleet. This measure failed. The governor would not give up his prisoners, and Child was forced to retire. Child, on his way back to Bombay, seized some ships belonging to the Sidhi, and, refusing to give them up, the Sidhi landed in Bombay. Aurangzeb was at this time free to help the Sidhi, and the English were forced to beg for peace (1689, December 10th). Their prayer was granted, and though treated with much dishonour, and compelled to pay a fine of £15,000, the English in Surat were set free and allowed to resume their work of trading (1690, April 4th).[3] So much did the reputation of the English suffer by this war that, as the Surat council wrote to the directors, "without a large supply of shipping, stock and servants, we can never regain the trade or benefits of former grants."[4] After the close of Child's war (1690) the English interest in Surat declined. In spite of their reverses the company was determined to continue their efforts to establish themselves as an independent power at Bombay. "The Moghal," they wrote, "should see that the English company were no longer dependent on him for help and countenance in Surat. There were other markets where his power did not reach. Ships loaded at Calicut and Kárwár should sail from Bombay to Europe, and let the Surat traders see that goods were to be found in other parts of India besides Gujarát." This show of independence on the part of the company's managers would seem to have yielded good results. The emperor treated the English with more favour, granted a licence for the Bengal trade, and agreed to pay a sum of £8,000 as compensation for the goods plundered from the English factory in Surat.[5] After their re-establishment at Surat, affairs did not go well with the company. The war with France, the competition of private traders, and the vengeance taken by the governor of Surat on account of the excesses of European pirates, served to injure and depress the English trade.[6]

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[1] Bruce's Annals, II., 611-612.

[2] The chief grounds of complaint were that the English were now charged 3½ per cent instead of 2 per cent as formerly, that the governor gave them no help in recovering their debts, and that their garden and wharf had been taken from them.—Ham. New Act, I, 203-215.

[3] During the whole of this time, the agent, Mr Harris, and the other servants of the company in Surat, remained 'imprisoned in irons'—Bruce's Annals, II, 639.

[4] Bruce's Annals, II, 642. Sir J Child did not survive the defeat of his plans. He died 1690, February 4th

[5] Bruce's Annals, III., 96.

[6] In 1695 five of their ships were seized by the French (Bruce's Annals, III, 180); in 1693 trade was suspended at Surat on account of piracies (Bruce's Annals, III, 146); in 1695 the factors were imprisoned, and kept in confinement till 1696 (June 17th)—(Bruce's Annals, III, 189).

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1573 1733.

English in Surat, 1684-1704.

New English Company, 1698.

In 1698 the company's affairs suffered still more severely by the formation of a new English company In 1700 the representatives of the new company, with Sir Nicholas Waite as their chief, arrived in Surat. There was much ill-feeling between the servants of the old, or London, and the new, or English, companies. So far was this carried that Sir John Gayer (1700), the head of the old company, recommended that their factory should be withdrawn from Surat. The importance of the new company was for a time increased by the arrival of the ambassador, Sir William Norris. The chief object of this mission was to free the new company from any share in the responsibility for protecting the Surat trade against European pirates with which the London company was burdened But this embassy proved a failure, and was very costly.[1] Another device of the president of the new, or English, company for lessening the power of his rival in Surat was more successful. By suggesting that the members of the old company were connected with the excesses committed by the English pirates, by warnings that now at any time the old company might desert Surat leaving their debts unpaid, and by bribery, Sir Nicholas Waite procured an order from the Delhi court directing that Sir John Gayer and the other members of the London company should be seized. A force was accordingly sent by the Surat governor to Suwali, and (1701, February) seizing Sir John Gayer, his wife, and several factors, brought them to Surat, and for a time confined them in the governor's house After a fortnight the prisoners were transferred to their own factory. At first there were no fewer than one hundred and seven persons in confinement But by the end of two years (1703, January) their number was reduced to twenty-two[2] During this time, though rationed as prisoners, and unable to leave the factory walls, the company's servants would seem to have been allowed to trade[3] In 1703, in consequence of more piracies by English captains, the governor attempted to lay hold of the factors. But they defended the factory for twelve days, and the governor's rage somewhat abating, they were allowed to remain in their former state of modified confinement. In England, in 1702 (July 22nd), the interests of the rival companies had been united by the grant of a charter of union. But at Surat the rivalry was too keen to allow of the members of the different factories at once beginning to work comfortably together In 1704, at Surat, orders were received appointing Sir John Gayer general in Bombay, and Sir Nicholas Waite president at Surat At the same time these orders contained the provision that, should Gayer not be released within three months, Waite was authorized to act in Gayer's place as general. Taking advantage of this provision, Waite left Surat

[1] The charges are said to have amounted to £80,000 Norris, fretted with the delays and worries of his mission, left India broken in health, and died of dysentery on his voyage to England, October 10th, 1702

[2] The details were 1 general, 1 president, 3 members of council, 1 chaplain, 9 factors, 6 writers, and 1 surgeon = 22

[3] Hamilton (1690-1720) writes "it was generally believed that it was only a piece of policy on Gayer's part of going to Surat in order to employ his money in private trade" (New Act, I, 239) But this seems inconsistent with the other accounts of these events.—Anderson, 367, and Bruce's Annals, III., 404-666.

for Bombay, and acted there as general till 1707, when he was dismissed the service.[1] Before leaving Surat in 1704, Waite is said, instead of making any effort to obtain Gayer's release, to have done what he could do, by bribery and misrepresentation, to strengthen the governor in his determination not to set Gayer free So successful was the course adopted by Waite, that the factors of the London company remained in confinement till, in 1707, by the vigorous steps taken by the Dutch, their own demands were conceded, and at the same time the English factors were set at liberty.[2]

English in Surat, 1684-1704.

The chief articles brought by the English to Surat at the close of this period were lead in pigs, barrels of tar, sword-blades and pen-knives, spectacles, looking-glasses, swinging-glasses, hubble-bubbles, and rose-water bottles. Among articles valued as presents are mentioned long guns, brass guns, large glass cisterns, and flowered cloth, green, scarlet, and white.[3]

English imports.

As organized in 1669 and 1675 the factory at Surat consisted of the president[4] and a resident council of four, and under them a subordinate body, generally about twenty-eight strong, divided into the three grades, of merchants, factors, and writers. After the president, who, with a salary of £500 a year, issued all orders and disposed of all preferments, there came his four resident councillors. Of these, the first in rank was the accountant, on £72 a year, who acted as treasurer and prepared the accounts for audit; the second was the store-keeper, on £10 a year, who registered the sales of European and the purchases of country goods, the third, the purser marine, also on £10 a year, who gave an account of all exports and imports, provided stores, and discharged other duties connected with the shipping; and the fourth, the secretary, on £10 a year, who modelled all consultations, recorded all transactions, and affixed the company's seal to all passes and commissions.

The English factory.

Of the three grades into which the body of the company's servants were divided, that of merchants was the highest. These,

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[1] Bruce's Annals, III, 636

[2] Bruce's Annals, III, 619 No direct mention of Gayer's release has been traced. Anderson notices (378) that, from a reference to him in the letters from England in 1708, Gayer was still in confinement But it is possible that he had before this been set at liberty, though the news of his release had not reached England when the directors' letter was written It seems strange that in 1708, when Waite's services were discontinued, Aislabie, and not Gayer, should have succeeded him as general Probably it was due to the 'New' element in the United Company that Gayer was so hardly used.

[3] Surat Diaries for 1700.

[4] *List of presidents of the seventeenth century*

Aldworth	1613-1615	Revengton	1659-
Kerridge	1615-1623	Andrews	
Thomas Rastell	1623-1626	Sir George Oxenden	1662-1669
Wyld	1626-	Gerald Angier	1669-1677
Methwold	-1638	Rolt	1677-1682
William Tremlen	1638-1644	Sir John Child	1682 1690
Francis Breton	1644-1649	Bartholomew Harris	1690-1694
Captain Jeremy Blackman	1650-1655	Daniel Annesley	1694-1700
Nathaniel Wyche	1658-	Stephen Colt	1701-

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who were men of more than eleven years' standing, received £40 a year. From their number any vacancies in the council at Surat, or among the chiefs of the branch factories, were filled up. The second was the grade of factors, men of from six to eleven years' service, paid at the rate of £20 a year. This grade was divided into two classes, senior factors of from eleven to eight, and junior factors of from eight to five years' service. The third was the grade of writers, men of less than five years' service, with salaries of £10 a year. A fourth grade, called apprentices, youths who worked without pay in the hope of preferment, is provided for in the orders of 1675; but this grade, if it ever had any actual existence, would seem soon to have been given up.[1] Besides the mercantile establishment, other Englishmen were employed in connection with the factory. Of these the highest in position, holding the rank of third in the factory, was the minister or chaplain, who, with a salary of £100 a year, was expected to read prayers twice every day of the week, preaching once, in addition, on Sundays, to catechise the youth, and to visit the subordinate factories on the Malabar coast. Next there was the surgeon, like the merchants, on £40 a year, who apparently was helped by an Indian doctor of physic.[2] There was also generally an European cook and about seventeen other Englishmen in subordinate positions, some of them attached to the Suwáli marine, the rest forming the president's guard.[3] Besides these resident members of the Surat factory, one or two of the chiefs of subordinate factories were generally elected members of the Surat council.[4]

Of natives attached to the factory there was the 'master' to teach the young men to write and read the native languages. But a good knowledge of native languages few of the company's servants were said to attempt and fewer to gain.[5] There was also an Indian doctor of physic to help the English surgeon, and an Indian cook. Besides, there was a body of forty Indian messengers, porters, and domestics, of whom all the English members, according to their position, had some to wait on them in their chamber

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[1] Bruce's Annals, II., 375. Compare Fryer (1673-1681), 84, and Anderson, 191.

[2] Ovington (1690), 402.

[3] Fryer, 85.

[4] Fryer, 85 The new or English company started, 1700, in Surat with an establishment of, including the president, forty Europeans Of these, twenty-six, employed on mercantile business, were engaged at the following rates of pay The president on £500, with a second £500 as table money, a member of council on £100 a year, five chief factors on £60 a year; other five factors on £40 a year, and fourteen writers on £20. Besides these, there were fourteen others a chaplain on £100; a surgeon on £30, and a Goanese cook on £20, ten soldiers and a trumpeter, who received £4 each and a suit of clothes. The factory was not always, however, kept up at this strength. During the first three years of its establishment in Surat eight persons had died and seven been dismissed, and though their places were to some extent supplied, the strength of the factory was in 1704 (February 21st) reduced to twenty, of whom fifteen belonged to the strictly mercantile establishment. At that time the monthly expenses of the factory, including steward's disbursements, peons' wages, stationery, and other small charges, varied from £150 to £200 (Rs. 1,500 to Rs. 2,000).—Anderson, 366.

[5] Fryer, 85.

and follow them out.[1] In matters of business the details of the carrying out of almost all orders were left in the hands of the native merchants, from whom the company's brokers were chosen.[2] The collection of piece-goods for export required a somewhat elaborate arrangement. To ensure a steady supply of these goods, money had to be advanced to the weavers. This was one of the parts of the business entrusted to the native brokers. These men went into the districts, employing clerks, or *gumástás*, on a monthly salary to see that the weavers acted up to their agreements. Sometimes, it is said, between the agents and the weavers were another class of small brokers called *dalláls*.[3]

Though their salaries were so small, the English servants of the company lived comfortably in Surat, and in many cases returned to England with large fortunes Of perquisites, in addition to their pay, the young men received from the brokers at every *diváli* festival (September to October) presents of jewels and cloth, 'enough to serve them for great part of the year.' The chaplain had his private gifts from merchants and masters of ships, and his 'noble large gratuities for officiating at marriages, baptisms, and burials.'[4] The surgeon gained considerably by his 'outward practice and traffic.' Those of the members of the factory who were in a position to engage in trade had other opportunities for making a fortune. Though the privilege of private trade was withdrawn in 1657, the country trade between ports east of the Cape of Good Hope was, in 1661, handed over to the company's servants. Such was the profit in this trade, that even those of the merchants who had no capital of their own could afford to borrow from native money-lenders, paying them at the rate of twenty-five per cent. Another source of profit during part of this time was the trade in diamonds, which, though taken away from their servants in 1680, was again restored by the company in 1698. The new company (1698) allowed their servants both the privilege of private trade and the right to trade in diamonds.[5]

To illustrate the mode of life of the English in Surat during the latter part of the seventeenth century, the following details are available: The house which accommodated the whole of the company's establish-

[1] Fryer, 85.

[2] Fryer, 85.

[3] Fryer (1673-1681) says "the factors oversee the weavers buying up the cotton-yarn to employ them all the rains, or else the chief broker employs Banians in their stead, and is responsible for their fidelity."—86.

[4] Ovington. Chaplains are said to have frequently remitted at least the whole of their salaries to England. (Anderson, 271) Perhaps, like the Dutch ministers of the 18th century, the English chaplains knew 'to avail of their visits to stations on the Kanara coast for the advantage of their pockets by taking with them as much merchandize for sale as they can find room for in the ships by which they take their passage.'—Stavorinus (1774), I., 307.

[5] A third source of gain would seem to have been a commission on transactions carried out on behalf of traders in England. Thus Fryer (1673) says, "none of the Surat council if known in England but makes considerably by his place after the rate of five per cent commission." "This," he adds, "is the Jacob's ladder by which they ascend."—85.

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ment had, through the liberality of the emperor Aurangzeb, who was their landlord, gradually been beautified and enlarged till, besides several 'decent apartments'[1] for the president, it could lodge forty persons, and 'had the convenience of several cellars and warehouses, of a cistern of water and of a bath.' Built of stone and excellent timber, with good carving, 'without representations,' their house was contrived after the fashion of the Moors buildings, with upper and lower galleries, or terrace-walks, a neat oratory, and a convenient open place for meals. Within the factory was a chapel 'decently embellished,' but, to please the Moors, without the figure of any living creature in it. In this chapel, about six in the morning, the whole company came together to hear prayers read by the chaplain. They then dispersed, some to the morning meal, others to the 'groves and gardens' near the water side, and a few of the young writers to the teacher provided for their use by the company. At ten business began, and went on till noon Then dinner was served, all sitting down, after the English manner, in a public place, according to their seniority in the service. The table, spread at the company's expense, was adorned with drinking cups, dishes, and plates of pure silver, 'massy and substantial.' The dishes were filled with the choicest meat Surat or the country round could afford, prepared, to please 'the curiosity of every palate,' by an English, a Portuguese, and an Indian cook With equal freedom generous Persian wine and arrack punch were served round the table. This was the everyday fare. But on Sundays and public festivals the table was 'still further embellished' by game, fruit, European wines, and English beer. In the afternoon, about four o'clock, business was resumed, and was carried on till dark Then, after prayers, at eight, a public supper and some 'innocent easy recreation,' all retired to their rooms, no one being allowed, without liberty of the president, 'to be abroad or leave the factory.'[2]

At times, from October to March, the summer season as it was then generally called, ships came and went from the Suwáli roads near the mouth of the Tápti, and then during the hours of business, from ten to noon, and again from four till dark, below stairs among the packers and warehouse-keepers, it was 'a mere Billingsgate,' and all over the factory a 'continued hurly-burly' Winter, or the rainy season, from June to October, was, to many of the factory, a less busy

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[1] Fryer (1673) calls them 'noble rooms for council and entertainment'—84.

[2] Ovington, 391-401; Fryer, 83 The life of the English factors in Surat was not, however, always either so well regulated or so comfortable as Fryer (1673) and Ovington (1690) describe it There are on record complaints of gambling (1686) and of drunkenness (1700) At one time (apparently about 1660) so displeased were the home authorities with their servants' conduct in Surat that they issued orders that any one addicted to drunkenness, profane swearing, or uncleanness, was first to be admonished, then justly punished, and, should the punishment prove insufficient, was to be sent to England by the next ship (Ovington, 406.) Nor was the style of living always one of profuse comfort Towards the close of the century, instead of the variety of dishes described by Ovington, only one joint of meat was placed before the company's servants. The younger members, finding no comfort in the factory, took to frequenting taverns and public houses. So great was the scandal that, in 1699, Sir John Gayer had to order the president (Mr, Colt) to provide proper suppers.—Anderson, 350.

time. Then their chief duty was to lay in a stock of cotton-yarn and keep the weavers at their work, so that the supply of cloth might be ready against the season of ships.[1] Even in the busy season, however, the members had their times of rest and holiday. Sent down to the roads at Suwáli to meet the ships from Europe, a few days would often be passed pleasantly, hearing the news from England, enjoying the hospitality of the ships' captains, and finding some shooting in the country near Suwáli.[2] In Surat 'on solemn days,' after the mid-day banquet was over, the president generally invited the whole factory abroad 'to some pleasant garden[3] near the city,' where they sat 'shaded from the beams of the sun, and refreshed by the neighbourhood of ponds and water-works.' Here they listened to music, shot at marks, and enjoyed the society of the ladies of the factory.[4] Besides the factory establishment of cooks, butlers, and menials, of whom 'every one, according to his quality, had some to wait on him in his chamber and follow him out,' the chaplain and members of council were supplied with four or five men to attend on their coach; when the president moved, 'besides a noise of trumpets, there was a guard of English soldiers consisting of a double file led by a serjeant, a body of forty moormen, and a flagman carrying St. George's colours, swallow-tailed, in silk fastened to a silver partizan.' On 'solemn days,' when they went in state to their garden parties, the English 'Lodge' passed through the heart of the city with still more show. On these occasions before the president were carried two large English ensigns; then curious Persian or Arabian horses of state 'rich in their trappings;' then the captain of the peons himself on horseback, leading a band of forty or fifty attendants on foot; then the council in large coaches drawn

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[1] Ovington, 393.

[2] Sometimes the president himself came down to meet the English ships When the captains (1638) learned the president was coming, they went ashore and paid their respects to him on the beach The president made a short speech, calling on the captains to do their duty by the company when in India Then he went on board one of the ships, when a salute of twelve guns was fired. The next two days were spent in the entertainments given by the captains to the president.—Mandelslo, 63

[3] There was (1673) 'good store of gardens' in Surat, the Queen's, the 'biggest of all, though some private gardens were neater' (Fryer, 104) The English garden near the Burhánpur gate (1626) had pretty walks, adorned with a variety of sweet flowers (Herbert's Travels, 44) Here the company had thirty-four shops, stables for horses, a summer-house, and several other convenient places, all firm buildings, worth Rs 25,000. When the city wall was built (1664-1670), these buildings were broken down, and the garden spoiled. (Ham New Act, I, 208) There was also (1673) a sweet garden belonging to the Dutch, 'with arbours and beds after the European mode'—Fryer, 115.

[4] When they first settled at Surat some of the English merchants were married. But Sir T. Roe (1616) disapproved of the practice, telling Steele that his wife would 'cause many inconveniences, and that he must live frugally and like a merchant, and therefore send his wife home' "I likewise," he adds, "endeavoured to deal in the same way about Captain Towerson's wife." (In Kerr, IX, 356) De la Valle (1623), who had his wife with him, could not go to the English factory because there was no lady among them (Trav, I., 25) For many years after there would seem to have been no English ladies in Surat Mandelslo (1638) supped with the English president, and three merchants met together to drink to the health of their wives in England (Trav., 45.) Then the only European ladies in Surat were the wives of the Dutch factors. Afterwards president Angier (1669-1677) suggested that the company's servants should be encouraged to marry, and so, when Fryer (1673) and Ovington (1690) were in Surat, several of the merchants had their wives living with them.

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by stately oxen; and last of all, the factors in coaches, or upon horses, with saddles of velvet richly embroidered, their headstalls, reins, and croupers covered with solid wrought silver.'[1]

English in Surat, 1684-1707.

Between 1616 and 1660, when no English ladies lived at the factory, it would seem to have been the common practice for Englishmen in Surat, especially when travelling through the country,[2] to dress in native fashion But later on (1690), when many of the merchants had their wives living with them, it was usual for the English in Surat not only to wear European clothes, but, as far as possible, to have them made according to the latest fashion. Fortunately the men found tailors in Surat 'who could fashion their coats according to the prevailing mode in England,' and ladies found native artists able to contrive 'their towering head-dresses with as much skill as if the head-dresses had been an Indian fashion, or as if the tailors themselves had been apprentices at the royal exchange.'[3]

In Surat the early Europeans would seem to have lived on somewhat familiar terms with the natives According to Ovington their grand style of living made the native governors and other persons in high position value their friendship and 'place an honour on their intimacy and acquaintance.' The factors, too, were hospitable, entertaining natives, at least Musalmáns, at their own tables, and in turn dining with them, 'imitating, when they did so, the customs of the east in lying round the banquet upon Persian carpets.'[4]

Dutch in Surat, 1665-1707.

During the greater part of these years at Surat the Dutch were the most successful of the European traders. In addition to their monopoly of the finer spices, by acquiring (1663) a hold on the Malabar coast, the Dutch gained the command over the supply of pepper.[5] In 1668 the English recovered their position on the Malabar coast and competed more vigorously with the Dutch. But in the war with the English (1672-1674) the Dutch were able to do much harm to the English trade at Surat,[6] and again, in 1682, by the capture of Bantam, they acquired the control of the Java pepper market. In 1684 they are mentioned 'as very firmly settled at Surat and strong in the Persian Gulf.[7] They benefited by the failure of

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[1] Ovington, 399 Fryer, 85-87.

[2] Terry (1617) notices that Sir T Roe and his suite were 'dressed in English habits, made as light and cool as possible' (205) Mandelslo (1638) mentions the surprise excited by his European dress, for, he adds, "to avoid dangers on the road, the Dutch and English dress after the fashion of the country."—(69)

[3] Ovington, 280 Occasionally Englishmen, even in Ovington's time, dressed in native fashion. When they did so, they 'complimented the Moors by adopting their style of dress.'—314.

[4] Ovington, 401,

[5] Bruce's Annals, II., 158, 163.

[6] Bruce's Annals, II, 328, 339.

[7] Stavorinus, III., 112 113. Valentyn gives the following list of articles of Dutch trade with Surat Imports—spices, including cloves, nutmeg, mace, cinnamon, pepper, camphor, and cardamums, copper in plates and bars, benzoin, gumlack, quicksilver, vermilion, aloes (succotrine), areca, sapan-wood, elephants' teeth, sandal-wood, woollen cloths, tin, lead in sheets, cowries, tea, china, sugar, coral in branches, radix china, ebony. Exports—gold and silver allegars, common ditto, broad and narrow chintzes,

the English attempt (1668-1690) to establish themselves as a military power at Bombay, and in 1690 tried hard to gain the sole command of the trade to the Persian Gulf. In 1694-1695, on condition of obtaining a monopoly of the European trade with Surat, and being freed from the payment of customs, they offered to guarantee the security of the pilgrim traffic between Surat and Mecca [1] This offer was refused, and in 1699 it was arranged that, with the English and French, the Dutch should be responsible for the suppression of piracies, taking the Red Sea under their special care.[2] But in the following year, disgusted with the conduct of the governor of Surat, the Dutch struck the flag on their house and sent their shipping to Batavia.[3] On the appointment of a fresh governor (1702) the Dutch would seem to have returned to Surat. But in 1703 their factors were again placed in confinement. In consequence of this insult the Dutch fleet in 1704 blockaded the mouth of the Tápti, and, though offered as much as £8,000, refused to withdraw unless they were declared free from any claim for damages. In the following year they made more prizes, and again returning in October 1706 continued the blockade till January 1707. The governor at last agreed to pay the Dutch a sum of £81,000 (Rs. 8,10,000) on giving up the ships they had seized, one per cent on the Surat customs was to be abated, and trade to Broach was declared to be free. At the same time liberty of trade was granted to the English.[4]

Dutch in Surat, 1665-1707.

During this time the staple of the Dutch trade with Surat and the chief source of their wealth was the import of spices. As the Dutch had a monopoly of this traffic, their profits were very high. From 1662-1670 the rate of profit on the finer spices is said, on an average, to have been about 520 per cent, and from 1688-1698 the corresponding rate rose to 850 per cent The trade in other merchandize at this time was said to yield a profit of about sixty per cent. The average income of the Dutch factory at Surat between 1662 and 1673 was from the finer spices alone about £30,415 (Rs. 3,04,150). The corresponding profits between 1688 and 1698 are returned at £69,581 (Rs. 6,95,810), of which £46,315 (Rs. 4,63,150) were derived from the finer spices, and £23,266 (Rs. 2,32,660) from their trade in other goods.[5]

According to the traveller Baldæus, who visited Surat about 1670, 'the lives of the meaner sort of the Dutch were at that time none of the best.' Heating themselves with arrack and other strong drink, and then lying exposed in the open air, they often caught 'the cramps or other

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blue baftas of Ahmedábád, narrow white baftas of Broach, black fine baftas, broad white ditto, silk chindoes, black cannequins, white ditto, quilted cottons, nicanees, petolas, choutarees, deriabadys of Agra, mammudies of Talalpour, indigo from Agra, indigo churees (Sirkhej) from Ahmedábád, candied mirabolans, *hing*, or assafœtida, *rasmal*, or borax, Malwa opium, Surat soap, red sealing-wax of Surat, cotton-yarn, wheat.—Stavorinus, III., 114.

[1] Bruce's Annals, III., 538, 543.
[2] Bruce's Annals, III., 189.
[3] Bruce's Annals, III., 308.
[4] Bruce's Annals, III., 275
[5] Stavorinus, III., 112, 113.

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Dutch in Surat, 1665-1707.

illness.' The better sort commonly rose with the sun, 'sleep after sunrise being accounted very unwholesome.' Some, immediately after coming out of bed, had the custom of washing their heads, nay, the whole body, with cold water. Others washed with lukewarm water three or four times a week "The last," he adds, "I have found the best by experience." Dinner was early, apparently before mid-day. When dinner was over, it was usual to sleep; then about three or four o'clock to drink tea; and after tea, in the cool of the evening, to walk. They supped commonly about seven or eight o'clock, but very moderately, and went to sleep, about ten or eleven, upon quilts, 'feather beds being not used in the Indies.' The ordinary food was goats, sheep, fowls, hares, peacocks, and such like. Besides the tea—of which two kinds, Chinese and Japanese, were known, and which had of late years 'gained a mighty ascendant' over the Hollanders—coffee and chocolate were used. A common drink was a mixture of sugar and water boiled together. Of spirits brandy was, by the wiser sort, seldom taken, 'unless it was a spoonful or so before dinner, or a drop at night before they go to bed.' Brunswick mum was, however, both more pleasant and more wholesome than in Europe, 'the worst being that it was excessive dear.' Of wines those of Spain were most in request. French and Rhenish wines being not strong enough in hot countries 'where the stomach requires more lively cordials, as a little brandy or a moderate share of canary'[1]

French in Surat, 1642 1700.

The French settlement of 1642, of which mention has been made above, would seem to have been a failure. But a fresh attempt was made in 1664 on the occasion of the formation of Colbert's famous company of the East Indies. Taking Madagascar, which they then (1665, July 10th) called 'Ile Dauphine,' they in 1667 sent Carron, a Dutchman, as agent, with the title of director, to settle a factory at Surat. In 1668 (February 13th) French ships arrived and gave out that large consignments were on their way to Surat. But as no more ships came, the Surat merchants would have no dealings with the French, and they were forced to retire to Madagascar. Meanwhile at Madagascar so greatly were the company's affairs mismanaged that the king of France recalled the grant under which he had invested the company with the possession of the island. Under these circumstances, the company in 1670 transferred their sovereign council to Surat, and in January 1671 gave its members full powers in civil and criminal cases.[2] In 1670, on the occasion of one of the Marátha raids on Surat, the French are said to have saved their factory from plunder by compounding with Shiwáji and furnishing his troops with the means of taking the Persian factory.[3] In 1672 the arrival of a strong French fleet in Indian waters raised the position of the French, and in the beginning of the following year (1673), on hearing that a Dutch squadr onwas menacing Bombay, Mr. Baron, the French director, with four ships, came from Surat to Bombay, and joining with the English,

[1] Churchill, III., 592.

[2] Milburn's, Or. Com., I., 381, 382

[3] Bruce's Annals, II., 285.

succeeded in defeating the designs of the Dutch.[1] Later on, the weavers of France raised objection to the importation of Indian cloth, and the trade of the French company at Surat fell very low. In 1692 a French fleet of four ships reached the Tápti with instructions to withdraw the factory from Surat. At this time (1692-1697) there was war between England and France, and as the French succeeded in capturing an English vessel near the Tápti, they were able to pay their debts, and the factory was continued for some time longer. Gemelli Careri (1695) mentions houses of French merchants as among the best buildings in Surat,[2] and in 1699 the French were still of sufficient consequence at Surat to unite with the English and Dutch in becoming responsible for the suppression of piracy, and took the Persian Gulf as their special charge. Very soon after this they were forced to close their factory, their agents leaving Surat without meeting claims upon them. For the rest of this period, and for some years after (1719), from fear of being seized to pay the company's debts, no French ships visited Surat.[3]

French in Surat, 1642-1700.

Throughout this period a Portuguese factory would seem to have been kept up in Surat. As late as 1670[4] the Portuguese granted passes to ships. In the same year a letter was written from the viceroy at Goa to the governor of Surat, asking that the customs duties might be reduced to two per cent. And about this time the English records make mention of a revival of the Portuguese trade at Surat,[5] and again in 1684 their competition is said to be serious.[6] In 1693 a scheme was started for establishing a Portuguese trading company, but with what success does not appear. The head of the Portuguese factory, at this time (1695), would seem to have been styled chief captain.[7] Again, in 1700, the English trade is said to have been prosperous, partly owing to the absence of the Portuguese, who, like the Dutch, would seem to have left Surat disgusted with the tyrannous conduct of the governor.[8]

Portuguese in Surat, 1658-1707.

The third period of Moghal rule at Surat extends over twenty-six years, from 1707, the year of Aurangzeb's death, to 1733, when, as governor of Surat, Teg-bakht Khán gained a position of practical independence. The chief influences affecting Surat during this period, were the failure of the authority of the court of Delhi, and the establishment of Marátha power up to the walls of Surat. These two influences combined to weaken the hands of

Decay of imperial power, 1707-1733.

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[1] Orme's Hist Frag., 33.

[2] Churchill, IV., 188.

[3] Milburn's Or. Com., I., 385. Of the French Capuchin friars who, during the whole of this time were held in much respect in Surat, some details will be found below in the account of the city of Surat.

[4] It was in this (1670) year that the town of Diu was sacked by Muscat Arabs.—Ham. New Act., I, 141.

[5] Bruce's Annals, II., 342.

[6] Bruce's Annals, II., 538.

[7] Tirocinio Litterario, No. 8 of 1862.

[8] Bruce's Annals, III., 334.

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ecay of imperial wer, 1707-1733.

the governor of the city.[1] He could no longer look for support either directly from the court of Delhi, or through their representative, the viceroy of Gujarát. At the same time, by the establishment of Marátha power in the districts round Surat, the city governor was deprived of the chief source of his revenue. With the decline of the governor's authority, the rich merchants of Surat and the chief companies of European settlers begin to take a leading part in the history of the city.

During the early years of this period (1707-1717), the only event of importance was the construction of the outer row of city walls. This work, begun under the governorship of Haidar Kuli Khán (1717-1719), was completed in 1720 by Haidar's successor, Tahavar Khán. In 1723 Rustam Ali, a Musalmán soldier of distinction, was chosen governor of Surat. Acting with vigour against the Maráthás, he succeeded in winning back from them the districts round the city. To revenge the death of his brother, Rustam in 1725 marched to Ahmedábád, where, in an engagement with the Maráthás, he was slain. Rustam was in 1725 succeeded by his son Sohráb Khán. In the early years of his governorship, Sohráb Khán, according to the accounts of the English factors, acted oppressively, and by his exactions turned against himself many of the leading native merchants as well as the European settlers in Surat. The immediate cause of the disturbances, which, beginning in 1729 lasted till the establishment of Teg-bakht Khán as governor of the city in 1733, was a certain Mulla Muhammad Ali. This man, who in 1719 succeeded to the fortune of his grandfather Mulla Abdul Jáfar,[2] would seem to have continued trading at Surat for about ten years. In 1729, according to one account, anxious to establish himself in a position of independence, and, according to another version, enraged at the exactions of Sohráb Khán, Mulla Muhammad attempted to make a settlement on the island of Piram, near Gogo. Failing in this attempt, the Mulla next determined to establish himself at Athwa, a village on the Tápti

lla Muhammad 1729-1733.

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[1] During this period the city governors of Surat were · Amánat Khán, 1707 ; Dayánat Khán, 1713 ; Kháje Abdul Hamid Khán, 1714 , Mahatarim Khán, 1714 , Momin Khán, 1715 ; Syed Asálat Khán, 1716 ; Haidar Kuli Khán, 1717 , Tahavar Khán, 1719 ; Rustam Ali Khán, 1723 , and Sohrab Khán, 1725.

[2] Abdul Jáfar, an inhabitant of Pátan, is said to have come to Surat in 1688. Starting in life as a poor man, he for a time taught in a school, and so, according to one account, was called the Mulla. (It seems more likely that he was called Mulla, because he belonged to the sect of the Mulla, or Shia, Bohorás.—See Ham. New Act., I , 151) After a time he took to trading, and became very rich According to one story, the Mulla was, on one occasion, unfairly forced to take a cargo of spoiled goods. For a time he left the goods alone, and, when next he went to look at them, found diamonds and rubies instead of bad butter and damaged dates. Another version is, that the Mulla for a long time supported a beggar, and that, in return, the beggar gave him nineteen cocoanuts full of dust This was to show that the Mulla would become the owner of nineteen ships. The omen was fulfilled ; and though the Mulla could never succeed in owning a fleet of twenty ships, he amassed so large a fortune that he died worth £850,000 (Rs 85 lakhs). This fortune was seized (1718) by the governor of Surat, Haidar Kuli Khán, on the ground that the Mulla had died childless But the Mulla had a grandson, Muhammad Ali by name, and he, going to Delhi, established his claim to his grandfather's estate, and was presented by the emperor with valuable gifts. On his return to Surat he received his grandfather's fortune His descendants still live in Surat, and are known as the *panchdsiwálás*, or the ' eighty-fivers '

about three miles below Surat. Here he began to build a fort. But before much progress had been made, the work was stopped by the orders of Sohráb Khán. Enraged at the interference of the governor, the Mulla turned to Begler Khán, the commandant of the castle. Working upon him by large presents, and by the promise that he would use his influence to procure for Teg-bakht Khán, Begler Khán's brother, the office of governor of the city, he persuaded Begler Khán to bombard Sohráb Khán's residence. Worsted in the contest, Sohráb Khán agreed to refer the matter to the court of Delhi, allowing Teg-bakht Khán to act as governor of the city till the emperor's order should be received. On the success of his party, Mulla Muhammad again set to work building his fort at Athwa. But Teg-bakht Khán and his brother Begler Khán, no longer dependent on the Mulla's help, informed him that, unless he obtained the special permission of the emperor, the work must stop. Meanwhile from Delhi Sohráb Khán was confirmed in the governorship of the city, and Muhammad, taking advantage of these orders, proposed to Sohráb that they should unite and deprive Teg-bakht Khán of his government. Sohráb Khán agreed, and Teg-bakht Khán was driven from office The Mulla was now allowed to go on building his fort. When the work was finished he established himself at Athwa, and at the expense of Surat Athwa became a place of considerable trade. Sohráb Khán, finding his customs revenue falling off, ordered the Mulla to return to Surat. But Muhammad winning over to his side the Dutch and English,[1] as well as his old ally Begler Khán, the commandant of the fort, Sohráb Khán, finding himself without supporters, fled to Gogo. Begler Khán had agreed to join with the Mulla only on the condition that the Mulla would solemnly promise to help in establishing Teg-bakht Khán in the governorship of the city, and as the Dutch and English approved of this choice of a governor Teg-bakht Khán succeeded to Sohráb Khán's place (1731). Mulla Muhammad would seem, for a time, to have been allowed to remain at Athwa. But in the next year (1732), careless of his promise to Begler Khán, he, by sending valuable presents to Delhi, endeavoured to obtain the office of governor of the city for his own son. Teg-bakht Khán, coming to know of Muhammad's intrigues, invited the Mulla to an entertainment, and, placing him under arrest, kept him a prisoner till his death in 1734. On getting the Mulla into his power, Teg-bakht Khán took and dismantled the fort at Athwa.[2]

Mulla Muhammad Ali, 1729-1733.

When news of the disturbances at Surat reached the court of Delhi, orders were issued transferring Momin Khán from Cambay to Surat, and appointing Teg-bakht Khán to be governor of Cambay. Momin Khán sent Syed Nurulláh to act for him, but he was defeated by Teg-bakht Khán, who continued in the governor-

[1] In Musalmán histories no mention is made of the help given by the Europeans. But the English gave valuable support, sending from Bombay troops to guard the factory, and ships to watch the river, and supplying Teg-bakht Khán with funds.—Surat Diary quoted in Bom. Quar. Rev., IV., 185.

[2] The account of these disorders is taken from Munshi Abdul Hakim's history. In almost all points it agrees with the particulars given in the Surat Diaries.—Bom. Quar. Rev., 184-185.

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'action fights at urat, 1729-1733.

ship at Surat. In the following year, in spite of his disregard of their orders, by presenting them with valuable gifts, Teg-bakht Khán induced the Delhi court to confirm him as governor of Surat, and confer upon him the title of Bahádur. During this time, in spite of disorders, trade would not seem to have suffered. Besides the extreme case of Muhammad Ali, many of the Surat merchants, both Muhammadans and Hindus, were at this time very rich.[1] The Pársis were also a large and prosperous class,

[1] Of these perhaps the most prominent character is a certain A'hmad Chalebi, an 'artful Arab merchant,' who played an important part in the negotiations for the transfer of the fleet subsidy to the English (see below, 118). This man at first was, or at least was believed to be, a strong supporter of the English claims. Afterwards, in 1733, in union with a young Pársi broker named Mánekji Návroji, he did his utmost to widen the breach between the governor Teg-bakht Khán and the English. He continued a staunch supporter of the governor till August 1735, when Teg-bakht Khán at length discovered that he had been made a dupe of by Chalebi. In reply to the governor's remonstrance, Chalebi simply defied his power, and so puffed up was he by his wealth and importance, that, taking soldiers into his pay, he was actually preparing to levy war upon the government Before matters came to a crisis, however, his supporters began to desert him, and on the 12th July 1736 he was assassinated in his own house (Surat Diary, 1732-1735, Bom Quar Rev, IV., 203.) According to Munshi Abdul Hakim's history of Surat, Teg-bakht Khán, with his own hand, assassinated Chalebi.

Another Surat merchant, the details of whose life occupy a large place in the records of this period, is a Hindu, Jagannáth Láldás by name This man was the English company's broker, and belonged to a family which had been in their service for four generations, and had enjoyed much of their master's confidence His chequered and adventurous life proves that his mind was shrewd, vigorous, and fertile of resources; that he had courage and firmness even to obstinacy, and that he was at least as honest as those by whom he was surrounded. The opinions of him entertained by his contemporaries were curiously conflicting The company's servants could not say enough for him at one time At another they could not say enough against him. He began by gaining their confidence, was then treated by them as a scoundrel who would cheat his own father But again, recovering their favour, held one of the most responsible situations in Bombay, and died at Surat after he had received abundant tokens of their esteem. Jagannath's difficulties began with the exposure of the English factor's frauds in 1736. At that time he was indebted to the company in the sum of £40,000 (Rs 4,00,000), and as he failed to provide securities for the payment of this debt, he and his brother were confined in the English factory at Surat As the governor refused to force him to pay his debts, Jagannáth was carried a prisoner to Bombay, and his brother, Govindás, was for three years detained a prisoner in the English factory at Surat. After Jagannáth had been in Bombay for some time, he persuaded the authorities in Bombay to let him return to Surat to make some settlement of his debts with his brother's help He was allowed to go to the mouth of the Tápti, but, in spite of the precautions taken, effected his escape in April 1738. On regaining his liberty, he hastened to the Marátha camp, where he was well received, taken into service, and entrusted with an important military command, the duties of which he discharged efficiently * Still he looked back to the situation he had lost, and was ever anxious to make terms with his old masters. After some negotiations with British officers, it was agreed, in April 1742, that, in lieu of the original sum, a composition of £10,000, payable in eight yearly instalments, should be accepted by the company Jagannáth then returned to Bombay, and so rapidly worked himself into the favour of his employers that in 1747, when 3,000 native soldiers had to be enlisted, he was appointed to their command, and so meritorious were his services then considered, that they were formally acknowledged by the president in council. He was afterwards engaged in extensive dealings with the factory at Surat. Finally, he was reinstated as English broker, and lived to see his English patrons gain command of the Surat Castle. He died in 1761, and was succeeded by his son †

* This episode in Jagannáth's life is interesting, as showing that, among the Wánias, centuries of trading had not deprived them all of that capacity for military affairs which, in the times of the ancient Hindu rule, had made men of this caste among the greatest commanders of the Anhilwára (942-1298) kings.

† Outward letters of the Bombay Government, dated 3rd February 1747, 23rd November 1748 Diary of the Surat Factory, 5th March 1748, 10th May 1751. Diary of the Bombay Government, No. 1764. — Bom. Quar. Rev. IV, 210-216.

'good carpenters and ship-builders, and exquisite weavers and embroiderers.'[1]

During this period the city of Surat continued to increase in size. Taking advantage of the protection of the new walls, Káji Mir Fatulláh Khán, in the year 1725, settled the suburb of Makhdumpura near the Athwa gate. Two years afterwards a flood in the Tápti caused much damage at Surat. On this occasion the water rose so high in the city that people were forced to take shelter in trees and on the tops of houses. In the general distress the governor, Sohráb Khán, acted with liberality, distributing food to large numbers, both Hindus and Musalmáns. 1732 was a year of famine.

Europeans in Surat, 1707-1733.

The beginning of the eighteenth century is a transition stage in the fortunes of the leading European settlements at Surat. On the one hand, in a struggle between local merchants and impoverished governors, their command of men and money made their friendship important. On the other hand, neither Dutch nor English aimed as yet at ruling in Surat. Their interest in the struggle was the same. The trade of both had lately suffered from the same acts of tyranny, and both were anxious to establish some one in power who, owing his position to their help, might in his management of the city be expected to consult their interests. At the close of the struggles in 1733, the Dutch and English together recovered, with thankful hearts, the charges incurred in helping the cause of their ally Teg-bakht Khán. In settling the accounts they lament 'the troubles and fatigues they had undergone in the long scene of confusion in the city.' They hope 'that it may never again fall to their lot or to the lot of their successors to disfigure their account books with the head of war charges.'[2]

English in Surat, 1707-1733.

Though for the English company, well provided with funds and protected in its monopoly, this was, on the whole, a time of prosperous trade,[3] the factory at Surat was subject to so much annoyance and so many exactions at the hands of the city governor that, in 1712, the English withdrew from Surat.[4] For three years their factory was closed. Then an embassy from Hugli, backed by magnificent presents and the surgical skill of Mr. Hamilton, exercised so favourable an influence on the court of Delhi, that the emperor not only granted the privileges the company required in Bengal, but also prohibited the governor of Surat and the viceroy of the Deccan from placing impediments in the way of English trade. In 1716 (January 6th) a fresh charter was obtained, under the terms of which all duties on the company's imported goods were commuted

[1] Ham. New. Act, I, 161.

[2] Extract from the Surat Diary quoted in Bom. Quar. Rev, IV., 185. Parsons (1777) says that in 1734 the English became masters of Surat by conquest, and continued in command till 1739.—Parsons' Travels, 247. This statement would seem to be incorrect.

[3] In 1716 a proclamation was issued, and in 1718 an Act (5th of Geo. I., Chap. 29) was passed for the better security of the company's trade to India.—Milburn's Or. I., XLVI.,

[4] The rest of this paragraph is condensed from the Bom. Quar. Rev., III., 69-73.

Chapter V. History. 1573-1733. English in Surat, 1707-1733.

for an annual tribute of £1,000 (Rs. 10,000), and they were allowed to establish a separate custom-house. At the same time about fifteen acres of land were granted wherever they might choose to build a factory, and it was agreed that all English wrecks should be protected from plunder and from exorbitant demands for salvage. In 1716 the English returned to Surat. But within a few years a renewal of attempts to make the English responsible for piracies committed by other nations led to fresh insults First, the English chief was told that the factory had been bestowed on a Musalmán saint, and that it would, therefore, be necessary for the factors to change their abode. At the same time they were given to understand that the evil might be averted by a present judiciously made to the governor, who would then exercise his powerful influence on their behalf at the Delhi court The English chief agreed to pay a small sum, threatening at the same time that, if the English were dislodged from their factory, they would at once withdraw from Surat and take their revenge on the trade of the port. Very soon after, a rumour reached the city that much damage had been done to Surat shipping in the Red Sea by an European vessel. The governor of Surat demanded restitution from the English for their losses, and the Musalmán merchants thronged the gate of the English factory with tumult and violence. The company's broker was assaulted and placed in confinement, and a guard stationed over the factory. Then the head of the English factory, feeling that the moment for reprisals had arrived, ordered the cruisers at the bar to lay an embargo upon all ships belonging to Musalmáns. Matters were not, however, pushed to an extremity. The governor engaged that the factors should not be again molested. The factors, on their side, bound themselves to make restitution when any acts of piracy were proved against them. Troubles were again renewed when, in 1723, Rustam Ali Khán was appointed to the charge of the city. During the two years of his rule (1723-1725), this governor oppressed all merchants who dealt with the English At the same time a change in England did much to destroy the value of the company's trade to Gujarát. The opposition to the importation of Indian goods into England seemed to die away at the close of the seventeenth century. The use of Indian calicoes, both for wear and for household furniture, was again for a time universal. But in 1721, in consequence of riots and tumults among the weavers of London, an Act was passed absolutely prohibiting the wear of Indian calicoes.[1] By the next governor, Sohráb Khán, English trade was at first obstructed Afterwards, for a time, he ruled with more justice and ordered their wrongs to be redressed. But before many years were over, Sohráb Khán again returned to a course of oppression. In 1730 he seized and imprisoned several of the principal merchants, bankers, and brokers, so that a stop was put to all business until he was brought to his senses by a remonstrance of the united English, French, and Dutch factors. Still he insulted

[1] Milburn's Or. Com., I., XLVII.

and injured the native merchants, who withdrew from the city, leaving the governor in great need of money. Sohráb then implored the English to pay their annual tribute, or *peshcush*, of £1,000 (Rs. 10,000) in advance. This they agreed to do, and afterwards the governor was able to raise from the English and Dutch brokers a further sum of £21,000 (Rs. 2,10,000). But this large sum of money was extracted from the brokers without the consent of their principals, and this act of extortion was one of the reasons that induced the English and Dutch shortly after to join in the combination against Sohráb Khán, which ended in Sohráb's flight and the accession of Tegbakht Khán.

English in Surat, 1707-1733.

The articles of trade imported and exported by the English at this time differed but little from those in which they formerly dealt. Of imports, there were bullion, lead, quicksilver, woollen-cloth, and hardware. The exports were chiefly cotton cloth, diamonds, pepper, drugs, and saltpetre. One of the chief changes was that, in the disordered state of the country, Europeans were not allowed to visit the interior without special permission, so that the disposal of goods was for the most part left to native dealers.[1]

During this period the Dutch would seem to have maintained their position of consequence among the foreign residents at Surat. In addition to the privileges conferred upon them at the close of the last period, the Dutch, in 1709, obtained a charter determining, among other points, that, 'according to ancient customs, a place in the city should be granted to the Dutch East India Company for their use in carrying on their trade, and likewise another for the residence of the chief within the city or in the garden.'[2] Again, in 1712, it was provided that the house of Itabár Khán should be given to the company's servants for their residence for ever, upon the condition that no angles or enclosures should be made to it, nor any great or small guns conveyed into it. Under the terms of a charter obtained in the year 1729, the director of Surat was allowed to purchase for his own use ground in the Jahángir Bandar, within the outer walls of the city of Surat by the river side, and to erect buildings upon it for the housing of merchandize.[3]

Dutch in Surat, 1707-1733.

In the early years of the eighteenth century the Portuguese, by their victories over the Muscat Arabs in 1704 and in 1713, are said to have improved their position in Surat. In 1714 the viceroy entered into negotiations with the emperor, and by the help of Donna Juliana, a Portuguese lady, then an inmate of the Moghal's harem, obtained a charter, under the terms of which the duties charged on the Portuguese were reduced to two and a half per cent, and their

Portuguese in Surat, 1707-1733.

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[1] Anderson's English in Western India, 380

[2] Quoted in Stavorinus' Voyages, III., 93, 94.

[3] This is the Walanda Bandar, or Dutch wharf, immediately above the present commodore's *bangalo*. The commodore's *bangalo* was then a garden house connected with the English factory. Details of each of these charters will be found in Stavorinus' Voyages, III, 92-100.

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enemies, the Muscat Arabs, forbidden to come to Surat.[1] In 1731 a Portuguese company was formed for trading to the Indies, and one ship was despatched to Surat. The experiment is said to have been attended with but little success.[2]

French in Surat, 1707-1733.

In the first eighteen years of the eighteenth century the French had no connection with Surat. But in 1719 a new French United East India Company was formed, and for some years traded to Surat with success.[3]

Austrians in Surat, 1707-1733.

A fresh company of European traders visited Surat during this period. This was the Ostend company, which started in 1717 under the protection of the emperor of Austria. In 1719 this company sent a ship to trade at Surat.[4] The heads of the Dutch and English factories joined in doing 'all disservices possible' to the people of this ship. But the deputy governor of the city favoured them, and two more ships that arrived in 1719 would seem to have been allowed to trade without disturbance. Later on opposition revived, and in 1727 rose to such a height that the Austrian emperor was forced to suspend the Ostend company's charter.[5]

Section III.—Independent Governors (1733-1759).

Independent governors, 1733-1759.

During the twenty-six years between the accession of Teg-bakht Khán in 1733 and the capture of Surat by the English in 1759, the governors of Surat were practically independent. This period of twenty-six years contains two sub-divisions, each of thirteen years—the first, during which Teg-bakht Khán maintained an unbroken control over the city; the second, after Teg-bakht Khán's death, a time of disorder and disputed succession.

Teg-bakht Khán, 1733-1746.

Though Teg-bakht Khán went through the form of appointment by the Delhi court, he was from the first independent. The old division of power in Surat between the governor of the town and the commandant of the castle had now ceased. The whole control of Surat affairs was in the hands of the two brothers, Teg-bakht Khán, the governor of the city, and Begler Khán, the commandant of the castle. Under these circumstances, as city governor Teg-bakht Khán discarded the old designation of *mutsadi*, or clerk of the crown, and adopted in its stead the higher title of viceroy, or *nawáb*. At the same time, to increase the importance of his own position, he established a new officer, a *náib* or deputy *nawáb*, and entrusted him with police and other functions. To this office Teg-bakht Khán appointed his third brother, Ghulám Mahmud, afterwards known as Safdar Khán. On his

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[1] Letter of the viceroy of Goa to the nawáb of Surat, dated 30th November 1715.

[2] Milburn's Or. Com., I., 308-310.

[3] Milburn's Or. Com., I., 384.

[4] Macpherson, 295.

[5] Milburn's Or. Com., I., XLVII and 411. Their charter would seem to have been suspended only for a time. As late as 1743 the court of directors warned the factors at Surat to be on their guard against the ships of the Ostend company.—Bom. Quar. Rev., III., 31.

Teg-bakht Khán, 1733-1746.

accession to power, Teg-bakht Khán found his revenues insufficient for his wants. To improve the state of his finances he adopted three courses: i, he made an arrangement with the Maráthás for a share in the revenues derived from the lands once under Surat; ii, he attempted to evade the payment of his £30,000 subsidy to the Sidhi admiral of the fleet; iii, he imposed new taxes on the trade of Surat. (1.) With regard to his relations with the Maráthás Teg-bakht Khán found that, though they had been driven by Rustam Ali (1723-1725) from the districts round Surat, the Maráthás had, during the disorders of Sohráb Khán's governorship, recovered their former hold and were again in possession of the country up to the walls of the city. Teg-bakht Khán was not in a position to oust the Maráthás from these lands; at the same time he was not inclined to give up the whole territorial revenue without a struggle. He accordingly entered into negotiations with the Gáekwár, and an agreement was concluded, under which, on the promise of a yearly assignment of £23,600 (Rs 2,36,000) in his favour, Teg-bakht Khán engaged to allow the Maráthás to hold the lands round Surat and collect the revenues from them.[1] (2.) In his attempt to keep back for himself part of the subsidy due to the admiral of the Moghal fleet, Teg-bakht Khán was helped by a contest between the English and the Sidhi for the post of admiral. Since the beginning of Aurangzeb's reign (1661) this office had been held by the Sidhis of Janjira. But of late years the power of the Sidhis had declined. Their fleet had shown itself no match for the Marátha fleets, and they were now, even by their own confession, unable to protect the shipping of Surat.[2] Under these circumstances, the English endeavoured to obtain for themselves the position and revenues of admirals at Surat. But as the Sidhi was their ally, and an ally whom, in the growing power of the Maráthás, they could ill-afford to offend, the English were unwilling to attempt to gain the position by force. They had to content themselves with granting passes to traders,[3] with making an expedition against the Koli pirates of Sultánpur,[4] and with using every effort to induce Teg-bakht Khán to transfer the fleet subsidy from the Sidhi to the English. Teg-bakht Khán, who had owed much of his success in the late struggles to the English, was at first anxious to please them. But as he found himself more firmly established in his government,

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[1] Surat Papers, 359. The records referred to are collected in a volume published in 1806 with the title 'Papers on East India Affairs.'

[2] Bom. Quar Rev., IV., 192.

[3] Under an order of the president in council, dated April 1734, passes were granted in the following form To all commanders of ships subject to the king of Britain These presents are to certify at the request of. . .... inhabitant of..... and owner of..... .burthen.....*candis*. Whereof goes. . . .with. ..... guns, laden with .... and bound to ..... That in consideration of the friendship between our respective governments, I, James Hope, Esq., chief for affairs of the British nation in Surat, do require all subjects navigating under the protection of the Honourable East India Company that may meet with the said .....in her intended voyage not to give her the least hinderance or molestation, which certificate is to be in full force during the term of .....months and no longer. Given under my hand in Surat.....this ..... day of ..... .—Bom. Quar. Rev., IV., 188.

[4] Bom. Quar. Rev., IV., 99.

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his tone by degrees changed. So long as the post of admiral was held by a weak chief, Teg-bakht Khán was able to keep back for his own use a considerable share of the fleet subsidy. But if the English were appointed to the charge of the fleet, their power at sea was sufficient to force Teg-bakht Khán to pay them the full amount of the admirals' stipend. Influenced by these motives, Teg-bakht Khán, after long negotiations, refused to favour the English claims to be made admirals of the fleet[1] (3.) In 1735, in addition to the existing custom dues, Teg-bakht Khán, besides introducing a tax on trades and professions, imposed new duties on all goods passing through Surat.[2] These new taxes yielded a very large revenue, and Teg-bakht Khán was able not only to live in a style of great magnificence, but to amass so large a fortune that after his death several members of his family were rich enough to engage troops and struggle for the office of governor of the city.

Teg-bakht Khán, 1733-1746.

Struggles with the English, 1733-1735.

The failure of the negotiations on the subject of the fleet subsidy (1733) caused a mutual dislike in the minds of Teg-bakht Khán and the English. The governor ill-treated some of the English dependents at Surat, and as no redress could be obtained the English chief and his friends, leaving Surat, remained on board their ships at the mouth of the Tápti. Refusing several invitations to land, they drew up a formal statement of their grievances, demanding redress, and, in case of refusal, threatening reprisals on the trade of Surat.[3] In this struggle with Teg-bakht Khán, besides the support of the other European settlers in Surat, the English received from Damáji Gáekwár offers of help, and from many of the people of Surat assurances that, if necessary, they were ready to leave Surat and seek protection under the English in Bombay. The English, however, wisely refused the Marátha offer of help, contenting themselves with showing their power by driving off a fleet of the Sidhis sent to act against them, and establishing a blockade at the mouth of the Tápti. In Surat the price of provisions rose forty per cent, and so great did the discontent in the city become, that Teg-bakht Khán was forced to agree to all the English demands. In February 1735 the guards were removed from their stations over the English factory, and the native merchants and brokers were told that they were again free to trade with the English.

Struggles with the Sidhi, 1735-1736.

Teg-bakht Khán's next struggle was with the Sidhi Always anxious to increase his wealth, Teg-bakht Khán thought that he might take advantage of the Sidhi's weakness to keep for himself the whole of the fleet subsidy. Sidhi Saut, the head of the family, failing in his efforts to obtain a share of the subsidy by peaceable means, collected a

[1] The negotiations lasted from June 7th to July 31st, 1733.—Bom. Quar. Rev., IV., 193.

[2] Details of these taxes and of the special one per cent, or *ekotra*, war cess levied will be found below p 124.

[3] Their chief demands were i, that they should be protected according to the terms of their charter (1716), ii, that a debt, owing by the governor, should be paid, iii, that their boats should not be molested, and iv, that their dependents in Surat should be compensated for the ill-treatment they had received.—Bom. Quar. Rev., IV., 97.

fleet and seized several ships at the mouth of the Tápti. The English were called in to mediate, and in August 1735 Teg-bakht Khán engaged to pay the Sidhi £24,000 (Rs 2,40,000) for arrears of subsidy, and £15,000 (Rs. 1,50,000) for the current year. But, once more, reluctant to part with his money, Teg-bakht Khán broke his engagement, and Sidhi Masud, the Sidhi's agent at Surat, again interrupting the trade, raised his demands to £90,000 (Rs 9,00,000.) A second time the helpless governor craved the assistance of the English. But they refused to interfere. Teg-bakht Khán was therefore left to make his own arrangements, and after some difficulty, in February 1736, he succeeded, by making certain concessions,[1] in inducing the Sidhi to restore all the ships he had taken. During the last ten years (1736-1746) of Teg-bakht Khán's governorship, his relations with the English were little altered. At times he treated their dependents with violence and injustice, and refused, as long as he could, to pay off his debts to the company.[2]

Teg-bakht Khán, 1733-1746.

The last five years of Teg-bakht Khán's rule in Surat were 'disturbed by threats of invasion, wild tumults of lawless Abyssinians, groans of impoverished merchants, and remonstrances of injured Europeans.' Invasion was threatened by Nasir Jang, who, being in rebellion against his father Nizám-ul-mulk, would, it was supposed, march on Ahmedábád, and on his way plunder Surat. Teg-bakht Khán ordered the walls of Surat to be repaired, and, suspecting that the European factors secretly favoured the enemy, invited the English chief and council to explain their grievances.[3] The danger of invasion for the time passed away, as Nasir Jang was defeated and made prisoner by his father. But again (1742), before two years were over, Nasir Jang, in arms against his father, appointed a supporter of his, Aziz Khán by name, governor of Gujarát, with authority over Surat. Aziz Khán had also obtained an imperial order confirming his appointment, and was marching against Surat. The trees and hedges near the city walls were cut down, and it was with difficulty that the English prevented their tombs from being levelled with the ground. On the nearer approach of Aziz Khán, Teg-bahkt Khán acted with vigour, forcing the Europeans to promise to support him and oppose the invaders, and taking careful precautions that at least no communications should pass between the Europeans and his enemies.

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[1] It would seem to have been on this occasion that Teg-bakht Khán, in lieu of the original subsidy, assigned the Sidhi, i, one-third of the customs by sea and land; ii, one-third of the proceeds of the mint, iii, an allotment from the cotton and other funds; iv, the revenue of the Balsár division; v, certain dues from Bhaunagar in Káthiawár, and vi, one-third share of the tolls on grain.

[2] In 1739, on account of the tyrannous behaviour of Teg-bakht Khán, the governor of Bombay again sent a naval force to the Tápti.—Bom. Quar. Rev., IV., 208; Surat Diary, 16th March 1741.

[3] The English chief, when questioned by Teg-bakht Khán, denied that he had any communication with Nasir Jang. But, soon afterwards, hearing that a messenger from Nasir Jang was returning to his master with letters and presents from the French and Dutch chiefs, he and his council resolved to send a present worth from £400 to £500 (Rs. 4,000 to Rs 5,000), hoping, as stated in the diary, that in case Nasir Jang should take the city in his way, he might be satisfied of the respect we had for him.—Bom. Quar. Rev., IV, 222.

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Teg-bakht Khán, 1733-1746.

So, when the invading army advanced within four miles of the city, their leader, finding that his friends in Surat were either unable or unwilling to open the gates of the city, was compelled to make a flank movement and retreat. All fear of further invasion from this quarter was soon removed. For the Maráthás under Khanderáv, following the retreating Musalmáns, on the 7th December 1743 forced them to give battle at Viráwal, thirty miles from Surat, and with the loss of its leaders, Aziz Khán and Fate Sab Khán, routed and dispersed the Musalmán army.

Shortly after this (1743) Teg-bakht Khán, desirous to be free from the cares of government, entrusted to his brother Safdar Khán, formerly his *náib*, or deputy, all the executive power. This change does not seem to have improved the position of the English chief and council. This was followed in 1745 by an attack upon three of the English factors, one of whom had in self-defence shot at, but missed a dangerous dog. After firing the shot, the factors were waylaid by thirty of the governor's retainers, and so badly beaten that the lives of all three were in danger. In spite of promises, no redress for this outrage was given In the following year (1746, August 28th) Teg-bakht Khán died of dysentery at the age of eighty. 'The common people deeply bewailed the loss of a ruler who had treated them with singular indulgence, and for the greater part of his life spent freely amongst them the sums he had extracted by violence from the rich. His love of magnificence, and a certain jovial humour, excused his crimes, and long after his death men pointed with admiration to the imposing palace he had built and the garden he had laid out at a cost of £50,000' (Rs. 5,00,000).

Europeans in Surat, 1733-1747.

The English.

As regards the position of the European settlers at Surat under Teg-bakht Khán, it will be seen from the details given above that none of them had as yet made any attempt to obtain a share in the government of the city. By the active help they had brought to their ally Teg-bakht Khán in 1731, the English had gained the highest position among the Europeans in Surat; and, in spite of the failure of their attempt to procure the post of admirals of the fleet, they forced Teg-bakht Khán to observe their charter privileges and to refrain from injuring their dependents. The trade of the factory would seem, on the whole, to have been prosperous. In 1741 the factors wrote, 'our business goes on without impediment, and we hope it will not be otherwise, as we shall only confine ourselves to our own sphere, and not the least interfere with any transactions relative to government further than supporting your honour's privileges when called in question.'[1]

But though outwardly this was a time of considerable prosperity, the interests of the English company suffered much by the dishonesty of their servants. About 1736, when Lowther was fetch-

[1] Bom. Quar. Rev. IV., 220.

at Surat, the Bombay Government, suspecting that all was not right in his management of affairs, determined to send Mr. Braddyl, one of their council, to Surat with the temporary title of 'supervisor of English trade,' and with authority to suspend Lowther from office. Lowther was at first blustering, insolent, and abusive. But finding resistance vain, he resigned his post, and on the 19th February 1736 delivered over charge of the factory to his second in council, Mr. Hope. The members of council would give no information against their chief. But from native sources sufficient evidence was, in a few days, collected to make out a case against Lowther It was proved from his own books that he had made false entries in the accounts of his private trade. as also, with Robinson's assistance, in the books of the factory. The case against him and his friends was so clear that at last they lost heart, and instead of repairing to Bombay, according to the president's order, secretly absconded to Madras, where they remained in concealment for a short time, and then made the best of their way to England This conspiracy was general. All the senior factors were guilty of connivance, most of participation. The court of directors, therefore, ordered that Henry Lowther, James Hope, John Robinson, Daniel Innes, James Ramsden, and Daniel Taudin, should be dismissed the service, although they afterwards suffered Hope and Taudin to return Lambton, who had been before suspended from the service and again restored, was appointed chief at Surat. But the characters of the company's servants at this time were so equivocal that their tenure of office was very uncertain. Lambton was in his turn accused of having purloined some jewels which had been deposited with him in pledge, and so disingenuous were his replies to the questions addressed to him on the subject, that the government were strongly convinced of his guilt. On this and other accounts he was, in 1739, dismissed from the service. In consequence of these irregularities the court of directors passed a standing order that for the future their money should be kept in a chest with three locks; that the chief and the two next members of council should each have a key; that every month the cash should be counted in the presence of the whole council, and the balance regularly entered in the official books of the establishment.[1]

Europeans in Surat, 1733-1747.

The English.

With the Dutch the period of Teg-bakht Khán's rule would seem to have been a time of depression. In public matters they played a part subordinate to the English. At the same time their trade was failing In virtue of their command of the supply of spices, they were able to maintain extremely high rates of profit. But so greatly had the demand fallen off, that in 1740 'the real average annual money gain scarcely came to one-fifth part of their former profits.'[2]

The Dutch.

During the latter part of this period the Dutch company would seem to have been but little more fortunate than the English in

[1] Surat Diary of 16th March 1741.—Bom. Quar. Rev., IV., 220.

[2] Stavorinus, III., 113. The rate of profit on the finer spices is said at this time to have been as high as 2,400 per cent. But the falling off in the consumption of spices

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the conduct of its servants Soon after Lowther had been ejected (1736) for his defalcations in the English factory, the Dutch discovered that their director, Mynheer Phonsen, owed £13,500 (Rs. 1,35,000) to the company, which he had no means of paying.

Europeans in Surat, 1733-1747.

At first he was permitted to resign quietly. But as he was afterwards suspected of having concealed his property, he was expelled, and died soon after under the protection of the English. Still worse were the distractions of the Dutch in Surat four years after

The Dutch

(1740), when Mynheer Van den Laer, a member of the council, was accused of fraud by the secretary, and absconded. Two months later Mynheer Van den Berg, chief of affairs for Mocha, also fled from justice, and sought refuge with the English factors at Surat. The English refused to give him up, and within three months more the director of the Surat factory was expelled by his subordinates. In connection with these misdeeds of their servants, the Dutch factors complained bitterly of the conduct of the English receiving with open arms their criminals and deserters.[1]

The French.

In the struggles at Surat, the French and Portuguese took no active part With their conquests on the Madras coast, the importance of the French factory at Surat would seem to have declined[2]

Surat factions, 1746-1759.

The chief events in the faction fights in Surat between the death of Teg-bakht Khán (1746) and the capture of Surat by the English (1759) were: 1747, the succession of Safdar Khán, brother to Teg-bakht Khán, to be governor of the city, and of Wakhar Khán, son to Safdar Khán, to be commandant of the castle, 1748, the defeat of Safdar and Wakhar Khán by Mia Achan, son-in-law to Teg-bakht Khán; 1751, the defeat of Mia Achan, Sidhi Masud gains command of the castle, Safdar Khán returns as governor of the city; 1757, Safdar Khán is succeeded by Fáris Khán; 1758, Mia Achan returns and defeats Fáris Khán; 1759, the English capture Surat. Two points deserve notice in these struggles: i, that (1747) the Maráthás acquired a share in the city revenues; and ii, that the English and Dutch, with the view of gaining a position of command in the city, fought against each other as partizans of the rival candidates.

Begler Khán, 1746-1747.

On the death of Teg-bakht Khán, his second brother, Begler or Azarat Khán, the governor of the castle, seized the reins of office, though professing to remain in power only until the emperor's pleasure should be known. Begler's tenure of power was brief. He also having reached the age of eighty, died early in the following year (1747, February). On Begler's death he was succeeded by the third brother, Safdar Khán.

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at this time, both in Asia and Europe, would seem to have been due to other causes than the high prices charged by the Dutch.—Macpherson, 103.

[1] Surat Diary, 1735 and 1736, and 13th October 1742 Courts' Letters, dated 5th October 1737, and 18th March 1743; and Consultation Book, 19th January 1746.—Quoted in Bom Quar Rev, IV, 206-210.

[2] In a list of the French possessions in India (1744), no mention is made of the factory at Surat.—Milburn's Or. Com., I., 390.

On entering upon office as governor of the city, Safdar Khán appointed his son, Wakhar Khán, to command the castle. But among the other members of the family, who had received a share of the late Teg-bakht Khán's fortune, was a certain Syed Mia Achan, or Mai-ud-din Khán, who had married the daughter of Teg-bakht Khán. This Syed had the support of his wife's mother, a rich and ambitious woman, and with the help of her partizans, and of one Ali Newáz Khán, a relation of his own, was able to collect a party strong enough to win for himself command of the castle and drive out Wakhar Khán. Not content with the command of the castle, Mia Achan determined, if possible, to oust Safdar Khán from the government of the city. With this object, he entered into negotiations with the Maráthás, engaging, if his attempt succeeded, to give Dámáji Gáekwár the one-fourth share of the revenues of Surat The Maráthás agreeing to this proposal, Safdar Khán was defeated and fled to Tatha in Sind.

Safdar Khán, 1747.

The issue of the first of the contests (1718) among the members of the family of Teg-bakht Khán was, therefore, to unite in the hands of Mia Achan the command both of the city and of the castle. The accounts of travellers who visited Surat about this time, would seem to show that these struggles were little more than street fights. Each[1] of the rivals raised as many troops as he could With these he cantoned and intrenched himself in his houses and gardens, and from time to time endeavoured to surprise or drive away his opponents During these hostile operations, which were not attended with any great loss of life, the inhabitants were content with shutting the gates of the town nearest to the scene of action, and continued to go about their ordinary affairs without fear of being pillaged. Nay, they were sure of receiving compensation whenever any chance injury was done Trade suffered no interruption.

Mia Achan, 1748-1751.

State of Surat, 1748.

As was the case in 1731, the English and Dutch took an active part in the struggle for succession. But on this occasion they no longer acted together, but became partizans of the rival competitors. Each of them not only furnished his ally with ammunition and funds, but, intrenching themselves in their factories, they fought against each other, though not openly at war. In the state of parties as they stood in 1748, when Safdar Khán was expelled from the government of the city and forced to retire to Sind, the English favoured Mia Achan, the successful competitor, and the Dutch supported Safdar Khán and his son Wakhar Khán. In 1751 Wakhar Khán returned to Surat, and, by promising to grant him half of the city revenues, won over Dámáji Gáekwár to his side. Mia Achan, unable to resist this increased force, was driven from the government of the city and had to take refuge in the castle. This command, too, he soon lost. For in the same year (1751) the Sidhi sent some cruisers to the Tápti to recover the fleet subsidy which the Surat government had failed to pay him. These ships reaching Surat just before the burst of the rainy season, under the plea of stress of weather, remained in the

English and Dutch, 1748-1751.

[1] Carsten Niebuhr's Travels (1764), in Pinkerton's Voyages, X., 214-216.

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Tápti until their leader Sidhi Masud found an opportunity of seizing the castle.[1] The Sidhi and the Dutch now united in recalling Safdar Khán from Sind. On again resuming charge of the city in 1751, Safdar Khán was able to induce Dámáji Gáekwár to accept of the one-third share in the revenue of the city instead of the one-half Wakhar Khán had agreed to give him. Mia Achan, ousted from both his commands, was forced to leave Surat and seek refuge with his allies, the English, in Bombay.[2]

English and Maráthás, 1751.

On learning of the defeat of their faction at Surat, the English and the Peshwa joined together in a scheme for ousting the Sidhi and Safdar Khán from Surat, and for dividing between themselves the command of the city The English engaged to equip a fleet and attack Surat from the river, while the Peshwa sent an army under Raghunáthráv to act on the land side. These preparations came to nothing. The Marátha army, urgently required in the Deccan, was recalled, and the English failing in an attempt to induce Nek A'lam Khán, the ruler of Broach, to join with them in their designs on Surat, were forced to retire to Bombay.[3] About the same time the Peshwa obtained from the Gáekwár the one-half share of his interest in the revenues of Surat, and so was less disposed to join with the English in any attempt on the city. In consequence of this at Surat English interests suffered severely. Their gardens and cattle were taken from them, and the factors placed in confinement. So entirely did Mr Lambe, the head of the English factory, admit his defeat, that in November 1751 he, under the influence of the Dutch, signed a treaty with Safdar Khán and the Sidhi Masud, under the terms of which he agreed to send from Surat all the soldiers in the company's service, Europeans as well as Indians.[4] This treaty was, however, repudiated by the Bombay Government, and in its place, in 1752, a fresh set of articles was drawn up, under which their property was to be restored, and the English paid a sum of £20,000 (Rs 2,00,000) for the expense they had incurred in the struggles and the loss sustained at their custom-house.[5] To pay this English indemnity, a special one per cent, or *ekotra*, cess was levied on all Hindu and on almost all Musalmán traders. Armenians, Jews, and all Europeans trading under charter privileges would seem to have been exempted. The levy of this special cess was continued till 1758, when the payment of the English indemnity was completed and the charge abolished.[6]

Sidhi Masud, 1752-1756.

At Surat during the next four years Sidhi Masud, a man of great ability, while continuing on friendly terms with Safdar Khán and the Dutch, is said to have drawn into his own hands the entire management of the city. He died in 1756, leaving a young son, Ahmad

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[1] Grant Duff, II., 50 and 60.
[2] Stavorinus, III., 52
[3] Aitchison, VI., 215.
[4] Aitchison, VI., 215. So keenly did Mr Lambe feel the failure of his plans and the censure of the Bombay Government that he committed suicide.
[5] At this time the rates paid by Hindu merchants amounted to seven per cent; by Musalmáns, except some favoured individuals, to 4½ per cent; by Armenians to 3½; and by chartered Europeans to 2½ per cent.—Surat Papers, 267-268.
[6] Aitchison, VI., 215.

Káhn by name. Disputes soon arose, and before the end of 1757 Surat was again disturbed by hostile factions, the Sidhi and the Dutch struggling for power with the English and Safdar Khán. At this time, hoping to secure for himself the government of the city, a certain Ali Nawáz Khán, who had hitherto sided with the ruling nawáb Safdar Khán, now went over to the Sidhi and Dutch faction. Upon this Safdar Khán, who had no direct heir, transferred his favour from Ali Nawáz Khán to one Fáris Khán, who had also gained the support both of the Maráthás and of the English. At the same time (1657) the nawáb, on the condition that they should expel the Sidhi from the castle, offered to make over to the English the command of the fleet. But this offer was not accepted.

Ali Nawáz Khán, 1758.

In January 1758 Safdar Khán died, and was succeeded in his government of Surat by Ali Nawáz Khán, Ahmad Khán the Sidhi, continuing commander of the castle. On the accession of Ali Nawáz Khán, the party in Surat, who supported his rival Fáris Khán, proposed to Mr. Ellis, the chief of the English factory, that Fáris Khán should be appointed governor of the city, and that the English company should undertake the command of the castle and the management of the fleet. If the English undertook the management of the fleet, the supporters of Fáris Khán guaranteed for a term of five years an annual payment of £20,000 (Rs. 2,00,000). In consequence of these proposals a treaty was, in March 1758, arranged between the English company and Fáris Khán, under the terms of which it was agreed: i, that the English should establish Fáris Khán in the position of governor of Surat; ii, that the English should obtain command of the castle and should hold three of the city gates; iii, that Fáris Khán should bear the expenses of the war, and, besides, pay a sum of £20,000 (Rs 2,00,000) as a donation to the European troops. No action was, however, taken on this treaty in consequence, it would seem, of an anxiety on the part of the Bombay government not to offend the Maráthás.[1] Meanwhile, before the end of 1758, Mia Achan, who had, since his expulsion from the command of the castle by the Sidhi Masud in 1751, been living in Bombay, returned to Surat, and, with the support of the Sidhi Ahmad Khán and his own influence with certain members of the family of the late Teg-bakht Khán, in December 1758 expelled Ali Nawáz Khán from the government of the city, and established himself in his place. Soon after this occurred (January, 1759), the Government of Bombay were strengthened by the presence of a squadron of men-of-war under Admiral Pocock, who offered, in the event of any active measures being undertaken, to reinforce the company's armament with two ships. Mr. Spencer, who had meanwhile, on the death of Mr. Ellis (1758), succeeded to the chiefship in Surat, forwarded to Bombay a detailed account of the state of affairs in that city. From Mr. Spencer's account it appeared that the Sidhi Ahmad Khán was all powerful in Surat, leaving to Mia

Mia Achan, 1758.

[1] The object of this treaty was frustrated by the Maráthás sending their agent to the Bombay Government to hint that they meant to attack Bassein, and probably Bombay.—Grant Duff, II., 115.

Chapter V. History. 1733-1759.

State of affairs, 1759.

Achan not so much as the nomination of the officers properly belonging to him. That, moreover, the two rulers distrusted each other, as the Sidhi suspected Mia Achan of corresponding with the Maráthás. At the same time the government of the city was bad, and the traders, fearing above all things that the Maráthás might step in, petitioned the English chief to take command of the castle and fleet Trusting to this feeling in their favour, and strengthened by the presence of the squadron of men-of-war, the Government of Bombay determined to make an attempt to oust the Sidhi from Surat and gain his place as commanders of the castle[1] With the object of preventing the Maráthás from taking a part in the struggle, the Bombay government took the precaution of drawing up certain articles, under which the Maráthás agreed . i, that on account of the ruin to trade caused by his command of the castle, the Sidhi should be turned out of Surat; ii, that the English should take possession and have the sole command of the Surat castle, iii, that the English should have the sole power of appointing the governor of Surat city; iv, that the subsidy for the fleet (*tankha*) should be divided into three shares, one for the English, one for the Peshwa, and one for the nawáb of Surat; v, that the Maráthás should not take part in any quarrels or disputes that might arise in Surat. On hearing of the determination of the Bombay government, the chief members of the English factory at Surat, with the exception of Mr. Erskine, for whose safety the English had a hostage in the person of Mia Achan's son, left Surat and went to the bar of the Tápti. Some delay took place in despatching troops from Bombay, and it was not till the 15th February (1759) that the body of land forces, consisting of eight hundred European, one thousand five hundred native infantry, and a detachment of royal artillery, arrived off the mouth of the Tápti Captain Maitland, of the royal artillery, was in charge of the land forces, and Captain Watson, of the company's marine, in command of the armed vessels. The strength of the enemy was estimated at about two thousand Musalmáns, Hindus, Arabs, Patháns, and others in the service of the Sidhi, and the nawáb's corps four thousand strong There was always, however, the further risk that the nawáb, or the Sidhi, mistrusting their own strength, might fly to the desperate resource of calling in the Maráthás.

The English, 1759.

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English attack Surat, 1759.

The inner town and the castle had still to be taken. In order to attack them both at once, three mortars were planted at the distance of about seven hundred yards from the castle and five hundred yards from the wall of the inner town. About six in the morning the mortars began to play very briskly, and continued firing till two the next morning. The cannonade and bombardment put the besieged into such a consternation that they never returned one gun. During the attack several messages passed between the principal persons in the town and Mr. Spencer, the chief of the English company. Every effort was made to induce the friends of Fáris Khán to place him in charge of the city. But, after two days, the wish of the people seemed to be that Mia Achan should continue governor of the city, and Fáris Khán be appointed his deputy. It was, therefore, proposed to Mia Achan and his party, that on condition that Fáris Khán was made deputy governor, and the English established in the possession of the castle and the fleet subsidy, that Mia Achan should be continued as governor of the city Mia Achan accepted these terms, and on the 4th March 1759 the agreement was concluded. Upon this Mia Achan opened the Mecca gate in the inner wall, and the Sidhi, judging that further resistance was useless, agreed to give up the castle. His people were allowed to march out with their arms and accoutrements, and also to take away their valuable effects, including even the common furniture of their houses. These changes were effected with the greatest regularity, and the English were peaceably put in possession of the castle and subsidy. The killed and wounded on the side of the English did not amount to more than one hundred Europeans.[1]

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Chapter V. History. 1759-1876.

Section IV.—English Ascendancy (1759-1876).

Divided rule, 1759-1800.

The period that has passed since the capture of Surat by the English in 1759 contains two sections,—the first, lasting from 1759 to the close of the eighteenth century, when the governors of Surat, though appointed by the English, still to some extent held a position of nominal independence; the second, since 1800, when the whole burden of the administration was taken over by the English.

The forty years of divided rule at Surat with the English in command of the castle, and a nominally independent governor in charge of the city, comprise two periods of nearly equal length. The first, from 1760 to 1780, a time of active trade, when the city, increasing in size, is spoken of (1772) as one of the greatest emporiums of trade in India.[1] The remaining twenty years, a time of decline in the fortunes of the city, ending in the transfer of the greater part of its foreign trade to Bombay.[2] The chief causes of the prosperity of Surat during the first of these periods would seem to have been its superior order and security, as compared with the state of the districts of northern Gujarát and the sudden development of a great export trade in raw cotton to China.[3] Towards the close of the century, besides the general disorder over almost the whole of India, the anarchy in Persia[4] and Arabia, and the repeated wars in Europe, two local events, the storm of 1782 and the famine of 1790, combined to hasten the decline of Surat's prosperity.

During this term of forty years (1759-1800) there were altogether four city governors or nawábs in Surat. Of these, the first was Mia Achan, who, being governor when the English obtained the command of the castle,[5] was continued by them in charge of the city till his death in 1763 (February 27th). The next governor was Kutb-ud-din, the son of Mia Achan, who, on his appointment by the Bombay Government, without waiting for the patent of the court of Delhi, assumed office with the title of Mir Hafiz-ud-din Ahmad

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[1] Forbes' Or Mem., I, 145.

[2] Surat Papers, 278

[3] The export of raw cotton to China dates from about the year 1770, when, in consequence of a scarcity of grain, the Chinese government issued a decree forbidding the cultivation of cotton. In 1777 so important was this trade that, on an average, thirty ships a year, of from 500 to 1,000 tons each, sailed from Surat and Bombay to China. (Parsons, 261.) Towards the close of the century this trade fell off. The Surat cotton was (1787) so greatly adulterated that much of it sent by the company to China remained unsold. (Hové's Tours, Bom. Govt Sel., No. XVI, New Series, 132.) The Chinese again began to grow their own cotton, and, at the same time, Bengal had become a formidable rival to Bombay.—Milburn's Or Com., I, 218.

[4] One of the greatest blows to Surat trade was the capture of Bussorah by the Persians (April 1776). "The trade from Surat to that port has ceased," wrote Parsons in 1777, "nor," he adds, "will it be renewed until, by some revolution in Persia, the Turks become masters of it again."—Parsons, 262.

[5] The position of the English as commanders of Surat castle was confirmed by the following orders from the court of Delhi: I, an order, or *hasbul hukam*, under the great seal of the nawáb vizier of the court of Delhi, directing Mr. Spencer to take care of the Surat castle, and of the preservation of trade in Surat seas; II, 1759, August 25th, an order from the high steward, or *khansáman*, committing the charge of the king's fleet to the company; III, 1759, September 4th, an imperial patent, or *farmán*, investing the company with the command of the castle; IV, 1759, September 18th, an order for the regular payment of a yearly subsidy of £20,000 (Rs. 2,00,000) towards the maintenance of the fleet.

Governors of Surat, 1759-1800.

I. Mia Achan, 1759-1763.

II. Hafiz-ud-din, 1763-1790.

III. Nizám-ud-din, 1790-1799.

IV. Nasir-ud-din, 1799.

Khán Bahádur. On this occasion (1764) the agent of the governor of Surat was recalled from Delhi, and all connection with the court of the great Moghal ceased.[1] Hafiz-ud-din continued in office for twenty-seven years, and died in 1790. On the death of Hafiz-ud-din, the governor-general of the English company, deciding that he had a claim, on the ground of inheritance, chose Nizám-ud-din, the eldest son of Hafiz-ud-din, as the next governor. Contrary to the practice on a former occasion, application was made to the court of Delhi for a patent in favour of Nizám-ud-din. But no patent was granted, and, after waiting for two years, Nizám-ud-din was installed governor by order of the English. Nizám-ud-din remained in office for nine years, dying in 1799 (January 8th). Nizám-ud-din left an infant son, but the child survived his father only by about a month. It was then arranged with Nasir-ud-din, the brother of the late nawáb, that he should receive from the British the title of nawáb, and with it a yearly revenue of £10,000, and one-fifth more of the surplus net revenue of the city. At the same time all the powers of the governor of the city were to vest in the English.

During the whole of this period, though the management of Surat was nominally in the hands of the city governor, so entirely did all power centre in the English that, in 1774, a Dutch traveller wrote: "The English give laws to all, neither Europeans nor Indians can do anything without their special approbation. The governor of the city does not in this respect differ from the lowest inhabitant. He must obey their commands, although they show him externally some honour, and will not in public allow that he is subservient to them."[2] It was by their favour that, in 1759, Mia Achan was continued in his office as governor. Mia Achan's successor, Mir Hafiz-ud-din, owed his appointment (1764) entirely to the English. Two years later the English chief, Mr. Hodges, dissatisfied with the state of the city, was able 'in a manner to compel the nawáb' to unite with himself in the administration of the city two nominees of the English chief.[3] Again, in 1767 (April 4th), the Bombay Government received instructions from the court of directors to keep the power of the governor of Surat city within as narrow bounds as possible without offending

[1] Surat Papers, 75. There were three other candidates for the office of governor: (1) Fáris Khán, the deputy governor; (2) Ali Nawaz Khán, a former governor who, in 1758, was ousted by Mia Achan; (3) a certain Nur-ud-din Ali Khán

[2] Stavorinus, III., 59 Parsons (1777) says, "the government of Surat is, with reason, called double For instance, should the French, Portuguese, or Dutch ask for alteration of duties or increase of privileges, if the English chief is disinclined to grant their request he tells them to ask the nawáb, at the same time communicating to the nawáb what answer he is to give." "They all," he adds, "understand the farce" (Parsons, 250) So also Niebuhr (1763), "the English are the actual sovereigns of Surat They keep the nawáb of the city in a state of absolute dependence." (Pinkerton's Voyages, X, 215) Two incidents show how entirely, in 1777, the English controlled the actions of the nawáb. In February 1777 the nawáb informed the English chief that he intended to receive a visit from the Dutch director, Mr. Van-de-Graaf. But on the ground that there was no precedent for such a meeting, his request was refused. About the same time certain French ordnance and military stores which the nawáb had allowed to be landed were, by order of the English chief, reshipped.—Secret Diaries, 1877.

[3] Surat Papers, 470.

Chapter V. History. 1759-1876.

him,[1] and in the next year (1768, March 25th) were reminded that 'in great measure the sole management, or, at least, the superintendency of the city belonged to the English.'[2]

Chief events, 1759-1800.

During the term of double government (1759-1800) few events of general interest took place at Surat. In 1771 an English expedition was sent from Surat against the city of Broach. But the arrangements were ill-planned, and the attempt failed. In 1775 an English force under Colonel Keatinge arrived at Surat, and along with their ally, Raghunáthráv or Rághoba, advanced to Cambay. In 1776 Rághoba again retired to Surat, and remained there for a time under English protection. The next attempt of the English (1778) to enforce Raghunáthráv's claims upon Poona ended in the capitulation of Wargaon (1779, January). In consequence of this disaster Colonel Goddard, summoned to the help of the Bombay Government, arrived in Surat (1779, February 26th).[3] In the following year, on account of the discovery of a treacherous correspondence with the agents of Nána Farnavis, measures were adopted to prevent the Dutch from again taking any part in the affairs of Surat.[4] About the same time (1780, January), on the commencement of hostilities against the Maráthás, Mr. Boddam, the English chief, occupied the Peshwa's districts near Surat.[5] And very shortly afterwards (1780, February 15th), on the fall of Ahmedábád, in return for the grant of the Peshwa's territories north of the Mahi, Fatesing Gáekwár ceded to the English his share in the districts south of the Tápti. At Surat the timely arrival from Bombay of a body of European troops freed the city from the alarm to which the rumoured advance of Sindia to seize the person of Rághoba had given rise. South of Surat the country was ravaged by a body of Maráthás. This force had been stationed in the Konkan, and, in the absence of the British troops in northern Gujarát, came plundering northwards as far as the city walls. To free the country from these invaders, a detachment under the command of Lieutenant Welsh, an officer of the Bengal cavalry, was sent from Surat. This expedition was most successful. They surprised the Marátha camp, killed upwards of a hundred of the enemy, mortally wounded their leader Ganeshpant, took his guns, three in number, and carried off the whole of his baggage (1780, March 23rd). "The inhabitants," wrote Mr. Welsh, "seem exceedingly happy, and are coming in from all quarters.' Welsh, then, advancing southward reduced Párnera, Bagwára, and Indegarh, three forts in the neighbourhood of Daman much desired by the Bombay Government.[6] The districts south of Surat did not long remain in the hands of the British. Under the terms of the treaty of Sálbái (1782-1783) all Gujarát territory acquired by the British since 1775 was restored to the

[1] Surat Papers, 73.
[2] Surat Papers, 73.
[3] Grant Duff, II., 276.
[4] Grant Duff, II., 286.
[5] Grant Duff, II., 287.
[6] Grant Duff, II., 295.

Maráthás.[1] From this time till the close of the eighteenth century the districts originally subordinate to Surat remained, as before, distributed between the Peshwa and the Gáekwár.[2] In 1782 Surat was visited by a storm so severe that great part of the buildings of the city were destroyed. Though suffering from the decay of the spice trade with Java, and from the loss of its commerce with the Persian Gulf, Surat was to some extent able for a time to recover from this disaster. But a few years later the famine of 1790 still further impoverished the city, and a European war increased the difficulty and dangers of its foreign trade. With the decay of its commerce the revenues of the city declined. The nawáb, trusting to the English for protection, reduced the strength of his armed force and of his police, and made little attempt to protect the city or maintain order within its walls. So entirely had he lost control of the city, that in 1795, though a fierce religious fight between Hindus and Muhammadans raged for many days, no effort was made to restore order or to punish the offenders. As the nawáb had ceased to do his part in managing the city, and as the share of the revenues originally assigned to them was insufficient to meet the charges which the entire protection of the city entailed, the English, in 1800, took advantage of the failure of direct heirs to assume the undivided government of Surat.[3]

Chief events, 1759-1800.

During the early part of this period (1759-1780) Surat is described as 'gay, prosperous, and one of the principal cities of India.'[4] At the mouth of the Tápti, the bar was in the fair season (October to May) generally crowded with merchant ships from all the commercial nations of Europe and Asia.[5] At Surat itself the river was thronged by vessels, and its banks were busy with ship-building.[6] Round the city the country was fertile and highly cultivated, and on all sides it was approached 'by avenues planted with shady trees.'[7] From the river the city looked bright and lively. The French lodge and garden, the English and Dutch wharfs, and the venerable castle were gay with many and different coloured flags.[8] Between the double row of the city walls the space, with very few houses, was given up to large dwellings and rich gardens.'[9]

Aspect of the city, 1759 1780.

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[1] Grant Duff, II., 324.

[2] Surat Papers, 51 and 168.

[3] Surat Papers, 447.

[4] Forbes' Or Mem., I., 243 Compare Auquetil de Perron, who (1758) calls Surat one of the largest and most populous towns of India.—Káwasji's Translation, II.

[5] Forbes' Or. Mem., I., 245.

[6] Forbes' Or. Mem., I, 248.

[7] Of these, to the west, was the Dumas road passing into the city through the Mecca gate, to the south was the Navsári road entering through the Sara gate; to the east the Katárgám, and to the north-east the Fulpára roads But, among Europeans, the favourite resort was through the little gate to the north along the 'green walk,' a narrow and closely shaded lane, reminding Stavorinus (1775) of the 'country roads in his native and pleasant island of Walcheran.'—Voyages, II., 461.

[8] Stavorinus, III., 162; Forbes' Or. Mem, I, 245. Out of compliment to the court of Delhi, the English and Moghal flags were both displayed on different towers of the castle; and as admirals of the fleet the Moghal's standard was hoisted on the principal armed vessels in the Surat station.

[9] Carsten Niebuhr, 1763, Pinkerton, X., 211. Shortly after Niebuhr visited Surat, the town must have increased in size, as Forbes (1772) says "between the outer and inner

Chapter V. History. 1759-1876.

Aspect of the city, 1759-1780.

Within the inner walls the markets were filled with costly merchandize, and the crowded streets, with their rich carriages and gay palanquins, were not unfrequently enlivened by the pageant of a procession in honour of the nawáb or of the English chief.[1]

walls are many streets and houses" (Forbes' Or. Mem., I., 247); and Parsons (1777) found the intermediate space between the two walls almost as thickly peopled as the city (251). Of the gardens mentioned in the text, six—three private and three belonging to the nawáb—are specially noticed. The private gardens were one built by Mr Price; one at Fulpára, belonging to the English broker; and the Dutch garden, the finest (1763) of the European gardens, rich and charming in aspect (Niebuhr, in Pinkerton, X, 212). Of the public gardens there were I. The Mahmudi garden built by Teg-bakht Khán (1733-1746) in Salábatpura. This garden was (1774) surrounded by a high stone wall, about a quarter of an hour to walk round. The enclosure contained many buildings. Of these, one was of great dimensions, and the rest were separate quarters for each of the nawab's wives. In this garden were two artificial lakes, one 150 feet by 75, the other 60 feet by 12. At one end was a beautiful cascade 20 feet high. On either side of the waterfall fountains played across, forming a watery arch. The parts devoted to flowers were, according to the season, filled with balsams, poppies, and various flowers of an equal height, closely planted, and so disposed as to resemble a rich Turkey carpet (Forbes' Or. Mem., I, 252). These pleasure grounds were said to have cost nine lakhs of rupees (Niebuhr (1763) says £50,000. Pinkerton, X, 212). In 1774 they had already been allowed to fall into disrepair (Stavorinus' Voyages, II, 470). II. The next was the Begam Sáheb's garden, built by a sister of the emperor Aurangzeb about the year 1700. It was situated in Begampura, the south-eastern division of the suburbs, near the Navsari gate, and covered about fifteen acres, the whole enclosed by a wall. Between 1774 and 1777 this garden had fallen into deplorable decay. But even at its best it was, in Stavorinus' opinion, 'for gallantry nothing like the Dutch garden' (Stavorinus' Voyages, II, 470; III, 177). III. The third garden was laid out by the nawáb Hafiz-ud-din in 1775, outside the Katárgám gate to the north of the city. The nawáb called it Alla bág, or the garden of God. But in laying out the ground many houses were cleared away, and the people, displeased with this exercise of power, nick-named the place *Zulami bag*, or the garden of oppression, a title it still bears. In 1775 this garden had a saloon, an aviary, and a parterre of most fragrant flowers (Stavorinus' Voyages, II, 470). All the gardens suffered severely in the storm of 1782. The Mahmudi garden became a wreck, and a wreck it was allowed to remain. But before the year was over, the European gardens were again recovering their looks, and the *Zulami bag* was already restored to its former beauty. 'The grounds were more artless and beautiful than the generality of the Indian gardens. It was profusely adorned with trees, shrubs, and flowers, not only those indigenous to Hindustán, but with every variety procurable from China, Persia, and Europe. The apple and peach flourished with Chinese roses, and oranges were interspersed with mangoes, plantains, and tamarinds.—Forbes' Or. Mem., III, 408.

[1] Of one of these processions, Parsons (1777) has left the following description: First came buffoons, then music, trumpets, hautboys, drums, and kettle-drums, on richly caparisoned camels, next, a company of archers, musketeers, a body of cavalry, and many military officers riding stately steeds. Behind the officers, and surrounded by a guard of horse, went five elephants, each of them bearing a most splendid carriage decorated with scarlet cloth, gold lace, and embroidery. The first and second were empty, in the third was the nawab, and the fourth and fifth were, like the two leaders, only for show. Next came more great officers, among them 'Charles Bouchier, Esq., the present mint master,' each in a palanquin richly inlaid with gold, silver, ivory, and tortoise-shell, with a guard of eight men, four on either side richly clothed. Then, again, as in front, bodies of archers, musketeers, and horse guards, the whole making 'a gallant appearance' (Parsons, 265). Forbes gives a similar account (Forbes' Or. Mem., I, 261). Not many years before (1763) Niebuhr saw one of these processions. But it was on a smaller scale, and the only part of the show that interested him was to see an English merchant in the European dress, attended by a party of British soldiers, and, with the train of an Indian prince, conduct and regulate a religious festival of the Muhammadans. (Pinkerton, X., 213.) Of the grandeur of the English chief, Parsons tells how, on Christmas, the day was ushered in at sunrising by a discharge of 21 guns from the castle. At nine in the morning the head men of the French, Portuguese, and Dutch factories made their visits of congratulation. After the head men had left came the other members of the English, French, Portuguese, and Dutch factories; then the principal native gentlemen

Aspect of the city, 1759-1800.

But, in spite of its wealth and prosperity, Surat 'could not be called an elegant city.'[1] Of its dwellings and shops there were, except in one quarter of the city on the way to the Delhi gate, where there were none but stone buildings, few houses of any external good appearance, and in many places there were nothing but little huts made of bamboo and plastered with mud.[2] Again, the streets, though some of them were broad,[3] were not paved, and so became 'quagmires in the wet season,[4] and in the dry were 'dusty beyond endurance.'[5] The state of the lanes and alleys was worse. Here the people threw every kind of filth,[6] so that a man had to take great care where he walked.[7]

In 1783, six years after Parsons described the city, a great change had passed over Surat. The splendour of the nawáb's court, and the magnificence of other leading Muhammadan families, were no more. Neither Hindu nor Muhammadan pageantry now enlivened the streets. The effects of the war, that so long had raged in Europe and India, were most sensibly felt in Surat Her dockyards, storehouses, and bazárs were silent and forsaken. The usual calamities of war were heightened by the dreadful storm of 1782. Its ravages at Surat were tremendous. The tottering mansions of the Moghals, the slighter Hindu houses, and the mud-built cottages of the lower classes, alike gave way and buried many of their inhabitants in their ruins. The whole city was a scene of desolation.[8] A few years later (1788, September), Surat would seem to have recovered from this disaster, and its trade revived.[9] But before the end of the century

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and merchants—Muhammadans, Gentoos, and Pársis—paid their respects, each according to custom, receiving areca-nut wrapped up in betel-leaf The English gentlemen, both civil and military, dined with the chief. A train of artillery was drawn from the castle into the outer court yard of the chief's house, and after dinner, at proper intervals, five salutes of 21 guns each were fired, after five public toasts At night the chief gave a supper and a ball, attended by all the heads of factories, and many of the gentlemen and ladies of their respective nations as well as all the English —(Parsons, 259)

[1] Niebuhr (1763), in Pinkerton, X , 211 So also Forbes (1774) says "The public buildings are few and mean The nawáb's palace makes but a shabby appearance. The mosques and minarets are small, without taste or elegance. The Hindu temples are not more conspicuous, and the resting-places much out of repair."—Forbes' Or. Mem , I , 249.

[2] Stavorinus (1775), II., 463.

[3] There is the same difference of opinion about the streets at this time as there was a hundred years before. Parsons (1777) calls them broad (253); Niebuhr (1763) spacious (Pinkerton, X , 211) , Forbes (1774) (Or Mem , I , 146) narrow , and Hové (1788) very narrow and foul A few may have been broad, but most of them must have been narrow ; the dirty lanes of which Stavorinus complained, and which Auquetil de Perron found (1760, June 20th) knee deep in several places, and so dark that he was on the point of losing his way and being nearly drowned —Kávasji's Translation, 34.

[4] Parsons (1777), 253.

[5] Niebuhr (1763), in Pinkerton, X., 211.

[6] Stavorinus, II , 464.

[7] Parsons, 253.

[8] Forbes' Or. Mem., III., 405.

[9] Hové's Tours , Bom. Govt. Sel XVI., New Series, 176-177. With regard to the state of the rural parts of the district at this time, the land to the north of the Tapti is said to have been well inhabited and cultivated everywhere with *bájri*,

Chapter V. History. 1759-1800.

its condition again declined. The famine of 1790 pressed sorely upon it, and the religious riot of 1795 would seem to have been both sufficiently fierce and long enough continued to cause Surat serious injury. Trade, too, was deserting the city, and in the decline of his revenues the nawáb was allowing great part of the city walls to tumble into pieces and moulder away.[1]

Population, 1759-1800.

About the beginning of this period, after the final capture of Ahmedábád by the Maráthás (1757), Surat gained an important increase to her population. Many of the weavers of brocade and other rich stuffs, the embroiderers, jewellers, painters, and inlayers of ivory, ebony, and sandal-wood, meeting with no encouragement from the Marátha government, emigrated from Ahmedábád to Surat.[2] Later on, in spite of the decline of its trade, people were said (1797) to be still daily resorting to Surat from Cambay, Ahmedábád, and even from Poona.[3] In 1763 the Europeans estimated the population of the city at a million of souls. But, according to Niebuhr, this calculation exceeded the actual strength, probably by about two-thirds.[4] In 1774 Stavorinus mentions 500,000 as being not an entirely improbable estimate of the Surat population;[5] Parsons (1777) had never seen so populous a city as Surat. There were probably not fewer than from 400,000 to 500,000 souls. Of these, about three-fourths were Hindus. For the rest, besides the handful of Europeans, there were Muhammadans and Pársis, some Jew and Armenian families, and a great concourse of commercial Persians and Arabians, who came yearly on trading voyages from the Persian Gulf or the Red Sea.[6] In 1788 (September) Hové says that, besides Gentoos of different tribes, the town swarmed in every quarter with a great number of Moghals, Arabs, Pársis, Jews, Armenians, and Portuguese.[7] In 1797 the population was estimated at 800,000 souls.[8] At that time many of the lower classes would seem to have sunk into a miserable condition. Licensed liquor-sellers had a large body of the people in their power, and, taking the law into their own hands, without any reference to the regular courts of justice, made use of torture to force their debtors to pay them what they owed. Again, there were gaming-houses, 'scenes of daily quarrels and places of refuge for a set of knaves and thieves, who could in no other way shelter themselves even from the Surat police.'[9]

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juwár and a little rice. (Hové, 25) South of the Tápti, near Surat, the soil was naturally so rich that without manure the same plantations could be cultivated yearly (Hové, 26.) But further south, near Gandevi, there was little culture, the greatest part of the district, as far as the eye could reach, being one field of high pasturage. (Hové, 94.)

[1] Surat Papers, 168.
[2] Forbes' Or. Mem., I., 146.
[3] Surat Papers, 91
[4] Pinkerton, X, 212 and 214. At this time, besides Hindus and Muhammadans, Niebuhr mentions Pársis in great numbers, 'skilful merchants, industrious artizans, and good servants.' He also found numerous Indian Catholics, and a few Armenians, Georgians, and Jews.
[5] Stavorinus, II, 479.
[6] Parsons, 260.
[7] Hové's Tours, 176.
[8] Surat Papers, 91.
[9] Surat Papers, 89.

Surat revenues, 1759-1800.

The revenues of Surat during this period were derived from three chief sources,—land, customs, and town dues. Of the greater part of the land revenue, that shared between the Peshwa and the Gáekwár, no details have been obtained. But the yearly receipts derived from the remaining sources, the nawáb's share of the land revenue, the land and sea customs, and the town dues, would seem, during the latter part of the eighteenth century, to have declined from £103,874 (Rs. 10,38,740) to £83,573 (Rs. 8,35,730).[1]

During this period this portion of the revenues of Surat was shared by three claimants, the nawáb, the Maráthás, and the English As far as details are available, the nawáb's share would seem to have fallen from £67,013[2] (Rs. 6,70,130) in 1759 to £42,286[3] (Rs. 4,22,860) in 1800, the Marátha share from £12,750 (Rs. 1,27,500) to about £9,000 (Rs. 90,000); and the English share from £28,411 (Rs. 2,84,110) to £24,761 (Rs 2,47,610).[4] The following are the chief items that went to make up the total claims of the different sharers: I. The NAWAB; as collector of the greater part of the revenues drawn from the trade of the city, the nawáb assigned certain sums to the Maráthás and to the English. In 1759 his gross receipts are returned as follows:—

Nawáb's share.

(1.) Share of district land revenues granted to him by the Maráthás (1733-1746) £23,600 (Rs. 2,36,000).[5]

(2.) Town dues £42,623 (Rs. 4,26,230).[6]

(3.) Customs £25,650 (Rs. 2,56,500),[7] total £91,873 (Rs. 9,18,730).

From this total amount two sums—one of £6,000 (Rs. 60,000)[8] to the Maráthás, and the other of £16,411 (Rs. 1,64,100)[9] to the English—had to be taken, leaving a balance to the nawáb of £69,462 (Rs. 6,94,620). In 1798, after deducting the corresponding shares

[1] The following statement shows the main heads of the revenue during the years 1759 and 1800 —

Comparative Statement of Surat Revenue (exclusive of the Marátha share of the land revenue).

Head of Account	1759		1800 †		Remarks.
	Rs	£ s	Rs	£ s	
Nawáb's share of land revenue	2,36,000	23,600 0	2,10,628	21,062 16	* The town dues are for 1778. The English share of customs is an average Surat Papers, 34 and 61. † These figures are from Surat Papers, 296 and 276.
Town dues*	4,26,235	42,623 10	3,30,043	33,004 6	
Customs { Nawáb's	2,56,505	25,650 10	1,65,686	16,568 12	
Customs { English	1,20,000	12,000 0	1,29,373	12 937 6	
Total ..	10,38,740	103,874 0	8,35,730	83,573 0	

[2] Surat Papers, 183.
[3] Surat Papers, 46 and 52.
[4] Surat Papers, 270.
[5] Surat Papers, 359.
[6] Surat Papers, 34 and 61. These are 1778 figures.
[7] Surat Papers, 61.
[8] Surat Papers, 21.
[9] Surat Papers, 151.

Surat revenues, 1759-1800.

due to the Maráthás and to the English, the nawáb's total receipts are returned at £65,155 (Rs. 6,51,550). To this, land revenue contributed £25,050 (Rs. 2,50,500); town dues, £30,485 (Rs. 3,04,850); and customs and miscellaneous items, £9,620 (Rs 96,200).[1] This total was, however, subject to several reductions; and in 1800, on taking over the management of the nawáb's revenues, the English found that the net receipts were not more than £37,400 (Rs. 3,74,000).[2]

Marátha share.

In 1759 the Marátha share[3] of the city revenue amounted to £12,750 (Rs. 1,27,500), to which the one-third share of customs contributed £8,550 (Rs. 85,500), and the share in the town dues £4,200 (Rs. 42,000)[4] About the year 1786 the Maráthás seem to have insisted on an increase in their share of the town dues, recovering under this head a total amount of £5,430 (Rs. 54,300).[5] On the other hand, their share of the customs and other branches of revenue had meanwhile fallen to £2,490 (Rs. 24,900), so that their total receipts amounted only to £7,920 (Rs. 79,200).[6] Subsequently some additions would seem to have been made to the Marátha share, as, at the close of the century, their total claim amounted to £8,888 (Rs. 88,880), of which £5,907 (Rs 59,070) were derived from town dues, and the rest were customs and miscellaneous revenue.[7]

English share.

In addition to the revenue of from £10,800 (Rs 1,08,000) to £13,000 (Rs. 1,30,000), which, under the provisions of their charter of 1716, they drew from their special custom-house,[8] the English, in 1759, on gaining command of the castle of Surat and receiving the charge of the emperor's fleet, obtained a revenue of £16,411 (Rs 1,64,110).[9] This assignment was, however, insufficient to meet the expenses connected with the castle garrison and the charge of the fleet, which during the first five years of their command (1759-1764) ranged from £21,500 to £24,500 (Rs. 2,15,000 to Rs. 2,45,000). In the decline of revenue towards the close of the century, the English castle and fleet assignments fell from £16,411 to £10,800 (Rs 1,64,110 to Rs. 1,08,000).[10] The cost of the maintenance of the castle and fleet remained undiminished; and in 1796, it was calculated that during

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[1] Surat Papers, 163.

[2] Surat Papers, 183.

[3] The Marátha share dates from the contested succession in Surat (1748-1751). In 1751 the Gáekwár was compelled to divide his receipts with the Peshwa.

[4] The one-third part of the town dues was, during the reign of Teg bakht Khán (1733-1746), commuted for a yearly payment of £4,200 —Surat Papers, 358.

[5] Surat Papers, 359, 361.

[6] Surat Papers, 361.

[7] Surat Papers, 427.

[8] Details of the receipts from the English custom-house will be found below under the head of Customs.

[9] Surat Papers, 27.

[10] This sum was composed of two items: 1. An assignment of £4,396 (Rs. 43,960) to meet their expenses as commanders of the castle. 2. A subsidy of £12,014 (Rs. 1,20,140) as admirals of the fleet. (Surat Papers, 151.) The actual receipts for 1760-61 were somewhat different Fleet subsidy, £10,666 (Rs. 1,06,660); castle revenue, £4,284 (Rs. 42,840); total £14,950 (Rs. 1,49,500).—Surat Papers, 26.

the preceding thirty-seven years the English had, in the discharge of the duties of their office, spent a sum, £699,825 (Rs. 69,98,250), in excess of the subsidies received[1] About this time (1795), with the object of lessening the burdens on Surat trade, and by changes in their commercial arrangements, the English incurred a fresh yearly deficit of £16,000 (Rs.[2] 1,60,000). So great was the balance against the English that, in spite of the changes introduced (1800) in the management of Surat, by which the English were calculated to have gained an additional yearly revenue of £14,141 (Rs. 1,41,419), the expense of the management of Surat still exceeded the receipts by a sum of £13,634 (Rs 1,36,340); the expenses amounting to a total sum of £94,569 (Rs. 9,45,690), and the income to £80,935 (Rs. 8,09,350)

Of the three chief heads of revenue (i, land revenue[3]; ii, town dues and iii, customs) the following details are available :— Revenue details.

In addition to the sum of £23,600 (Rs 2,36,000) made over to him by the Maráthás about the year 1735, the nawáb in 1785 obtained, through English influence, an assignment on the revenues of the Olpád sub-division, estimated at a yearly sum of £4,000 (Rs. 40,000)[4] On the other hand, the general decay of the district was such that, in 1797, the nawáb's territorial revenue was estimated at a sum of not more than £17,250 (Rs. 1,72,500). In 1800, when the British took over the management of the nawáb's affairs, they found the gross land revenue to be £21,063 (Rs. 2,10,630), and the net revenue £12,463 (Rs. 1,24,630) In the Peshwa's districts, except in the sub-divisions of Wasrávi and Olpád, where the nawáb's officer collected his master's share, the whole of the land revenue was, in the first instance, realized by the Peshwa's agent, or *pandit*, and the nawáb's assignment handed over to his representative, or *amaldár* In the Gáekwár's villages the assignment was collected by the nawáb's officer partly at the villages, and partly on the produce of the village when brought into town.[5] Land revenue.

The special town dues, or *mokát*, introduced by Teg-bakht Khán about the year 1735, were in 1778 estimated to yield a revenue of Town dues.

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[1] Surat Papers, 26. This falling off was partly in the castle receipts which, during the five years ending with 1795, averaged £3,500 (Rs 35,000), as compared with £4,300 (Rs 43,000), the amount received in 1760, and partly in the fleet subsidy, which had suffered a corresponding fall from £10,666 (Rs 1,06,660) in 1760 to an average of about £7,300 (Rs 73,000) during the five years ending with 1795 – Surat Papers, 82

[2] Surat Papers, 10 The changes that caused this fresh deficit were i, reduction of custom dues from 5½ to 2½ per cent Of this measure some details will be found below under the head of Customs, ii, doing away with the profits of shipping (see below under the head of Trade), and iii, the appointment of an additional establishment under the name of the commercial board

[3] Land revenue refers only to the nawáb's share No details of the land revenue collected by the Maráthás are available.

[4] Surat Papers, 51 and 618

[5] Surat Papers, 366. The holders of estates would seem to have had considerable difficulty in recovering their rents In the village of Umra, the Bakshi could collect his dues only when not interrupted by the Maráthás, and that, too, only by sending a party of soldiers.

Chapter V. History. 1759-1800. Revenue details.

£42,623 (Rs. 4,26,230),[1] and in 1800 a corresponding amount of £33,004 (Rs 3,30,040)[2] The articles on which these duties were imposed are, in the accounts for 1800, arranged in three classes: i, articles paying town dues only; ii, articles paying customs as well as town dues; iii, articles paying a certificate tax in addition to town dues. To the first class belonged articles of agricultural produce charged at rates varying from one to five per cent on grain, and rising to 10·55 per cent on clarified butter, 11 75 per cent on sugar-cane, and 30 10 per cent on tobacco.[3] Under the second class 101 articles are enumerated, chiefly dyes, preserved fruit, and manufactured goods. These, in addition to a uniform customs rate of two and a half per cent, paid town dues for the most part of either two or four per cent. A few articles were charged at much higher rates; such as assafœtida, 8 33 per cent; myrabolans, 8·82 per cent; bees'-wax, 10·67 per cent; clarified butter, 11·87 per cent; and lac, 30 98 per cent.[4] For the year 1800 the total value of the trade in articles belonging to this is returned at £38,386 (Rs. 3,83,860), to which coarse cotton-cloth or *dhotis*, contributed £8,878 (Rs 88,780); fine cotton-cloth, or *báftás*, £6,191 (Rs. 61,910); dates, £4,100 (Rs. 41,000); and jingelly oil, £2,958 (Rs. 29,580).[5] Under the third class a list of 115 articles of every description is given, which, before the levy of town dues, were imported either free, or under a reduced custom rate of three-quarters per cent.[6] The goods privileged to pass at the specially easy certificate rates may be arranged under three heads according as they were imported . (*a*) through the English, or *láti*, custom-house; (*b*) through the nawáb's sea, or *furja*, custom-house; (*c*) through the nawáb's land, or *khuski*, custom-house. (*a*) On goods imported through the English, or *láti*, custom-house the town dues varied, as a rule, from one and three-quarters to about three per cent, though pomegranates and raisins were charged at five per cent, assafœtida at nine per cent, and lac at as much as 46 63 per cent. The total value of the goods imported under this head in 1800 is returned at £33,773 (Rs. 3,37,730), to which cochineal contributed £11,051 (Rs. 1,10,510), and China silk £9,325 (Rs. 93,250). (*b*) On goods imported under certificate through the nawáb's sea custom-house, or *furja*, a certificate tax of three-quarters per cent was charged. With the exception of indigo, which paid 4¼ per cent, the town dues varied from 1½ to 2¼ per cent. The total value of the articles imported under this head was £17,053 (Rs 1,70,530), to which *chádars* contributed £12,756 (Rs. 1,27,560). (*c*) In addition to a cer-

[1] Surat Papers, 34.

[2] Surat Papers, 356.

[3] Surat Papers, 390.

[4] Surat Papers, 374-375.

[5] Surat Papers, 374-375.

[6] The goods to which Moghal certificates were ordinarily applicable are said to have been *dhotis* from Cambay, Ahmedábád, and Gogo; silk *patolas* from Pátan, silk goods from Burhánpur and Bengal, and various fabrics from Broach. (Surat Papers, 70.) The origin of this ¾ per cent tax was that up to 1795 these goods had paid the two *ekotrds*. They were then freed, and the merchants, afraid that the Maráthás would stop their trade on account of their loss of revenue, agreed to pay a tax of ¾ per cent, ¼ for the Maráthás, ¼ for the nawáb, ¼ for the English.—Surat Papers, 154.

tificate duty of three-quarters per cent, the articles imported through the *khuski*, or land custom-house, were charged with town dues, varying in amount from ¾ to 3¾ per cent. Only in the case of chintz did the town dues levied on goods of this class rise as high as five per cent. The total value of the articles imported under this head is returned at £30,386 (Rs. 3,03,860), to which yarn contributed £21,613 (Rs. 2,16,130).[1]

Revenue details.

During this period customs were collected at Surat in three distinct custom-houses. Of these, two were in the hands of the nawáb, and one belonged to the English. Of the náwab's custom-houses, one, called the *furja*, was a sea custom-house; the other, called the *khuski*, was a land custom-house. The English custom-house was a sea custom-house, and was called the *láti*. Here, under the provisions of their charter of 1716, the English were allowed, on payment of a yearly tribute of £1,000 (Rs. 10,000), to pass their own wares free of charge, and to recover dues from merchants who traded as their dependents.[2]

Customs, 1759-1800.

It was at first (1759-1790) the rule for goods brought into Surat, either through the land or sea custom-house, to pay duty, and when again exported to pay duty a second time. Towards the close of the century (1790-1800) this practice of levying duty twice on the same goods was, in great measure, given up. First, at the English custom-house, and afterwards, at the nawáb's sea custom-house, merchants came to be allowed, without a fresh charge, to export by sea goods that had already paid an import duty at the same custom-house. One consequence of this privilege was that merchants, having to send inland goods brought into Surat by sea, avoided the land custom-house fees by sending the goods out of Surat by the same custom-house through which they had been imported, and then, landing them at some convenient point on the coast, had them conveyed to their destination. Similarly, by a special exemption, piece-goods, the chief article of trade imported into Surat by land, were freed from duty at the land custom-house.[3]

The same rates were levied at the nawáb's sea and land custom-houses But these rates were from time to time changed and were not uniform, merchants of different classes being charged at varying rates. From 1759 to 1763 the whole amount levied at the nawáb's sea and land custom-houses was composed of two items, the regular custom-house charge and two special cesses. The regular custom-house charge was recovered from the different classes of merchants according to the following scale: 2½ per cent from Musalmáns, 3½ per cent from Armenians, and five per cent from Hindus.[4] Of the two special cesses, or *ekotra*, each of one per cent, one was first levied by Teg-bakht Khán about the year 1746. The other was introduced

Nawáb's rates, 1759-1800.

[1] Surat Papers, 377.
[2] Surat Papers, 61 and 153.
[3] Surat Papers, 223.
[4] Surat Papers, 231.

Chapter V. History, 1759-1876.

by the English in 1759 (March 14) to repay the charges incurred by them in the capture of Surat.[1]

Revenue details.

The proceeds of the first cess, levied only on Muhammadans with some special exceptions, and on Hindus, belonged entirely to the nawáb;[2] the revenue of the second cess, collected from Armenians as well as from Hindus and from all Muhammadans, was enjoyed by the English The total charges paid by the different classes of traders were, therefore, for Musalmáns 4½ per cent, for Armenians 4½ per cent, and for Hindus seven per cent.

In 1763 (January 4), with the view of equalizing these burdens, Mr. Hodges, the chief of the English factory, arranged that the rates paid by Hindus should be reduced to six per cent, and that those paid by Musalmáns should be raised to 5½ per cent.[3] The rates introduced in 1763 remained in force till 1792.

English rates, 1759 1800.

Meanwhile at their custom-house the English had been charging their dependent merchants regular custom dues at the rate of four per cent To this were added two special cesses of one per cent each Of these cesses, one was first levied to repay the charges incurred by the English during the disputes of 1750, the other was a one per cent convoy duty, making altogether a total uniform rate of six per cent [4] In 1791 orders were received from England to reduce the rates charged at the English custom-house to 2½ per cent. This change was carried out, and in the following year the new rates were extended to the nawáb's custom-houses.[5] It was found, however, that the revenues of Surat could not bear so serious a reduction of customs rates, and in 1799, when the whole management of Surat affairs came into the hands of the English, it was found necessary again to increase the customs charges In 1800, on account of the claim of the Maráthás to share in the revenues of the *furja*, or nawáb's sea custom-house, it seemed advisable to maintain the three custom-houses, charging at each a uniform rate of four per cent. To this was added at the *láti* a one per cent fee for marine charges, and at the *furja* and *khushi* custom-houses a one per cent cess, representing the former English war charge abolished in 1794.[6] Of

[1] Surat Papers, 181 This English cess was a revival of a one per cent tax levied in 1752 by the government of Surat, to provide funds for the payment of the £20,000 promised to the English under the terms of the treaty of that year This tax was continued till 1758, when the payment of the £20,000 was completed.—Surat Papers, 231, 268

[2] Surat Papers, 181 But at Surat Papers, 70, the Maráthás are said to have had a one third share in part at least of the proceeds of this cess.

[3] Surat Papers, 258

[4] The yearly revenue derived by the English from their custom-house varied from £10,800 (Rs 1,08,000) to £13,000 (Rs 1,30,000) —Surat Papers, 61.

[5] The effect of this change was to reduce the revenue derived from the English custom house from £12,976 (Rs 1,29,760) to £6,757 (Rs 67,570), and the English share in the nawáb's customs from £3,247 (Rs 32,470) to £1,969 (Rs. 19,690).—Surat Papers, 271

[6] Surat Papers, 181 On the basis of the trade of the four preceding years the total customs revenues for 1800 were estimated at £29,506 (Rs 2,95,060) Of this total, *láti* collections are estimated to yield £12,937; *furja* collections, £8,056, *khushi* collections, £4,838, and the Gulf trade, £3,674. Some particulars regarding this last item are given in the text —Surat Papers, 276

additional charges there was, besides several exactions by the nawáb and the officers of the customs houses,[1] a special arrangement in favour of the English. This provision was, that as admirals of the fleet they should enjoy the monopoly of providing tonnage for the trade between Surat and the Persian and Arabian Gulfs. This monopoly, which was estimated to be equal to a charge of six per cent on the trade, was abolished in 1795, and in 1800, in its place, a special cess of two per cent was imposed.[2]

Revenue details.

On the other hand, besides the chances of evading the full duty, to which the variety of class rates and the rivalry of the two sea custom-houses gave rise, there were certain acknowledged exemptions which greatly lightened the burden of the duties on trade. These exemptions were three in number: i, on goods passed with an English certificate through the English custom-house; ii, on goods passed with a Moghal certificate, or *dáhhla*, iii, on trade conducted under charter, or *farmán*, privileges. 1. The practice of allowing special exemptions at the English sea custom-house was not introduced till 1791, when it was arranged that the payment of customs dues at any one English settlement should pass the same goods free of charge through other English custom-houses.[3] Under this arrangement it was estimated that at Surat, during the four years ending with 1800, goods to the average yearly value of £291,436 (Rs. 29,14,360) were passed free of custom duties, and in return that Surat goods valued at £201,110 (Rs 20,11,100) were exempted at other ports.[4] 2. The court of Delhi had from time to time granted, in favour of certain Musalmán merchants, freedom from the payment of customs dues. The average total yearly value of goods imported under these certificates during the four years ending with 1800 is returned at £80,683. Of the whole quantity some paid duty at the rate of 2½ per cent, some at the rate of ¾ths per cent, and the rest was allowed to pass free of all charge. The only merchant who, at this time, held a certificate freeing him from the payment of all duty, was Mulla Abdul Fate, grandson of the Mulla Muhammad Ali who (1729-1733) played so important a part in the affairs of Surat. In 1800 it was determined that all exemptions under Moghal certificates should cease. It was at that time arranged that Abdul Fate should receive, as compensation for the loss of his privilege, a yearly pension of £100 (Rs. 1,000).[5]

Exemptions.

During the whole of this period the French, Dutch, and Portuguese traders at Surat, in consideration of their charter, or *farmán*, privileges would seem to have continued to trade, paying duty at the rate of only 2½ per cent. From 1759 to 1798, goods belonging to these privileged companies are said to have paid 2½ per cent duty

European privileges, 1759-1800.

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[1] Under the names of *balloy* and *rezqu*, the nawáb and his officers received certain cesses and allotments.—Surat Papers, 238.

[2] Surat Papers, 181.

[3] Surat Papers, 232.

[4] Surat Papers, 278

[5] Surat Papers, 282.

Chapter V. History. 1759-1876.

and nothing more.[1] In 1800 the custom-house regulation (No. IX. of 1800), then introduced, provided (rule VII., Surat Papers, 233) that the trade of the European nations possessing charters from the great Moghal should in no way be interfered with, nor the existing provisions altered.[2] In accordance with this rule, in the estimates drawn up in 1800 of the probable custom-house revenue, Portuguese merchandize is entered as charged 2½ per cent.[3]

Administration of the city, 1759-1800.

In the collection and management of the city revenues the powers of the English and of the nawáb were well marked and distinct. But in the other departments of government, the maintenance of public order and the administration of justice, the functions of the different members of the double government were less clearly defined.

Maintenance of order.

Trusting to the English to protect the city as well as the castle, the nawábs gradually reduced the strength of the troops employed by them to guard the city walls. In 1759 there are said to have been in the nawáb's pay from two to three thousand troops. But by the close of the century the number had declined to 750.[4] In 1800 the nawáb's force was disbanded, and their posts at the gates of the city were occupied by British troops.[5]

Police.

In matters of police the government of Surat was, at this time, responsible only for the management of the city of Surat. As early as the beginning of Teg-bakht Khán's rule (1735) the Maráthás agreed to make over to him a fixed assignment on the district revenues, and from that time his responsibility for the state of the country beyond the suburbs of the city ceased. From this time the *faujdár*, or district police officer, no longer moved about the country round Surat, but, instead, held his court in the suburbs near the Gopi-pool.[6] So disturbed was the country that, even in times of peace, in passing (1788) from Surat to Broach, Hové the traveller required a guard of sixteen horsemen. He got safely to Broach. But shortly after, on his return southward, he found the guard-room at the Kim in the hands of a chief of banditti, who waylaid and robbed all who passed. Although, he complains, this was so near Surat, and every person was acquainted with the depredations this bandit practised, no steps were taken to put a stop to them.[7]

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[1] Surat Papers, 258 Europeans trading under *farmán* privileges paid neither Teg-bakht Khán's cess (1746) nor the English war cess (1759). Teg bakht Khán's cess was levied only on Hindus and on some Muhammadans The English war cess was levied on Hindus, all Muhammadans, Armenians, and Jews. The expression (Surat Papers, 231) 'every body was obliged to pay the English war cess,' seems to mean every Muhammadan.

[2] Surat Papers, 234.

[3] Surat Papers, 240, 253, 274, 276, 277

[4] Surat Papers, 22. 'The details for 1733 are, besides peons, 1,500 foot and 400 horse, the whole force kept up at a cost of £19,480 (Rs. 1,94,800). (Surat Papers, 25.) The details for 1799 are 444 disciplined troops in red, 21 horsemen, and the rest armed peons Besides this force there would seem to have been about 150 unarmed peons. The whole kept up at a yearly cost of about £1,032 (Rs. 10,320).—Surat Papers, 461.

[5] Surat Papers, 488

[6] Surat Papers, 359.

[7] Hové's Tours, 32.

Administration of the city, 1759-1800.

The functionary who was originally responsible for the management of the city in police matters was the *kotwál*. This officer was appointed by the court of Delhi, and with the decline of his master's authority in Surat the *kotwál's* powers were also curtailed. As a check on the *kotwál*, the governor of Surat, when he began to assert his independence (about 1735), appointed a commissioner, or *amin*, and with the downfall of the emperor's authority in Surat the nawáb's representative entirely superseded the *kotwál*.[1] In the struggles that took place on the death of Teg-bakht Khán (1746-1751) the commanders of the castle established a right to control the city governor in matters of police. And in 1759, when the English became commanders of the castle, they found that this command carried with it the right to appoint a deputy governor, or *náib*, whose chief duty it was to take charge of the city police.[2] In consequence of the fall in the city revenues, the office of deputy was abolished in 1777, and its emoluments made over to the nawáb.[3] The abolition of this office would seem to have been a mistake. The city police became less and less efficient till, in 1795, they were found to be powerless either to suppress the riot that took place in that year, or bring the chief offenders to punishment.[4]

At the close of the century, when the entire management of the city was taken over by the English (1800), they found that the city police were, in addition to the stations at the city gates, distributed in small posts of one or two men, stationed at the intersection of the principal streets. These men were under the orders of the superintendent, or *amin*, and had no fixed wages, being paid by contributions from weddings, caste feasts, Hindu festivals, carts and hay.[5] Under the arrangements introduced in 1800, a body of police 100 strong was raised and placed under the charge of the magistrate, who in police matters was made responsible for the management of the city. The pay of the new body of police was fixed at the monthly rate of 10*s*. (Rs. 5).[6]

Justice.

The administration of justice was irregular and complicated. The Maratha tribute collectors and the representatives of the different European trading companies assumed the power of protecting their own dependents and punishing other classes of the people.[7]

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[1] Surat Papers, 360.

[2] Surat Papers, 83 and 90. The deputy governor would seem, like the commissioner, or *amin*, to have been first appointed when the governor assumed the title of nawáb. Besides the charge of the city police, the deputy, or *naib*, held the keys of the sea custom-house, or *furja*, and had power to seal goods and grant passes.—Surat Papers, 40-44.

[3] The funds allotted to the deputy had dwindled from Rs. 1,17,940, in the time of Safdar Khán (1751-1757), to Rs. 44,785 in 1777. (Surat Papers, 40-44.) At this time (1777), on the subject of police, Parsons (250) says, "the police is in the hands of the nawáb. But when the natives think themselves aggrieved, they fly to the English chief for redress, who, when he sees occasion, seldom fails to relieve them by remonstrance to the nawáb, which always enforces compliance."

[4] Surat Papers, 83.

[5] Surat Papers, 183.

[6] Surat Papers, 164 and 494.

[7] Surat Papers, 137.

Chapter V. History. 1759-1876. Administration of the city, 1759-1800.

Licensed liquor-sellers are also said to have confined and punished people of the lower classes who owed them money.[1] Justice was expensive: the first object of both civil and criminal courts was to draw a revenue from the cases brought before them. In criminal matters fines yielded a yearly revenue of about £4,000 (Rs. 40,000). In civil cases the costs are said to have amounted to one-half of the value of the property under litigation.[2] Besides this, the process of the nawáb's courts was most irregular, and matters were complicated by the separate jurisdiction to which, as commanders of the castle, the English had succeeded.[3] The reform of the administration of justice was one of the measures which, towards the close of the century, the English most pressed upon the attention of the nawáb They proposed that for the whole city one general court of justice should be established. This court was to be under the joint superintendence of two judges, one appointed by the nawáb, the other chosen by the English. Appeals were to lie first to the nawáb, and finally to the Government of Bombay[4] This proposal was not, however, carried out, and, under the arrangements completed in August 1800, an officer was appointed styled judge and magistrate, vested in the former capacity with civil, and in the latter with criminal and police jurisdiction in the city and port of Surat, the town of Ránder and their dependencies.[5]

Civil suits would seem to have been decided either by the *amin* or in the two supreme courts. There was finally the religious judge of the Musalmáns, the *káji*, in whose office marriages and deeds of sale were registered, and before whom, among the lower classes, domestic quarrels and disputes were decided Under the English the chief or head of the factory exercised two distinct sets of judicial functions. As head of the factory he was, 1, a justice of the peace in matters connected with English subjects; 11, as commander of the castle he would seem to have had considerable but ill-defined judicial powers In this latter capacity the English chief was specially entrusted with the protection of weavers, artizans, and labourers,[6] and, besides this, was, according to the custom of the city, bound to hear, and, if possible, redress the grievances of any

[1] Surat Papers, 89.

[2] Surat Papers, 39 and 137.

[3] The following are the details of the arrangements for administering justice (1798) · Under the nawáb there were two chief tribunals, courts of appeal apparently, both in civil and criminal matters. These were 1, the *darbar adalat*, nominally under the superintendence of the nawáb's brother , 11, the nawáb's personal court, or *adalat karrai huzuri* Of subordinate courts there were in criminal matters 1, the city police court, known as the *chebutra kotwali* or *amni*. The powers of the officer in charge of this court were at first only criminal, but afterwards he took cognizance of civil as well as of police matters ; 11, the rural police court, or *faujdári kachery* This was also called the Chorasi station or *thánd*, and was held at the Gopi-pool by the nawáb's brother In revenue matters there was the paymaster's court, *karrai sarkár bakshi*, a tribunal said to have been oppressive and greatly dreaded Zafirad Khán, the other chief revenue collector, also acted as judge or arbitrator in questions brought before him.—Surat Papers, 136, 137, 360.

[4] Surat Papers, 156.

[5] Reg. I. of 1800, Sec. II.

[6] Surat Papers, 91.

one who came to the flag-staff in the castle green and claimed his protection.[1] As a rule, when such petitions were of the nature of civil complaints, the chief would seem to have referred the question in dispute, in the first instance, to the nawáb's brother, or to the police commissioner, or *amin*; afterwards, should these courts fail to redress the grievance, the chief settled the matter[2] as he thought right. Caste disputes were referred to the heads of the castes.[3] Questions of crime, of which the chief could not take cognizance as a justice of the peace, were referred for settlement to the nawáb's criminal courts.[4] In 1796 petitioners would seem to have been prevented from applying for redress to the English chief. A proclamation was accordingly issued, stating that the chief was at all times ready to hear complaints, and a gong was hung up in front of his dwelling for petitioners to strike when they wanted to attract attention.[5]

Products of Surat, 1759-1800.

With regard to the produce and manufactures of Surat, it would seem that, in spite of the disordered state of the province, the lands at least in the neighbourhood of the city were (1772) highly cultivated. The fields, generally enclosed by hedges and fringed by lines of mango and tamarind trees, besides wheat, rice, millet, and other Indian grains, yielded crops of cotton, hemp, tobacco, plants for dyeing, and a variety of seeds for pressing oil. The gardens produced cabbages, cauliflowers, pease, French-beans, artichokes, asparagus, potatoes, carrots, turnips, lettuce, and salads in abundance and perfection, besides a variety of indigenous roots and vegetables.[6]

Though the manufactures of Surat are said (1789) 'not to be compared to those of the towns of northern Gujarát,'[7] they were of considerable importance. Besides its brocades, which, according to Parsons (1777), were the best of their kind, very beautiful, with gold and silver flowers of various patterns on a silk ground,[8] Surat itself was famous for its coarse and coloured cottons, while Navsári vied with Broach in the fineness of its muslins. The provinces near the city, says Niebuhr (1763), "are full of manufactures of all sorts."[9] Surat still continued famous for its 'most elegant targets' of rhinoceros' hide. The skin was brought over from Arabia, and polished in Surat till it shone like tortoise-shell; it was then shed

[1] Surat Papers, 123.

[2] Surat Papers, 144.

[3] Surat Papers, 143.

[4] Surat Papers, 143.

[5] Surat Papers, 144.

[6] Forbes' Or. Mem., I., 269. Stavorinus (1774) praises the industry of the Surat cultivators, 'scarcely a piece of uncultivated ground is to be seen' (II. 453). Besides the crops mentioned by Forbes, he notes tobacco, and praises the wheat, which was sometimes sent to Batavia (II. 455). The tobacco, according to Parsons (1777), was dried with great care, and became of a beautiful colour and a most agreeable fragrant smell. (Travels 258.) This tobacco was sent from Surat to Mocha.—(Travels, 284).

[7] Surat Papers, 22.

[8] Parsons, 261.

[9] Niebuhr, in Pinkerton, X., 216.

with silver nails, whose heads were full an inch in diameter and curiously wrought. The targets sold at from £3 to £5 each Arabia was the chief market for the shields, where every man who could afford to purchase one would not go without.[1]

Ship-building, 1759-1800.

Surat ship-building was at this time an important industry. Many of the ship-builders were Pársis.[2] The yards were places like graving-docks, hollowed out on the bank of the river. While the ship was building, these ships were closed towards the river by an earthen dam. When the work of building was completed, the dam was taken away, and the water coming in floated off the ship. In 1777 Stavorinus speaks of a ship being built in the English yard about 100 feet long, about 190 lasts in burden, and costing £7,500 (Rs 75,000). Though they were dear to build, the Surat ships were valuable from their great endurance, being able to navigate the sea for a hundred years together[3] The largest ships were those engaged in the China trade. These (1777) varied in size from 500 to 1,000 tons burden. Those that sailed to Arabia and Persia were smaller.[4] Except for certain peculiarities in the details of construction, the Surat ship-builders, both in the form of the ship and in the style of rigging, would seem to have closely followed European models[5] Stavorinus describes one of their ships, a vessel of 135 feet in length, as built like a frigate with three masts, and cut away full as sharp at the bow as a European ship. The stern was said to have originally belonged to an English ship, and was like the pictures of seventeenth century vessels It had two decks, likewise a quarter-deck and a forecastle The gun-room was very large, but the height between decks was scarcely five feet The cabin was adorned with a great deal of carving, and not the least piece of wood was left without some foliage or imagery. Upon the quarter-deck were little huts or cabins, and in front a large awning. The bowsprit was fixed at the right side of the stem. The builders of these ships would seem to have chiefly been Pársis, and their owners natives of Surat

[1] Parsons, 272

[2] Ham New Act, I, 161

[3] Stavorinus tells of a ship called the 'old ship,' in 1702, which up to 1777 made a yearly voyage to the Red Sea (Voyages, III, 17-23.) Compare also Niebuhr, in Pinkerton, X, 215, and Forbes' Or Mem., I, 146

[4] Parsons, 261

[5] Niebuhr (1763) says "the Indians are in ship-building servile imitators of the Europeans" (Pinkerton, X, 216) But Stavorinus, with a practical knowledge of the subject, notices several peculiarities Of these the chief were that most of the timbers were fitted in after the planks had been put together In placing the planks great care was taken When the edges of a plank fitted exactly in their place, they first rubbed a glue, which by age became as hard as iron, and then covered it with a thin layer of capoc After the capoc had been applied, they united the planks so firmly and closely with pegs that the whole side seemed a single piece of timber. To preserve them from the salt water, the sides of the ships were occasionally smeared with wood oil Their bolts were peculiar, of country iron, very tough and flexible. As to the rigging, the masts were generally made of *pun* wood (Calophyllum angustifolium) from the Malabar coast Except the cables, for which coir was much esteemed, the cordage of all good ships came from Europe. For sails coarse cotton cloth, or *doti*, served well, for, though not so strong and lasting as canvas, it was more pliant and less apt to split The anchors were mostly European.—Stavorinus III., 17-23

At the same time their captains and officers were (1777) English, they traded under English passes, and flew English colours.[1]

The chief articles of sea trade were (1789) of imports, European goods[2] and hardware brought by the English, Dutch, and Portuguese; copper, silk, lac, tea, sugar, porcelain, and spices from Bengal, China, and the Dutch settlements; ivory brought by the Portuguese from Africa; and European goods, bullion, coffee, and dates from Arabia and Persia. The exports were, to Arabia and Persia, the richer kinds of silk and cotton goods and indigo; to Africa, cotton, indigo, and piece-goods; to Madras and Bengal, cotton; to China, cotton and drugs, and cloth, cashmere shawls; and small quantities of cotton to the Mauritius and Europe.

Sea trade, 1759-1800.

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[1] Parsons, 261. During the greater part of the time the English had the monopoly of providing tonnage for the Arabian and Persian trade. They hired ships from ship-owners and relet them to merchants, and it was from the balance of profit that the English 'chief' at Surat was paid (Surat Papers, 77-78). In 1796 this monopoly was abolished (Surat Papers, 79), and in 1799, besides English ships, seventeen vessels were employed in the Gulf trade, of which one belonged to the nawáb, six to the English, and the rest to Arab merchants.—Surat Papers, 257.

[2] *European goods.*—Under this head came coral, amber, glass-beads, brass and iron wire, brass plates, needles, looking-glasses, toys, and trinkets. Much of the ware was from Venice. The chief route by which articles of this class were imported was by Scanderoon, Alleppo, and Bussorah. (Parsons (1777) 261.) *Bullion.*—Under this head gold and silver, both coined and uncoined, were imported. Of the coins there were (1774) Venetian sequins, worth Rs. 4¼, German dollars, Rs. 4½, Turkish gold pieces, Rs. 3, and silver coins from Persia. (Stavorinus, III., 8.) *Cotton cloth.*—This was the staple export, chiefly coarse and coloured, though fine, checkered, and white wares also came from Broach. (Parsons, 261.) *Cashmere shawls.*—According to Parsons, the fine wool used in their manufacture was imported through Surat from the coast of Caramania between the Indus and the Persian Gulf. The shawls were again exported through Surat (262). Of the chief varieties of silk and cotton cloths, the following particulars have been preserved by the Abbe Raynal (1780): The goods more commonly known are (1) *Duttas*, a kind of coarse unbleached cloth, worn in Persia, Arabia, Abyssinia, and the eastern coast of Africa, and blue linens, which are disposed of in the same manner, and are likewise sold to the English and Dutch for their Guinea trade. (2) The blue and white checks of Cambay, which are worn for mantles in Arabia and Turkey, some are coarse, and some fine, and some even mixed with gold for the use of the rich. (3) The white linens of Barokia (Broach), so well known by the name of báftás. As these are extremely fine, they make summer caftans for the Turks and Persians. The sort of muslin with a gold stripe at each end, with which they make their turbans, is manufactured at the same place. (4) The printed calicoes of Ahmedábád, the colours of which are as bright, as fine, and as durable as those of Coromandel. They are worn in Persia, in Turkey, and in Europe. The rich people of Java, Sumatra, and the Malacca Islands, make head-dresses and coverlets of these chintzes. (5) The gauzes of Burapour (Burhánpur). The blue ones are worn by the common people in Persia and Turkey for their summer clothing, and the red ones by persons of higher rank. The Jews, who are not allowed by the Porte to wear white, make their turbans of these gauzes. (6) Mixed stuffs of silk and cotton, plain, striped, some with satin stripes, some mixed with gold and silver. If they were not so dear, they would be esteemed even in Europe for the brightness of their colours, and the fine execution of the flowers, though their patterns are so indifferent. They soon wear out, but this is of little consequence in the seraglios of Turkey and Persia where they are used. (7) Some are of silk, called *tapis*. There are *pangues* of several colours, much esteemed in the eastern parts of India. Many more would be woven, if it had not been necessary, to use foreign materials, which enhance the price too much. (8) Shawls, very light, warm, and fine cloth, made of the wool of Cashmere. They are dyed of different colours, striped and flowered. They are worn for a winter dress in Turkey, Persia, and the more temperate parts of India. With this fine wool turbans are woven that are ell-wide, and a little more than three ells long, which sell for as much as a thousand crowns (125*l*). Though this wool is sometimes manufactured at Surat, the finest works of this kind are made at Cashmere.—II., 39.

Sea trade, 1759-1800.

Surat, which in 1763 is called 'the store-house of the most precious productions of Hindustán,'[1] and, in 1777, was still the port through which the greatest trade of any kingdom in Hindustán passed,[2] had before the end of the century lost great part of its commerce.[3]

With the exception of the English, the trade of the European settlers at Surat during the latter half of the eighteenth century almost entirely ceased, the great export of cotton wool to China and Bengal, which (1777) 'employed, on an average, more than thirty ships of from 500 to 1,000 tons apiece,'[4] would seem at the close of the century to have declined in amount, and to have been transferred to Bombay.[5] The trade to Arabia and Persia also suffered. The exports, estimated in 1789 at about £100,000, are at the close of the century valued at but little more than half of this amount.[6] With regard to the total value of the sea trade of Surat at the close of the eighteenth century, it would seem from statements drawn up in 1800, when the management of the trade of Surat passed into the hands of the British, that during that year the total value of exports and imports amounted to £356,584 (Rs 35,65,841)[7] During that year there were in all thirty-eight articles imported or exported, whose total estimated value was over £1,500 (Rs. 15,000) Of these, seven were over £10,000, nine between £10,000, and £5,000, eight between £5,000 and £2,500; and fourteen between £2,500 and £1,500[8]

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[1] Niebuhr, in Pinkerton, X, 216

[2] Parsons, 261, 262

[3] The causes of the decline of Surat trade have been mentioned above The extent of the decline appears from the custom house figures In 1759 the customs yielded a revenue of £25,650 (Rs 2,56,500), this by 1796 had fallen to £8,000 (Rs 80,000), and in 1798 (with rates reduced to about one-half) to £3,900 (Rs 39,000) —Surat Papers, 153 and 164

[4] Parsons (1777), 261

[5] For the decline in the amount of cotton exported, see Surat Papers 52, where (1797) it is said that the sub division of Chorasi alone would yield as much cotton as the company usually invested

[6] Surat Papers, 22 and 256 The exports (1800) are to Persia, £28,000 (Rs 2,80,000), to Arabia, £37,000 (Rs 3,70,000), total £59,000 (Rs 5,90,000)

[7] This total is made up of the following items

	Rs	£
Articles subject to customs dues only	8,69,377	86,938
Do do to certificate dues only	15,00,479	150,048
Do do to customs and town duties	3,83,863	38,386
Do. do to certificate town duties	8,12,122	81,212
	35,65,841	356,584

(Surat Papers, 374, 384) To this must be added the trade that paid only town dues.—Surat Papers, 390

[8] Surat Papers, 374, 389 I The seven articles whose estimated value was over £10,000, were ivory, £31,228, yarn, £21,613, sugar, £18,208, copper, £17,018, dollars, £16,420, chádars, £12,756, cochineal, £11,051 II The nine articles whose estimated value was between £10,000 and £5,000 were shawls, £9,526, fine cloth, or *baftas*, £9,331, China silk, £9,325, sugar, £9,155, white coarse cotton cloth, or *dhotis*, £8,278, betel nut, £8,108, cutnis, £7,210, palanpuis, £6,254, silk cloth, or *elaicha*, £6,086. III The eight articles whose estimated value was between £5,000 and £2,500 were cotton cloth, or *dupattas*, £4,837, jingelly oil, £4,708, iron, £4,625, cass, £4,430, dry dates, £4,120, red lead, £3,950, cloves, £3,228, betel leaves, £2,826. IV. The fourteen articles whose estimated value was between £2,500 and £1,500

The land trade at Surat in the latter part of the eighteenth century would seem to have chiefly lain along two routes,—to the towns of northern Gujarát, and through Khándesh, southward, to the Deccan, Aurangábád, and Haidarábád, and northward to Málwa, Indor, and Ujain. To northern Gujarát the chief exports were molasses, sugar, and cocoanuts, sent in return for the muslins of Broach, and the silks and calicoes of Ahmedábád and Pátan.[1] Eastward along the Tápti valley would seem to have been exported brocades and other silk articles, the manufacture of Surat. Land trade, 1759-1800.

The native merchants of Surat were Hindus, Musalmáns, and Pársis.[2] Of foreign Asiatics, Georgians, Persians, and Arabians, merchants from Malacca, China, Abyssinia, Madagascar, Mozambique, and the Comoro[3] islands are mentioned (1774) as resorting to Surat.[4] Merchants.

The chief European traders were, as before, the English, Dutch, French, and Portuguese. But, in addition to these, mention is made of Danes, Swedes, and Germans.[5] In 1759 a Danish ship arrived at Surat, and the captain, doing good service to the English, accomplished his business very much to his advantage.[6] Between 1746 and 1765 three ships of the Swedish East India Company visited Surat, and for a time a factory was maintained in the city.[7] In 1777 (Septem- Europeans in Surat, 1759-1800.

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were piece-goods, £2,465, chaya root (a dye), £2,450, silk scarfs, or *lungis*, £2,265, chuntz, £2,245, pepper, £2,156, sugar-candy, £2,036, tortoise-shell, £2,031, turbands, £1,865, castor-oil, £1,856, clarified butter, £1,807, *patolis* (silk cloth), £1,596, women's robes, *salla*, £1,576, wet dates, £1,567, raw silk, £1,551.

[1] Surat Papers, 259. Other Northern Gujarát local trade centres in communication with Surat were Ankleshwar, Baroda, Dabhoi, Coral, Sinor, Sadra, and Jambusar. —Surat Papers, 259.

[2] With regard to the character of the native merchants of Surat, and the inner working of its trade, Abbe Raynal (1780) says, that when Europeans hardly suspected that commerce was founded on any certain principles, these principles were already known and practised in Surat. Money was to be had at a low price, and bills of exchange might be obtained for every market in India. Insurances for the most distant navigations were very common. Such was the honesty of these traders that bags of money, ticketed and sealed by the bankers, would circulate for years without ever being counted or weighed. (Abbe Raynal, II., 29.) This estimate was perhaps partly based on Niebuhr's statement that (1763) the Hindu merchants were distinguished for their honesty and the Pársis for their skill. (Pinkerton, X., 214.) Men better acquainted with the actual state of affairs in Surat would seem to have drawn very different conclusions. In 1797 a committee, appointed by the Bombay Government to inquire into the state of trade at Surat, report, 'among merchants a very general neglect of agreements, and even of written obligations, producing a total want of confidence between man and man.' Bankruptcy, they complain, was not unfrequently a premeditated scheme to defraud creditors. (Surat Papers, 90.) At the same time, in forwarding this report to the Bombay Government, the head of the English factory dissented from the opinion of the other members, holding that 'knavish tricks and chicane' were the work only of the lowest class of the people.—(Surat Papers, 145).

[3] Comoro islands (S. Lat. 12°, E. Long. 45°)—Mohilla, Mayotta, and Johanna—lying between the north point of Madagascar and the main land. The trade with these islands was small. Milburn (1806-1812) says, occasionally piece-goods are imported in vessels from Surat. The returns are made in cowries, red betel-nut, dammer, wax, cocoanuts, and corn.—Milburn, Or. Com., I., 77.

[4] Forbes' Or. Mem., I., 146., Niebuhr, in Pinkerton, X., 214.

[5] Forbes' Or. Mem., I., 146, makes a casual reference to Greek merchants.

[6] Niebuhr (1763), in Pinkerton, X., 216.

[7] Macpherson, 310, and Briggs' Cities of Gujaráshtra, 32. The Swedish East India Company was started on the failure of the Ostend Company (1727). It worked well till

ber) a ship, bearing the standard of the Austrian empire, arrived at Surat from Leghorn. Failing to dispose of its cargo, the ship sailed to Gogo, and the imperial company of Trieste made no second attempt to establish a trade at Surat.[1]

Europeans in Surat, 1759-1800.

The English.

Their command of the city improved the position of the English as traders. As early as 1763, Niebuhr noticed that, to all appearance, the English must soon engross the whole commerce of the city ;[2] and at the close of the century, when the trade of their former rivals had almost entirely ceased, the English were said to procure cloth to three times a larger extent than they ever did before.[3]

During the greater part of this period English affairs at Surat were administered by a chief and council of four, namely, a collector, a customs master, a commercial resident, and a civil paymaster, together with three assistants, or a total staff of eight officers. About 1795 the court of directors sent orders that a commercial board should be constituted at Surat. To this board, besides the chief as president and the commercial resident, one additional member or deputy resident, and three assistants were appointed.[4]

The Dutch.

In spite of the decay of the spice trade, the Dutch were at the beginning of this period (1759) the most powerful of the European settlers in Surat.[5] But on the ascendancy of the English the decline of the Dutch quickly followed. In 1762 their factory was besieged by the nawáb, and ultimately they were compelled to send away their cannon, pay a fine of £9,000 (Rs. 90,000), and move their head-quarters from the old factory within the city to the wharf still known as the Dutch wharf, or Walanda Bandar.[6] In their new quarters they

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the close of the eighteenth century, when the disturbances in Sweden put a stop to its trade Niebuhr (1763) tells of a Swedish captain who came to Surat between 1759 and 1763 He sold his iron and copper well But the nawab demanded a sum of £10,000 (Rs 1,00,000). This the captain refused to pay He was placed in confinement, but in the end was let off with a fine of £2,000 (Rs 20,000)

[1] This expedition was under the management of an Englishman named Bolts, who, formerly in the service of the English company, had become a subject of the empress Maria Theresa After having disposed of his cargo at Gogo, with the object of obtaining leave to start a trading station at one of their Maratha ports, Bolts went to Poona The Poona government granted his wishes, and after establishing three factories in Malabar, Bolts returned to Europe But the company never succeeded, and in 1785 was declared bankrupt —Macpherson, 313-317

[2] Pinkerton, X , 215.

[3] Surat Papers, 459

[4] Surat Papers, 14

[5] The friendship of the Dutch and the Sidhi commander of the castle was one of the chief difficulties in the way of the establishment of English power at Surat. The Dutch, with the object of getting the castle into their own hands, are, in 1759, said to have arranged with the Sidhi that the Sidhi should seize and carry into the castle the Dutch brokers. Then the Dutch chief was to send a strong detachment to the castle to rescue the brokers On the arrival of the Dutch, the Sidhi was to open the castle gates, admit their troops, and make over the castle to their commander. No steps were taken to carry out this plan, and Stavorinus hints that the scheme failed because the Dutch director was bribed by Mr. Spencer, the English chief —Stavorinus, III , 122.

[6] Stavorinus, III., 127.—This is the plot of ground, about seven or eight acres in extent, that was ceded to the Dutch, partly as a purchase, partly as a gift under the terms of their charter of 1729, (Stavorinus, III., 101) In 1775 it was covered with buildings,

Europeans in Surat 1759-1800.

The Dutch.

at first kept up considerable state. Parsons (1777) describes them as having a battery mounted with twenty cannons, a company of soldiers, and a factory which, with its flags, made a grand appearance. And besides their business-quarters outside of the Mecca gate, they had an 'elegant country-house' with 'a rich and charming garden.'[1] In 1788 the Dutch house is spoken of as the healthiest of all the European factories, 'undoubtedly because of the great cleanliness in it.'[2] But during these years their trade kept steadily falling off, and only a few months after Parsons visited Surat, with the exception of two small ships, the naval establishment was abolished, the military force reduced from one hundred to fifteen; the horses and elephants, the chariots of ceremony, and palanquins with trappings of gold and silver, formerly furnished at the expense of the company, were all disposed of. The gold and silver ornaments, the plate valued at £3,000 (Rs. 30,000), were carried to Batavia, and little or no appearance of pomp was any longer kept up.[3]

About two years after (1780) a correspondence was intercepted showing that the Dutch chief at Surat had engaged in a plot to assist the Maráthás to surprise Surat castle. Measures were taken to prevent the Dutch again attempting to interfere in the politics of the city, and from this time, though they continued to maintain their factory till after the close of the century, the Dutch ceased to have any importance at Surat. In 1794-95 the total value of their trade was estimated at £31,140 (Rs. 3,11,400),[4] and in 1799 they are spoken of as 'having no active influence.'[5]

Of the constitution of the Dutch factory and of their way of conducting business, Stavorinus supplies the following particulars.[6] Under the director were two councils, one general, the other judicial. The general council consisted of the director as president, the senior merchant as second, the merchant fiscal, and six junior merchants. Except that the president took no part in its proceedings, the council of justice was constituted in the same way as the general council. Under the members of council were book-keepers, a comptroller of equipment, a surgeon, and a purveyor. Of the members of the native

except for about 240 yards along the river, where a stone wall had been erected four feet above the level of the ground. In the wall were two gates, and in front of each a pier-head jutting into the river, where goods were discharged and shipped, and vessels lay afloat. It was afterwards found necessary to build wooden piles in front of the wall to ward off the force of the stream.—Stavorinus, III., 158, 160.

[1] Parsons (1777), 252, and Niebuhr (1763), in Pinkerton, X, 212.

[2] Hové's Tours, 179.

[3] Stavorinus, III., 150. At this time (1776) the total European strength of the Dutch factory was returned at 62 souls. Of these 30 were in the civil service of the company, one was a clergyman, two were surgeons, 4 marines, and 25 soldiers. In the following year (1779) the profits of the factory are returned at £18,000. The imports were 1,715,718 lbs of sugar, 20,002 lbs. of cloves, and a small quantity of nut-meg and mace. The exports were gamboj, cotton-yarn, and cotton cloth. In 1778 Indian cloth was sold in Holland to the value of £23,636.—Stavorinus, III., 116.

[4] Surat Papers, 266.

[5] Surat Papers, 170.

[6] Stavorinus, III., 150 156.

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Europeans in Surat, 1759-1800.

The Dutch.

establishment the chief were the brokers.[1] Next in importance to the brokers came the money-changer, an officer so much trusted that, under cover of his seal, bags containing £100 in silver (Rs 1,000) passed unchallenged from hand to hand For providing the supply of cloth the Dutch, like the English, handed patterns to persons styled 'furnishers' or contractors. These men, during the rainy months, settled with the weavers for the preparation of the cloth. When the yearly supply was ready, the furnishers took the cloth to the Dutch lodge in the city. It was there tested, and such pieces as did not agree with the pattern, or were faulty, were returned to the contractor.[2]

The system adopted by the Dutch company for the payment of their servants at Surat was, for the chief officers, a percentage on all the business that passed through their hands, and, for the lower officers, what savings they could make out of the grant assigned for the support of their office. The common servants, soldiers, sailors, and artizans, besides allotments of pepper, firewood, salt, vinegar, and oil, received pay at the rate of about 8*d* a day.[3] Even more than the English, the Dutch company, 'that the Indians might hold them in respect,' spent large sums of money on 'grandeur and ostentation.'[4] Their director moved out in state with one or two elephants, a certain number of horses, chariots of ceremony, and palanquins with trappings of gold and silver In the factory the common table was adorned with various ornaments and services of gold and silver plate to the value of £3,000 (Rs. 30,000).[5] Unlike the English the Dutch factors would seem to have been generally married Perhaps one consequence of the large number of ladies in the Dutch factory was the frequency of disputes on questions of precedence So bitter did these disputes become that, in 1755, rules were passed, laying down not only the rank of each of the company's servants, but for the men which of them might have a velvet coat and who might wear gold lace; and among the women, settling the number of their attendants, the value of their jewelry and the quantity of gilt and paint they might put on their children's chaises.[6]

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[1] Originally both the brokers were Wánias But, about 1740, their honesty was suspected, and one of them dismissed In his place, that each broker might act as a check on the other, a Pársi was chosen But this device seems to have failed, as Stavorinus (1774) found the brokers 'as confidentially connected together as if they were not alone of the same religion, but also own brothers'—Stavorinus, III., 154.

[2] Stavorinus, III , 156

[3] 10 stivers, 30 stivers going to one rupee.—Stavorinus, III , 8.

[4] Stavorinus, III , 148.

[5] Stavorinus, III , 149.

[6] The Dutch factors would seem to have carried into their private entertainments the same minute attention to matters of etiquette "Above all things," says Stavorinus, "the master of the house must attend to the seating of every guest, and drinking their health in the exact order of precedence" Especially was this necessary when ladies had been asked, for they 'are peculiarly prone to insist upon every prerogative attached to the station of their husbands Some of them, if they conceive themselves placed a jot lower than they are entitled to, will sit in sullen and proud silence for the whole time the entertainment lasts.'—Stavorinus, I., 302 and 304.

After the union of the different French trading companies[1] in 1719, they for some time carried on a considerable commerce at Surat. Like the Dutch and English, they had a factory in the town, and a garden, called Bel-air, on the river bank, a little to the west of the outer wall. But with the ascendancy of the English at Surat (1759), and their victories over the French in Southern India, so low did the credit of the French fall that, in 1764, the head of their factory is said hardly to have found the means of a scanty subsistence.[2] In 1769 the company was deprived of its monopoly, and their chief was now called consul, and appointed by the king of France. Their general trade was of very little importance; and so entirely were they under the power of the English, that they (1774) were forbidden to hoist a flag at their factory, and were forced to clear away a flight of steps from the garden-house on the bank of the Tápti to the edge of the river.[3] In 1778 it was found that the head of the French factory was assisting, by his counsel and funds, the adventurer St. Lubin. Orders were issued for the consul's arrest He and the whole staff of Europeans were for a time kept as prisoners of war in their garden at Surat. But here, too, they continued to intrigue, and were accordingly transferred to Bombay,[4] and until the close of the eighteenth century the French factory at Surat was not again re-opened.[5]

Europeans in Surat, 1759 1800.

The French.

In 1764 the affairs of the Portuguese at Surat were in almost as bad a state as those of the French.[6] Some years after this, their trade for a time improved,[7] and in 1777 more respect would seem to have been shown to them than to the French, as they were allowed to hoist a flag at their factory.[8] During the last four years of the century, the average yearly value of their trade was returned at £62,100 (Rs. 6,21,000).[9] The Portuguese trade consisted of the import of Chinese and European goods, and the export of raw cotton, 'the most staple article for the China market.' The course of trade was for four or five large ships to come from Goa to Surat in Novem-

The Portuguese.

[1] Four French companies were united in 1719,—the Senegal, the West India, the East India, and the China.

[2] Niebuhr, in Pinkerton, X, 216 Anquetil de Perron (in Surat from 1758 to 1761) confirms this, stating that for several years before 1758 the factory at Surat had received no funds from Pondicherry, and that the chief, Anquetil's brother, had difficulty in supporting himself (Káwasji's Translation, 39) The Capuchin friars, who had been settled in Surat for more than one hundred years, were generally beloved and respected in Surat, and, out of respect to them, the French nation were still held in estimation

[3] Stavorinus (1774), III., 70, and Parsons (1777), 252.

[4] An Account of Bombay (1781), 170

[5] Surat Papers, 22. Their garden was taken by the English on the declaration of war (1793).

[6] Carsten Niebuhr, in Pinkerton, X, 216. One relic of their former power remained in the use of a corrupt Portuguese as the language of trade.

[7] Carsten Niebuhr, in Pinkerton, X., 213 and 216

[8] Parsons (1777), 252 On the other hand, Stavorinus (1774) says, "though the first Europeans established at Surat, the Portuguese are, at present (1774), least in power and respect."—Stavorinus III., 70.

[9] At 2½ per cent. it yielded a revenue of Rs. 15,526.—Surat Papers, 276.

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ber and December, and, after calling at Diu and Daman, return in the beginning of the year to Goa. Here they completed their cargoes, and sailed for China in March and April, or, at latest, some time in May.[1]

English Management. 1800-1876

Form of administration, 1800.

On the assumption of the entire government of the city by the British (1800), the establishment of chief and council was abolished. In their stead the management of the city was entrusted to three officers, a collector of revenue, a judge and magistrate, and for the discharge of political duties a lieutenant-governor.[2] In 1803 the title of lieutenant-governor was changed into 'agent of Government at Surat.' In 1806 the designation of chief was again adopted and continued till, in 1822, the head officer was styled 'agent to the governor,' a title which has since been maintained With slight alterations in their functions, the offices of judge and collector have been maintained.

Acquisitions since 1800.

By the arrangements introduced in 1800, the English were put in possession of the towns of Surat and Ránder, yielding an estimated yearly revenue of £80,935 (Rs. 8,09,350)[3] At present the district of Surat contains an area of 1,669 square miles, yielding a yearly land revenue of £223,828 (Rs. 22,38,280). The cessions of the territory that form the present district took place on three occasions: I, in 1804, under the provisions of the treaty of Bassein (1802, December 31st), II, in 1817, in consequence of the treaty of Poona; and, III, in 1839, by the lapse of the state of Mándvi[4]

The Nawábs of Surat, 1800-1842.

Under the agreement of 1800 the nawáb was entitled to a yearly allowance of £10,000 (Rs. 1,00,000), together with a one-fifth share of the annual revenues of the city, after deducting the nawáb's allowance, the sums payable to the Maráthás, and the charges of collection.[5] His lands extended over 1,500 acres, with 300 cultivators. He had 200 armed attendants and 300 domestics and slaves.[6] In 1818, instead of the variable allowance of one-fifth, the nawáb agreed to accept an annual provision of £5,000 (Rs 50,000), raising his total yearly receipts to £15,000 (Rs. 1,50,000)[7] The nawáb died on the 23rd September

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[1] Parsons (1777), 243

[2] Surat Papers, 183 Details of the powers and positions of these officers, as well as of the modifications introduced from time to time in their functions, will be found in Chapter VIII, 211. No change was at this time made in the arrangements for providing the companies' investment. The commercial board was continued, the lieutenant-governor acting as president —Surat Papers, 414.

[3] Surat Papers, 424. Besides the lands of which they were put in possession, the right of collecting the *Moglai*, or nawáb's share of the duties levied on articles imported by land, and of stationing guards for the security of the collecting posts, gave to the British through the country within about fifty miles of the city of Surat a considerable degree of local influence —Letter of the Bombay Government, dated August 1st, 1800 Surat Papers, 172 173

[4] Details of these cessions will be found in Chapter VIII, 212.

[5] Surat Papers, 445

[6] Clune's Chiefs of Western India, quoted in Briggs' Cities of Gujaráshtra, 24.

[7] Aitchison's Treaties, VI., 241,

1821, and was succeeded by his son Mir Afzul-ud-din, on whose death (1842), August 8th, without male issue, the titular dignity and office became extinct. A provision of £5,280 (Rs. 52,800) was settled on his son-in-law, Jáfar Ali Khán, and two grand-daughters. The pension was in 1857 raised to £10,000 (Rs. 1,00,000), with the stipulation that it was to be enjoyed till the death of the survivor of the three grantees. Jáfar Ali Khán died on the 21st August 1863.[1] On the death of the nawáb in 1842, the fleet and commodore of the station were recalled to Bombay, and the Delhi flag, which had till then continued to fly on the castle, was taken down.[2]

Chief events since 1800.

Since they have come under the charge of the British, the lands of the district have been kept free from any attack from without, or from any general internal disorder. On only four occasions (in 1810, in 1844, in 1846, and in 1860) has the public peace been broken; and once only (1810) has there been any considerable disturbance.

Musalmán disturbance, 1810.

In the beginning of 1810, in the east of the Surat district, a Musalmán, Abdul Rehmán by name, proclaiming himself the Imám Mehdi, collected a band of followers, chiefly cultivating Bohorás of the Sunni sect. Advancing against Mándvi, then the seat of a small Hindu chieftain, the insurgents captured the fort of Mándvi and made prisoners of the chief and his minister. The chief effected his escape from confinement, but the minister was killed. Establishing himself in a mosque in the town of Bodhán, about fifteen miles east of Surat, Abdul Rehmán, the leader of the revolt, sent (January 10th and 15th) two letters to Mr. Crowe, the British chief at Surat, one calling upon him to pay a sum of £30 (Rs. 300), and the other advising him to embrace the Musalmán faith. During this time numbers of Musalmáns from Surat had left the city to join Abdul Rehmán. Others, who remained behind in Surat, assailed the Hindus with cries of *din*, and there seemed every reason to suppose that an attempt would be made to bring about a revolution in the city Under these circumstances, Mr. Crowe determined (January 18th), if possible, to seize Abdul Rehmán. With this object he arranged that four companies of infantry should be sent to put down the rising, and that two troops of cavalry should start in advance and invest the village of Bodhán. The dragoons reached Bodhán about daybreak on the 19th, and before the infantry came up a furious engagement took place between the cavalry and Abdul Rehmán's followers. Nearly two hundred of the insurgents were left dead on the field, and of the troops a corporal, two privates, and several horses were lost. On the arrival of the infantry the attack was renewed, and Abdul Rehmán and many of his followers were slain. With the death of the leader the religious disturbance ceased. At the request of the Mándvi chief, who had meanwhile escaped from confinement, English troops were sent to Mándvi. The fort was recovered (January 22nd), and the authority of the chief restored.[3] A few years

[1] Aitchison's Treaties, VI., 217. The papers regarding the succession to the nawáb's estate have been printed (Blue Book) —Nawáb of Surat Treaty Bill, 1856.

[2] Briggs' Cities of Gujaráshtra, 101

[3] Briggs' Cities of Gujaráshtra, ap. B

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later (1818) it was again necessary to send troops to Mándvi. Durjansing, the chief who had been restored in 1810, died without male issue in 1814. He was succeeded by his cousin Hamirsing. Falling into the hands of bad advisers, this chief in 1817 formed the design of handing over his territory to the Peshwa. British troops were accordingly moved towards Mándvi, and, intimidated by their approach, the chief dismissed his advisers, and for the future agreed to make no change in the administration of his affairs without the knowledge and consent of the British Government.[1]

Riots in Surat.

Since this disturbance in Mándvi no general attempt has been made to break the public peace of the district. In the city of Surat, however, the mob has more than once resisted the introduction of disagreeable measures by riotous and disorderly conduct. Of these, the first occasion was in 1844 (August 29th), in consequence of the introduction of a new duty upon salt.[2] Early in the morning of the 29th August, placards were posted about the town calling on shopkeepers to shut their shops. An invitation to all heads of castes to come to the court-house and state their grievances to the judge was disregarded. About three o'clock in the afternoon a large body, assembling in front of the court-house, began to pull down fences, tear tiles from the roofs of the out-houses, and attack the court-house 'in a ferocious and determined manner.' About this time, when matters had gone so far that the judge had applied to the officer commanding the station for military assistance, some European gentlemen, headed by the district magistrate, made their appearance, and the attack on the court-house ceased. The rioters, however, refused to withdraw, and, as evening was coming on, a proclamation was issued, warning them that if they did not, within one hour's time, return to their houses, the military would be called to disperse them Upon this the people withdrew. But throughout the next day, though no disturbance took place, the excitement continued with little abatement. In case of any further disorder, a body of troops and some artillery were dispatched from Bombay to Surat. No further disturbance took place, and in the following month (September 14th), when the Salt Act was introduced, 'perfect tranquillity prevailed throughout the city.'[3]

Salt riot, 1844.

Weights and measures riot, 1848.

In the beginning of April 1848, an attempt was made to introduce Bengal standard weights and measures into Surat. The proposed change met with much opposition. The shops were closed for several days, and a placard was affixed to a house in the city, stating that the people of each caste had agreed to expel any one of their number who adopted the new weights, and that a sum of £5,000

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[1] Aitchison's Treatises, VI, 257 Nothing further of importance has happened in connection with Mándvi. Hamirsing, dying in 1834, was succeeded by his son Wajesing, who was killed on the 19th October 1838 by an explosion of fireworks On the death of Wajesing's posthumous son (1839, December 13th), the direct line of succession became extinct, and the state was annexed.—Aitchison's Treatises, VI., 254.

[2] Under the provisions of Act 16 of 1844.

[3] Session Judge, to Government, dated 14th September 1844

(Rs. 50,000) had been subscribed to contend 'the point at law as far as England.' No breach of the peace was committed. On the 5th April, a deputation of merchants waited on the collector, who agreed to postpone the introduction of the measure until the people represented their case to government. On hearing how unpopular the change was, Government (7th April 1848) decided that the attempt to introduce the new weights and measures should be abandoned. The strong feeling in Surat was supposed to have been created by certain ill-disposed persons circulating the rumour that this was a preliminary step to an increase of taxation. But on inquiry nothing more than a general dislike to change was proved.[1]

Income-tax riot, 1860.

In 1860 (November 29th), in connection with the introduction of the income-tax, a slight disturbance took place in Surat. About nine in the morning of that day the residents of the Burhánpur Bhágal, one of the central quarters of the city, collected to the number of about three thousand, declaring that they would not fill in the income-tax forms, and that they would close their shops until the income-tax was repealed. On the arrival of the district magistrate and police superintendent with a body of mounted police, the crowd dispersed without requiring any exercise of force.[2]

State of the district, 1857.

During the year 1857, in spite of the riots at Broach and the disorders in other parts of Gujarát, the tranquillity of Surat was unbroken. This, in the opinion of the district magistrate, was in great measure due to the unshaken loyalty which Sheikh Sáheb Syed Hussein Idrus, the head of one of the chief Musalmán families of Surat, maintained towards the British government, and the beneficial exercise of his influence amongst his people, the Muhammadans of Surat.[3]

Condition of the district, 1800-1875.

After its transfer to the English, the condition of Surat would seem for a time to have improved As the territories in the neighbourhood of the city came under British management, abuses were checked, order was established, and the area of land under cultivation enlarged. But, about the year 1830, the fall in the value of agricultural produce, the decrease of trade, and the failure of local manufactures, depressed the condition of the rural population and made extensive reduction of revenue necessary. The city of Surat suffered still more severely. Trade deserted it, and the city was on more than one

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[1] Collector, to Revenue Commissioner, 148, dated 2nd April 1848

[2] District Magistrate, to Government, No. 672, dated 29th November 1860

[3] District Magistrate to Government, No 741, dated 11th December 1857 In reward for these services Syed Idrus received the grant of a yearly allowance of £50 (Rs 500) (Government of Bombay Resolution, dated 19th April 1860) Since then, this gentleman has been further honoured by being made a Companion of the Star of India Both in 1759 and in 1800 the Idrus family aided the establishment of British power in Surat. (Surat Papers, 489) In 1800 (7th July), in recognition of his position and influence, Mr Duncan granted a yearly allowance of £50 (Rs 500) to 'Syed Sheikh, the son of the principal Syed of the Idrus mosque' (Accompaniment to Government letter No. 2488 of 1860, to the Collector of Surat) According to papers in the possession of the present Syed Idrus, C S I , his family came to Gujarát from Arabia as early as 1550 (H., 958) One of his ancestors settled in Surat, and from their high descent, and the power which some of them possessed of working miracles, they have always held a position of much respect in Surat.

Chapter V. History. 1759-1876.

Condition of the district. 1800-1875.

occasion almost destroyed by fire and flood. About 1850 affairs took a turn for the better. Trade revived, and the prices of agricultural produce rose. Again, about 1858, the construction of the line of railway did much to improve the condition of the labouring classes, and a few years later the great rise of prices, due to the American war, threw large sums of money into the district. Much of this wealth was afterwards (1866) lost in unsuccessful speculation in Bombay. But enough remained to raise for some years the value of land and house property. During the past six years (1870-1876) prices have again fallen, the profits of the cultivators are much reduced, and a considerable area of land, once under cultivation, has been abandoned. Still, except the aboriginal tribes, the great body of the rural population of the district are well-to-do. While in the city of Surat, though it is no longer the centre of trade for any large area of country, the hand-loom weaving of silks and brocades has of late years recovered some of its former importance, and two steam cotton spinning and weaving factories have been started and work with success. Statistics of the development of the district for any long series of years are not available. But, as compared with 1851, the census returns of 1872 showed that while the population had advanced by 23·22 per cent., agricultural stock has increased by 16·08; the area[1] of land under cultivation by 42·67; and the value of the trade of the district by 45·06 as compared with the trade in 1801-1802. During the same time in the district of Surat 73 miles of rail and 315 miles of road have been constructed; while in the city, besides erecting some useful and handsome public buildings and opening a public park, eighteen miles of streets have been made and lighted, a system of public markets and conservancy has been established, and efficient measures taken to protect the city against fire and flood

[1] Returns of the area under cultivation, through any great number of years, are not available. But, as compared with the area cropped in 1859-60, the returns for 1873-74 show that no less than 181,141 acres of waste land had been taken under cultivation.

CHAPTER VI.

TRADE.

Until 1863, when the tax known as the local fund cess was first levied, but little had been done to improve the natural land communications of the district. Before that time there were only five sections of made roads in the district, with a total length of nineteen miles. Of the five sections of made roads, three—one of them, of three miles, between the town of Surat and the ford across the Tápti at the village of Wariáv; a second, of a quarter of a mile near the village of Puna, about four miles from Surat; and the third, three-quarters of a mile long from the halting station, called Kim Choki, to the bed of the river Kim—were on the main line of communication with northern Gujarát; the fourth, four miles long, ran eastwards from Surat to the village of Fulpára; the fifth was westwards from Surat to Dumas at the mouth of the Tápti, a distance of eleven miles.[1] This Dumas road, the only complete line of communication in the district, was made by convict labour at a total cost of upwards of £7,000 (Rs. 70,000). As the other sections of made roads were only fragments, during the rainy months communication along them ceased. Any one forced to travel between the months of June and October was either carried in a palanquin by men of the Bhoi caste, went on horseback, or rode on a bullock or a buffalo. In the fair-weather season the tracts, though rough, were (1851) quite sufficient for 'all purposes of traffic and of social intercourse,' and the district was well supplied with carts at the rate of one cart to every seventeen persons.[2]

Roads, 1851.

There are at present (1876) sixty-four lines of road extending over a total distance of three hundred and fourteen and a half miles. To the north of the Tápti, three run from Olpád, one eight miles long, metalled and bridged, connecting it with

Roads, 1876.

Sub-division	Lines	Length in	Metalled.	Gravelled.	Bridged	Partly Bridged.
		Miles	Miles.	Miles	Miles	Miles.
Olpád	6	41¼	16½	..	23¼	7
Mándvi	3	32	..	..	..	29
Chorási	13	36	..	23¼	23¼	1
Bárdoli .. .	10	63¾	..	..	.	43½
Jaláipor .	15	54	..	2½	2½	38½
Chikhli . .	5	30½	..	..	15¾	7¾
Balsár	6	26¾	1½	..	20¾	3
Párdi .. .	6	25¾	11	.	11½	9¾
Total ..	64	314½	28¾	25¾	96½	139½

[1] Surat Collector's report No. 588, dated 7th July 1856.

[2] Surat Collector's report No. 311, dated 29th May 1851.

Chapter VI. Trade.

Roads, 1876.

Ránder to the south-east; a second, eight and a quarter miles long, metalled and bridged, leading to the railway station of Sáen eastward; and the third, seven miles long and partly bridged, to the village of Kadráma on the north. From Wadoli, about two miles to the north-east of Kadráma, there is a metalled and bridged road, having a total length of thirty-six miles, to Mándvi, the chief town of the sub-division of that name. It runs through the railway station at Kim, Baroda territory, and the village of Tadkesar, and thence in a south-easterly direction to Mándvi. From Mándvi a road, ten miles long, runs in a north-easterly direction to Deogarh. A road of ten miles leads from Ránder to Kudiána on the north-west. On the south of the Tápti a gravelled and bridged road, eleven miles long, connects Dumas with Surat. From Bárdoli a partly bridged road, twenty miles long, leads in a north-easterly direction through Uchrel and Karod in the Bárdoli sub-division, and thence, running parallel to the southern bank of the Tápti, reaches Motichor, a village in the Mándvi sub-division. Three partly bridged roads centre at Bárdoli,—one, running eastwards about eleven miles, passes through Kikwád and Mánekpur; the second, with a total length of sixteen miles, extends in a south-easterly direction from Bárdoli to Buhári, and, crossing in its course the road between Sejwár and Sarbhon, passes through the villages of Wánkáner and Wálod. The cross road between Wánkáner and Sarbhon is six miles long. The third road, sixteen miles in length, starting from Bárdoli in a south-westerly direction, passes through Sarbhon, crosses the river Purna, and ends at Káliáwári, a village in the Jalálpor sub-division From Káliáwári runs, in a south-easterly direction, a partly bridged road, twenty miles long, which, passing by Sisodra, Supa, and Astgám, reaches the northern bank of the Ambika. Thence, from the port of Matwár on the opposite bank, it continues directly south until, within a mile of Chikhli, it meets another road, fifteen miles in length, running from east to west. From Balsár to the south-east extends a bridged road, fourteen miles in length, leading to Dharampor. A road bridged and metalled, with a total length of ten miles, and crossing in its course the Auranga and Pár rivers, connects Balsár with Párdi. From Párdi a road, fourteen miles long, extends, in a south-easterly direction, to meet the high road from Peint in the Násik district. Besides these there are, in most of the sub-divisions, several detached small lines varying in length from one to five or six miles, leading from village to village in a sub-division, or acting as feeders to the railway stations in the neighbourhood.

The Tápti bridge.

The chief bridge in the Surat district is that recently completed across the Tápti. The breadth of the river at the town of Surat is about 1,700 feet. On the Surat, or left side, the bank is above the level of ordinary floods. On the right side, on the other hand, the land is low-lying, and nearly every season is flooded to the distance of about two miles from the bank. The bridge consists of seventeen spans of wrought-iron Warren lattice girders carried upon pier, formed of iron cylinders. Each pier is composed of two columns of cast-iron cylinders placed twenty feet apart from centre to centre, and strongly joined together by lattice bracings. The main girders are each ten feet high and 103 feet long. The roadway consists of

two planked foot-paths, five feet wide, for passengers, and a macadamized roadway carried on buckled plates of wrought-iron for cart traffic. On the north bank of the river ramps of earth are carried down to the right and left of the bridge in the shape of the letter T. These ramps are pitched with stone on the side slopes, and paved with stone on the upper surface up to the level of the highest known flood. On the south bank, or Surat side of the river, the approaches run through the end of the old castle, crossing the castle moat by a small iron bridge of two thirty-feet spans carried on two feet six inches diameter cast-iron screw piles. The average depth of sand, mud, and clay through which each column had to be sunk was forty-three feet. The difference of soil found in the cylinders was very great, in some it was a water-tight clay, which enabled the cylinders to be pumped dry and excavated by ordinary labourers; in others, Bull's patent dredges were used with success; and in some dress-divers alone could be employed. The cost of the whole work is, according to the revised estimate, £70,451 (Rs. 7,04,510). The original estimate was £65,000 (Rs. 6,50,000). To meet this, £20,000 (Rs. 2,00,000) were to be paid by government; £35,000 (Rs. 3,50,000) by local funds; £8,000 (Rs 80,000) by the Surat municipality; and £2,000 (Rs. 20,000) by the Ránder municipality.[1] The Tápti bridge.

Of nine buildings for the accommodation of district officers, one at Olpád, and the other at Kathodra near the Kim railway station, are in the Olpád sub-division; one at Máldha, in the Mándvi sub-division; one at Karod, in the Bárdoli sub-division; one at Jalálpor, in the Jalálpor sub-division; one at Chikhli, in the Chikhli sub-division; one at Balsár and the other at Tithal on the sea-shore, in the Balsár sub-division; and one at Párdi, in the Párdi sub-division. For the convenience of native travellers the district is provided with sixteen rest-houses, or *dharamsháláś*. There is only one rest-house, or travellers' bungalow, suited for Europeans. This building is situated in the west of the city of Surat and close to the bank of the Tápti. Of the sixteen rest-houses, five are near the railway stations of Sáen, Surat, Balsár, Párdi, and Wápi (Daman road); one is on the sea-coast in the village of Udwára, in the Párdi sub-division; and four are on high roads at Ránder, Dumál, Bhestán, and Párdi, in the Chorási sub-division. Of the rest, one is in the Bárdoli, one in the Chikhli, and four in the Mándvi sub-divisions. Rest houses.

Besides the steam-ferry plying between Surat, Gogo, and Bháunagar during the fair season, and fifteen ferries maintained during the rainy months, the district of Surat is provided with ten ferries kept up throughout the whole year. Of the fifteen temporary ferries, one is in the Olpád sub-division, four in each of the sub-divisions of Mándvi and Bárdoli, three in Jalálpor, two in Chikhli, and one in Párdi. Of the ten permanent ferries, one at Balsár is across the Auranga; one at Umarsári, in the Párdi sub-division, is across the Pár; one at Kolak, in the Párdi sub-division, is across the Kolak; Ferries.

[1] The details of the Tápti bridge are extracted from the administration report of the Public Works Department, Bombay Presidency, for 1875-76.

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and the rest are over the Tápti. Of the ferries across the Tápti, six start from the left and one from the right bank of the river. Of those on the left bank, one plies at Magdala, a village about six miles below Surat; three start from the city of Surat; one from Gebansha, about two miles, and one from Fulpára, about six miles above Surat. The ferry on the right bank of the Tápti is at Mándvi, about forty miles above Surat. Except three temporary ferries belonging to private individuals, and two, one at Mándvi and the other at Gebansha (near Surat), supported by the municipalities of Mándvi and Surat, the other ferries, both temporary and permanent, are maintained by the local funds to which the proceeds of fees are credited. The ferry fees amounted in 1875-76 to £1,108 (Rs. 11,080).

Trade by land, 1802-1876.

In 1802 the total value of the land trade at Surat was returned at £97,362 (Rs. 9,73,620), of which £89,729 (Rs 8,97,290) were imports and £7,633 (Rs. 76,330) were exports. Of the total amount of imports, £74,309 (Rs 7,43,090) were returned as coming from Ahmedábád and the interior, £22 (Rs. 220) from Cáshmir and the Panjáb; £2,443 (Rs 24,430) from the Deccan; £3,021 (Rs. 30,210) from Jeypur; and £9,934 (Rs. 99,340) from Khándesh. Of the exports, £2,020 (Rs. 20,200) were sent to Ahmedábád and the interior; £3,926 (Rs. 39,260) to the Deccan; and £1,687 (Rs. 16,870) to Jeypur.[1] As no statistics of internal traffic have of late years been collected, corresponding information is not available.

Besides the movements of the internal trade between the villages of the district there are three main lines of traffic—to the north, to the east up the Tápti valley, and, in the south, the timber trade from the Dáng forests to the sea-coast. Of the trade northwards between 1802 and 1863, when by the opening of the railway it in great measure ceased, no information has been obtained. The traffic eastwards, at one time the most important branch of the Surat land trade, suffered in 1825 by the opening of the direct line of communication between Bombay and Berár,[2] and since the construction of the Great Indian Peninsular Railway, the traffic along the Tápti route has still further fallen off. At present (1876) the number of pack-bullocks that pass yearly along this route is estimated at from twenty to forty thousand, and the carts at from one thousand to twelve hundred. The total yearly value of the trade is said to be about £40,000 (Rs. 4,00,000).[3] Along this route the chief articles of import from Khándesh are wheat, millet, and pulse. Salt is almost the sole article of export from Surat. But, as much salt now finds its way inland by rail, the bullocks have in many cases to return unladen.

Unlike the land traffic to the north and east, the timber trade between the Dáng forests and the railway stations and ports in the

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[1] Hamilton's Description of Hindustán, I., 719.

[2] This direct traffic from Bombay to Berár was first started by Sir Jamsedji Jijibhái. After a few experimental trips the trade became permanently established. The importance of this route was in 1831 much increased by the opening of the road by the Bor Ghát.—Chapman's Cotton and Commerce of India, 76.

[3] Report of the officer in charge of the Surat custom-house, dated 4th April 1876.

south of the district still maintains its consequence. The value of the timber exported in 1874 amounted to £59,010 (Rs. 5,90,100). Of the whole quantity, £11,782 (Rs. 1,17,820)[1] went from the railway stations of Surat, Bilimora, and Balsár, northwards to Baroda, Ahmedábád, and Viramgám, and from the ports of Surat, Bilimora, and Navsári; £47,228 (Rs. 4,72,280) to Dholera, Gogo, and the Káthiáwár ports The carriage for the timber brought from the Dáng forests on account of merchants and other private individuals affords occupation and profit to a large section of the population, mostly to Kanbis, Bohorás, and Bháthelás. It is in the hot season, during the months of February, March, April, and May, that this traffic is chiefly carried on; the forest being so dense that it is impenetrable earlier, besides being dangerously unhealthy. During the hot season the cultivator has little use for his cattle, and this traffic affords him profitable opportunity of employing them. As soon as his crops are cut and housed, he starts for the forest and brings back loads of timber, rafters, and bamboos, generally making three trips during the season.[2]

Trade by land, 1802-1876.

The improvements in roads and the increase of carriage required at the different railway stations would seem to have counterbalanced the decline of the long distance cart traffic. Though somewhat less than the corresponding increase in population, the returns for 1874 give a total of 31,148 carts, or fourteen per cent in excess of 27,145,[3] the corresponding number in 1851.

Railway traffic, 1868-1874.

Besides the improvement in the matter of roads, land traffic has been aided by the construction of a line of railway that passes through the whole length of the district from south to north, a distance of 73½ miles. The portion of the Bombay, Baroda, and Central India Railway that lies within the limits of the Surat district, was opened for traffic between 1860 and 1864. The Surat section of the line, 73½ miles in length, is provided with fifteen stations. Statistics of the railway traffic at these stations are available since 1868. From these returns it would seem that, though as compared with the earliest years, there is a considerable advance, during the four years ending with 1874 the traffic has somewhat declined. In 1868 there were twelve stations, and in the year following thirteen; while in 1871 the number was increased to fifteen. Of these, in 1874, Surat, Navsári, Amalsád, Bilimora, and Balsár had the greatest traffic of passengers as well as of goods; Kim, Sáen, Sachin, Párdi, and Wápi (Daman road) ranking next. Of the remainder, Dungri had a considerable goods traffic, greater than that of any of the stations of the second group,

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[1] Value of 1,571 tons at £7 10s. (Rs. 75) per ton.

[2] Report of Mr. Bellasis, First Assistant Collector of Surat, No 42, dated 15th October 1850. This timber trade has always been an important help to the cultivators of the south of the district. In 1827 it was estimated at 5,261 cart loads, and the value of the timber at £10,700 (Rs. 1,07,000) (Mr Pyne's report), and in 1850 Mr. Bellasis noticed that one effect of this traffic was to enable the cultivators to build much stronger and larger houses than they could otherwise have afforded.

[3] This total is calculated from Mr Davies' statement, that there was at that time (1851) one cart for every seventeen inhabitants. The corresponding proportion in 1874 is one cart to every nineteen inhabitants.

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Railway traffic, 1868-1874.

while at Udwára, the site of the oldest Pársi fire-temples, the traffic is entirely one of passengers. At Kánkrákhári, near Surat, a station was kept open for three years (1871-73). But as the number of passengers declined from 3,861 in 1871 to 853 in 1873, and as there was no traffic in goods, the station was closed. In 1868 the returns for all the stations in the district show that 855,474 passengers were carried as compared with 1,033,641 in 1874; while the traffic in goods has risen during the same period from 46,661 tons to 67,087 tons. The highest total of passengers during this term of seven years was 1,077,045 in 1873, and of goods 85,723 tons in 1870; while the corresponding lowest totals amounted to 812,342 passengers in 1869, and 46,661 tons in 1868. The following statement shows in tabular form the fluctuations that have taken place in the quantities of the chief articles of trade carried from the different stations of the Surat district:—

Comparative Statement showing the fluctuations in the chief articles of trade by rail in the Surat District, 1868-1874.

Articles	1868		1870		1874.	
	Outward	Inward	Outward	Inward.	Outward.	Inward
	Tons	Tons	Tons	Tons	Tons	Tons
Cotton	4,126	387	6,667	237	4,297	407
Cotton-yarn	144	318	156	337	137	373
Grain	8,641	2,592	9,540	17,285	5,720	10,969
Metal	220	449	227	675	156	608
Oil	555	66	421	56	352	180
Piece goods	430	677	411	697	528	769
Sugar and molasses	6,942	869	5,126	1,061	5,188	1,388
Sundries	6,438	12,902	16,949	24,201	13,360	18,482
Timber and firewood	544	341	773	304	3,336	637
Total	28,040	18,621	40,270	45,453	33,274	33,813

The details for the Surat station show an increase in the total number of passengers from 414,797 in 1868 to 491,789 in 1874, and in the quantity of goods from 23,189 tons in 1868 to 30,868 tons in 1874. During the term of seven years ending with 1874, the greatest total number of passengers was 558,667 in 1873, and of goods 45,301 tons in 1870, the lowest totals being 359,624 passengers in 1869 and 23,189 tons in 1868. As compared with 1870 the returns for 1874 show a marked falling off in the goods traffic at the Surat station. On the other hand, trade has been more generally spread over the district, each station becoming to some extent a trade centre. Of the smaller stations the greatest increase of activity is at Dungri, where passenger traffic has advanced from 8,541 in 1868 to 14,262 in 1874, and the carriage of goods from 1,395 tons in 1868 to 3,413 tons in 1874. In Bilimora the number of passengers advanced from 47,894 in 1868 to 62,572 in 1874, and the quantity of goods carried from 2,433 tons in 1868 to 4,796 tons in 1874. The following statement contrasts in tabular form the passenger and goods traffic at each of the stations of the Surat district in 1868, 1870, and 1874:—

Comparative Statement of passenger and goods traffic by rail, 1868-1874.

Stations.	Distance in miles from Bombay	1868.		1870.		1874	
		Passengers.	Goods.	Passengers.	Goods	Passengers	Goods.
		Number	Tons	Number	Tons	Number	Tons
Daman ..	108½	26,281	651	34,758	1,110	28,911	1,778
Udwára ...	114½			13,476		12,377	
Párdi	118	27,743	1,167	28,675	2,257	26,230	2,422
Haria (a)	119½					4,661	57
Balsár	124½	91 042	4 150	118,594	5,841	101,014	4,288
Dungri .	130	8,541	1,395	14 997	10,500	14,262	3,413
Bilimora .	135¾	47,894	2,433	64,470	3,767	62,572	4,796
Amalsád	139	41,723	4,403	67,716	4,530	50,515	5,594
Navsári	148¾	127,033	5,579	153,579	7,077	153,071	6,445
Maroli (b) .	154					12,308	1,978
Sachin .	168	14,969	800	24,350	1,707	24,448	1,228
Surat . .	167	414,797	23,189	4,34,970	45,301	491,789	30,868
Amroli .	169½	20,356	726	17,874	656	7,091	371
Sáen .. .	175½	16,133	1,173	22 572	1,400	22,398	1,665
Kim ...	181¼	18,962	995	25,565	1,577	21,994	2,184
Total	.	855,474	46,661	1,021,596	85,723	1,033,641	67,087

(a) Haria was opened in 1872, when passengers numbered 5,336 and goods amounted to 56 tons
(b) Maroli was opened in 1871, when passengers numbered 11,209 and goods amounted to 1,212 tons.

As the railway traffic returns are kept in tons, and do not show the value of the goods carried, no direct comparison can be made between the total trade of the district of late years and its trade at the beginning of the century. But it would seem, according to the tables of values adopted by the appraisers of the Bombay custom-house, that in 1874 the total value of the outward goods by rail from the fifteen stations of the Surat district amounted to a sum of £569,273 (Rs. 5,692,730), while the value of the inward trade for the same year was £570,137 (Rs. 57,01,370).[1] In 1874 the value of the sea trade was £515,147 (Rs. 51,51,470). The total value of the district trade by sea and rail in 1874 was therefore, according to this calculation, £1,654,557 (Rs. 1,65,45,570), an increase of 45·06 per cent as compared with £1,140,584 (Rs. 1,14,05,840), the total value of the sea and land traffic in 1801-1802.

Light-houses.

There are two light-houses in the Surat district, the Tápti light-house and the light-house at Balsár. The Tápti light-house is situated on the right bank at the mouth of the Tápti river and near Vaux's tomb, thirteen miles west of Surat It has a circular tower built of brick masonry, with a spiral stone staircase inside. The height of the lantern above high-water, as well as the height of the building from its base, is ninety-one feet. The character of the light is dioptric, and its order four It is a single fixed light of white colour, visible from the deck of a ship fifteen miles off, and illuminates an area of ninety square miles.

The light-house at Balsár is situated on the left bank at the mouth of the Auranga river in the Balsár sub-division. It consists of a

[1] These sums do not include the value of treasure, silk, and other valuable articles carried by railway as luggage and parcels,

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Light-houses.

wooden pile of a conical shape with a square base, and a frame-work at the top reached by a ladder applied from without. The height of the lantern above high-water, as well as the height of the wooden work from its base, is fifty feet. The light consists of a common lantern containing three oil-burners with reflectors. It is a single, fixed light of white colour, visible from the deck of a ship fifteen miles off, and illuminates an area of ninety square miles. The light is exhibited from 1st September to 31st May, that is, for a period of nine months in the year.

Landing stages.

There are three chief landing stages, two at Surat and one at Rándér. Of those at Surat, one is a floating pier, built in 1868 at a cost of £7,240 (Rs. 72,400); and the other is a wooden jetty, originally constructed in 1857 at a cost of £850 (Rs. 8,500), and subsequently (1860) enlarged at a cost of £1,120 (Rs. 11,200). At Ránder a wooden jetty with masonry hard was in 1862 built at a cost of £1,158 (Rs. 11,580.) It is fitted for the passage of carts, which can lade cotton into vessels drawn up alongside of the pier.

Trade by sea, 1800-1802.

Though in 1800, as compared with its condition twenty years before, the sea trade of Surat had greatly fallen off, there was still a considerable foreign commerce In 1802 the total value of the trade by sea is returned at £988,388 (Rs. 98,83,880), of which £528,370 (Rs. 52,83,700) were exports and £460,018 (Rs. 46,00,180) imports. From the following detailed statement it will be seen that at this time among exports the local traffic to Bombay was only about one-third part of the whole amount, and but little in excess of the combined trade to the Arabian and Persian Gulfs :—

Statement showing the commerce of Surat by sea, 1802-1803.[1]

Ports.	Imports to Surat					Exports from Surat				
	Vessels		Merchandize	Treasure	Total.	Vessels		Merchandize	Treasure	Total.
	Number	Tons				Number	Tons.			
			£	£	£			£	£	£
Lisbon	.	..	..	.	.	1	600	530	..	530
America .. .	.	..	..	.	.	..	..	..	..	..
Bengal .	.	.	79,374	..	79,374	..	.	.	.	..
Malabar and Kanara	2	133	3,088	..	3,088	2	266	1,872	..	1,872
Bombay	6	1,483	16,857	763	17,620	2	900	188,197	..	188,197
Villages near Surat	..	..	19,765	..	19,765	..	..	1,169	..	1,169
Broach	.	..	40,436	..	40,436	..	..	72,010	25,752	97,762
Cambay .. .	..	..	16,747	..	16,747	..	..	4,733	..	4,733
Jambusar .. .	..	.	8,668	..	8,668	..	..	3,377	..	3,377
Bhâunagar .	..	.	17,903	.	17,903	.		15,847		15,847
Arabian Gulf .	4	1,040	8,314	107,215	115,529	11	1,855	131,881	..	131,881
Persian Gulf .	14	1,695	7,883	1,595	9,478	5	641	40,425	..	40,425
Penang and eastward	.	..	3,190	704	3,894	..	.	..	..	..
Batavia .. .	2	840	8,993	..	8,993	1	440	6,548	..	6,548
Bassein and villages	..	..	5,074	..	5,074	..		7,916	..	7,916
Cutch and Sind ..	2	48	1,457	..	1,457	..		580	..	580
Siam .. .	..			..	.	2	400	5,385	..	5,385
Mozambique ..	2	185	15,446	371	15,817	2	152	15,502	..	15,502
Isle of France ..	1	400	403	5,832	6,235	1	400	6,646	..	6,646
Total..	33	5,824	343,538	116,480	4,60,018	27	5,654	502,618	25,752	528,370

[1] Hamilton's Description of Hindustán, I., 729.

According to Forbes,[1] under British management, for some years after 1802 trade increased. And, though details are not available for the whole trade of the port, it will be seen from the following statement that, as regards the trade between Surat, Bombay, and Madras, there was an advance from £379,220 (Rs. 37,92,200) in 1802 to £562,191 (Rs 56,21,910) in 1806. In the trade between Surat and the Persian and Arabian Gulfs there may, on account of the internal disorders in Persia and Turkey, have been some falling off. But in 1806, in spite of the unsettled state of those countries, large quantities of cloth and yarn were still sent from Surat to Bussorah.[2]

Trade by sea, 1802-1806.

Statement showing the trade of Surat with Bombay and Madras, 1802-1806.[3]

Years.	Imports from Madras and Bombay			Exports to Madras and Bombay		
	Merchandize.	Treasure.	Total	Merchandize	Treasure	Total.
	£	£	£	£	£	£
1802 .	177,640	57,497	235,137	133,061	11,022	144,083
1803 ..	138,717	36,924	175,641	95,813	1,599	97,412
1804	219,248	117,406	336 654	132,480	2,657	135,137
1805...	204,627	140,042	344,669	232,535	10,577	243,112
1806	297,581	19,193	316,774	227,115	18,302	245,417
Total	1,037,813	371,062	1,408,875	821,004	44,157	165,171
Average	172,969	61,843	234,812	136,834	7,359	144,193

Trade by sea, 1802-1815.

Returns for the whole trade of the port are again available for 1810. From these returns it would seem that since 1802 some falling off had taken place, the totals, of which £462,204 (Rs. 46,22,040) were imports and £443,546 (Rs. 44,35,460) were exports, amounting to £905,750 (Rs. 90,57,500) as compared with £988,388 (Rs. 98,83,880) in 1802. In 1813 commerce is said to have further declined, an increased quantity having passed to Bombay.[4] In the following year the collector, Mr. Morrison,[5] in noticing the falling off in the customs revenue at Surat, says, "it is a notorious fact that the number of Arab, Jew, and Armenian merchants has, of late, by deaths, bankrupt-

[1] Forbes' Or Mem., III., 401.

[2] Milburn's Or. Com. I., 121-124.

[3] Milburn's Or. Com , I , 160 Of imports in 1805, raw silk represented £61,666 ; sugar, £32,940 , piece-goods, £27,526 ; treasure, £1,40,042 , quicksilver, £8,572 ; cochineal, £6,991 ; betel-nuts, £6,594 , old brass, £4,037 ; iron, £3,697 , elephants' teeth, £3,565 , copper, £3,554 ; grain, £2,663 ; horses, £2,658 , wine, £2,640 ; liquors, £2,640 ; cocoanuts, £2,116 , pepper, £2,569 , tortoise shell, beads, and china-ware, between £1,800 and £1,550 each , glass-ware, cardamoms, sacking, woollens, coir, spices, dates, and tin, between £1,400 and £1,000 each ; sundries, £15,186 , and imports re-exported, £16. Of exports, cotton was valued at £108,398 , piece-goods (Surat) at 77,579, piece-goods (village) at £19,653 , treasure at £10,577 , hemp at £2,297 , horses, castor seeds, red and white lead, silk cloth, country paper, tin, and shawls, at between £1,360 and £1,000 each ; indigo and vermilion at between £450 and £400 ; woollens at £44 , and sundries at £10,577.

[4] Milburn's Or. Com. I , 160.

[5] Letter to Government dated 29th August 1814.

Trade by sea, 1802-1815.

cies, and desertions been much reduced." Surat had also suffered severely by the destruction of ships by the French and by the disturbances caused in Arabia by the Wáhábis. The very heavy Surat Duties, seven per cent as compared with three and a half per cent in Bombay, injured the Surat trade, though, even if the duties were removed, 'it seemed doubtful if the Gulf trade would again rise to its former consequence.' When Mr. Morrison wrote (1814, August 29th), piece-goods worth £80,000 (Rs. 8,00,000) were stored in Surat warehouses 'without the prospect of any purchaser.' Mr. Morrison's only hope for the revival of Surat trade was the close of the European war. This hope was not disappointed. In 1815, on the increase of trade that followed the proclamation of peace, the total commerce of Surat rose to £1,253,111 (Rs. 1,25,31,110) as compared with £988,388 (Rs. 98,83,880) in 1802. The imports standing at £637,190 (Rs. 63,71,900) instead of £460,018 (Rs. 46,00,180), and the exports at £615,921 (Rs. 61,59,210) instead of £528,370 (Rs. 52,83,700) From the detailed statement given below, it will be seen that of the whole amount a much larger proportion than formerly consisted of local traffic with Bombay :—

Statement showing the detail of the sea trade of Surat, 1815-1816.[1]

Ports	Imports to Surat					Exports from Surat				
	Vessels		Merchandize	Treasure	Total	Vessels		Merchandize	Treasure	Total.
	No.	Tons				No	Tons.			
			£	£	£			£	£	£
Brazil	3	1,150		30,169	30,169	3	1,150	88,684	630	89,314
Malabar and Kanara	..	..	519		519	..		1,055	1,776	2,831
Bombay	.	.	225,357	57,061	282,418		..	199,508	32,460	231,968
Broach ..	..		80,245	38,500	84,095		..	45,388	19,099	64,487
Cambay ..	..	.	6 849	..	6,849	..		5,191	42	5,233
Jambusar . ..	..	.	19,668	.	19,668	.		4,230	1,659	5,889
Bháunagar . .	..	.	9,811	9,956	19,767	.	.	30,220	40,488	70,708
Persian Gulf ..	14	805	2,912	2,945	5,857	10	627	29,941	630	30,571
Arabian Gulf ..	3	483	3,386	103,228	106,614	9	1,342	92,370	.	92,370
Bassein .. .	..	.	41,151		41,151	..		2,576	1,835	4,411
Mozambique ..	6	665	25,968	6,579	32,547	6	665	17,710	..	17,710
Penang and eastward.	1	300	..	6,750	6,750	..	..	.	..	..
Cutch and Sind ..	..	..	786	..	786	.	..	299	130	429
Total	27	3,403	416,652	220,538	637,190	28	3,784	517,172	98,749	615,921

This increase of commerce did not last long. In 1820 the trade had again fallen lower than in 1810. Of a total value estimated at £849,500 (Rs. 84,95,000), £443,376 (Rs. 44,33,760) were imports and £406,124 (Rs. 40,61,240) exports, and in 1822 the collector of customs wrote that the trade was yearly on the decline.[2] By 1825 Surat trade was still further reduced. 'It was of very trifling consequence, consisting of little but raw cotton shipped to Bombay in half decked boats of from thirty to forty tons.'[3] "Except brocade and shawls," writes bishop Heber (March 1825), "all the manufactured goods are undersold by the English, and dismal decay has

[1] Hamilton's Description of Hindustán, I., 721.

[2] Letter to Government dated 4th February 1822.

[3] Heber's Narrative, II., 175.

fallen on the native merchants."[1] In the next year (1826) the depression of trade at Surat was still greater. At Mocha and Jedda, on account of bad markets, many merchants became insolvent and brought ruin on some of the merchants of Surat.[2] In 1827 the farmers of the town duties owed government nearly £2,500 (Rs. 25,000), and the collector of customs wrote that, in the existing state of the money market, he doubted if the security of Surat bankers was safe.[3]

Trade by sea, 1815-1830.

In 1830 the returns had still further declined, the total estimated value of the commerce being £816,345 (Rs. 81,63,450), of which £427,025 (Rs. 42,70,250) were imports and £389,320 (Rs. 38,93,200) were exports. The decline continued till about 1840.[4] Then trade again began to revive, the returns for the eight years following 1840 showing a total average yearly trade of £741,097 (Rs 74,10,970) as compared with £625,923 (Rs. 62,59,230), the corresponding average amount during the seven years ending with 1840. The returns of the years since the introduction of the railway (1863-1875) show, as compared with those of 1848, a falling off, the average for the five years ending 1871 being £674,070 (Rs. 67,40,700), and the total value of the sea trade in 1875 standing as low as £507,866 (Rs 50,78,660).[5] The following summary shows in tabular form the total estimated value of the sea trade of Surat during a succession of years between 1801 and 1875 :—

1830-1875.

Comparative Statement of the total Surat trade by Sea, 1801-1875.

Import and Export	1801.	1810	1820	1830.	Yearly average from 1834 to 1840 (7 years)	Yearly average from 1841 to 1848 (8 years)	Yearly average from 1867 to 1871 (5 years).	1875.
	£	£	£	£	£	£	£	£
Import	545,101	462,204	443,376	427,025	207,271	288,934	212,592	160,433
Export	498,121	443,546	406,124	389,320	418,652	452,163	461,478	347,433
Total	1,043,222	905,750	849,500	816,345	625,923	741,097	674,070	507,866

Traders with Surat, 1800-1875.

With the exception of the English whose increase of power improved their position as merchants, the state of the different European trading companies which, for several years before the close of

[1] Heber's Narrative, II., 175.

[2] Petition of the people of Surat, dated 1st December 1826.

[3] Letter to Government dated 18th November 1827.

[4] Mr. Vaupell, who visited Surat in December 1838, found one ship in the Tápti roads. "Trade," he says, "has left the Tápti. I can remember the river at this season crowded with shipping, now passed away probably for ever."—Trans Bom. Geog. Soc., VII., 103.

[5] The totals of Surat trade given by Mr. Mackay (Western India, 284) do not agree with the figures given in the text At the same time, the two sets of returns point to a gradual decline in the trade till about the year 1836, and a subsequent revival from about 1840 According to Mr. Mackay's returns, the total average yearly trade during the fourteen years ending with 1836 amounted to £450,000 (Rs. 45,00,000), during the five years ending 1841-42 it averaged £490,000 (Rs. 49,00,000), whilst during the five years ending 1849-50 the average rose to £560,000 (Rs. 56,00,000). The returns for 1849-50 were as high as £708,000 (Rs. 70,80,000).

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Traders with Surat, 1600-1675.

The English.

the eighteenth century, had been depressed, from the beginning of the present century became hopeless. Under the arrangements introduced in 1800, the English company maintained their commercial board at its old strength, and passed a regulation helping the company's servants to check and punish any attempts at fraud on the part of the dealers and weavers from whom the supply of cloth for export was obtained.[1] But by the charter act of 1813 the monopoly of trade was withdrawn, and the company ceased to have a special trading establishment in Surat.

The Dutch.

Before the close of the eighteenth century, Dutch trade had almost ceased at Surat. Their factory, of which the English had taken possession on the conquest of Holland by France (1796), was restored to the Dutch government at the close of the European war (1815). But that government would seem to have made no attempt to revive Dutch trade at Surat. In 1825 the factory was empty, 'the chief only waiting the orders of his government to surrender this, like the other Dutch possessions, to the English.'[2]

The French.

During the European war the property of the French in Surat had been taken possession of by the English. On the restoration of peace (1815) this property, 'containing some handsome and convenient buildings,' was restored to them. A governor and several officers were sent to take possession But the governor died, and his suite was so thinned by disease that the few survivors returned to the Mauritius. No one came to take their place, and in 1825 the buildings were rented by the English officers from some country-born people.[3]

The Portuguese.

At the beginning of the century, with the exception of the English, the only settlement of European merchants that remained in Surat was that of the Portuguese. In 1801 the government of Portugal suggested that their factory might also be withdrawn, and it was continued, apparently rather 'as a help to a great number of Roman Catholic families who call themselves Portuguese,' than because of the value of its trade.[4] In 1802-3 only one ship of six

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[1] Among other points this enactment (Reg. VIII of 1800) provided for the punishment of weavers, calico printers, and others, who, in preparing cloth for the company's investment, used less than the proper quantity of raw material The following acts were also made punishable The failure on the weaver's part to supply the cloth within the stipulated time, the entering into an engagement with some other purchaser before they completed their contract with the company, the attempt to purchase goods that had been wrought for the company, or the attempt to deter weavers from accepting the company's advances On the other hand, weavers and others were invested with special powers of prosecuting any of the company's servants who had wronged them From details given in this regulation, it would seem that between the company's immediate servants and the weavers there were fewer middlemen than in other parts of India. And that in some cases the company's servants arranged for the produce of cloth direct with the weavers.—Surat Papers, 226, 228.

[2] Heber's Narrative, II., 175.

[3] Heber's Narrative, II, 175. Another reason for the desertion of Surat by the French was that the Bombay Government declined to re-admit them to their *farmán* privileges —Memo. on Portuguese Privileges at Surat, by C. B. Pritchard, Esq., C.S., Collector of Salt Revenue, dated 8th July 1872

[4] Notes by the late Mr. Fellipe Nevy Xavier, Assistant Secretary to the Goa Government (1870).

hundred tons sailed from Surat to Lisbon.[1] The Portuguese were at first allowed to continue to trade at the old charter rates of two and a half per cent.[2] With this advantage their competition with English trade became so formidable that, in 1806, the Bombay Government, so far at least as the Gulf trade was concerned, found it necessary to deprive the Portuguese of their special privileges.[3] In 1811 an attempt was made to improve the trade. Four Portuguese ships arrived at Surat and carried away goods valued at £160,000 (Rs. 16,00,000). This speculation would seem to have turned out a failure, as in 1813 and 1814 no Portuguese ships visited Surat.[4] The Portuguese would seem to have shared in the speculative shipments of cotton in 1817, 1818, and 1819, as their trade is said to have then been 'something considerable.'[5] But along with the English exporters of that time the Portuguese must have suffered severely. In 1822 they had 'no trade at all,' and in 1825, if their factory was then open, their trade must have been extremely low, as bishop Heber, who mentions both the Dutch and the French, makes no reference to the Portuguese.[6] During the next twenty years their trade remained very insignificant. In 1840 the gross value of imports was only £82 (Rs. 820), and in the next seven years the amount was still less, averaging only £64 (Rs 640) a year. Between 1851 and 1861, on account of larger importations of salted fish and cocoanuts from Daman and Goa, the corresponding returns amounted to £512 (Rs. 5,120). During the five years ending with 1876 there was a still further increase to an average of £645 (Rs 6,450) a year. In 1868 a new trade was started, and grew so fast that in 1871-1872 its value rose to £65,419 (Rs 6,54,190). This trade consisted in importing, under the cover of charter privileges, which though in some respects curtailed had never been entirely revoked, large quantities of wines and spirits through Surat to Bombay. As this traffic was of the nature of an abuse, the British government, in 1872, determined that the special privileges under which it was carried on should cease.[7]

Traders with Surat, 1800-1875.

The Portuguese.

There are at present (1876) seven ports in the Surat district,— Surat on the Tápti, Bhagwa on the Sena creek, in the Olpád subdivision, Bilimora on the river Ambika, Navsári on the river Purna,

Surat sea-ports, 1876.

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[1] Hamilton's Description of Hindustán, I., 719.

[2] Surat Papers, 274, 276, and 277.

[3] Mr Pritchard's Memo, para. 12. 'Payment of the increased charges was at first resisted by the director of the Portuguese factory, but his objections were overruled, and the orders of government were carried into effect.'

[4] Collector of Surat to Government, dated 29th August 1814. It would seem from Mr. Morrison's letter that the Portuguese paid duty on these goods at the rate of 2½ per cent.

[5] Collector of Customs, dated 4th February 1822.

[6] Heber's Narrative, II, 174-177. One reason for the decline of the Portuguese trade at this time was that in 1820, by the levy of town duties and land customs, the special advantages they had formerly enjoyed under the terms of the *farmán* privileges were greatly curtailed —Mr. Pritchard's Memo., paras 16 and 17.

[7] The loss of imperial revenue occasioned by this indirect importation of spirits into Bombay during the three months ending with July 1872 amounted to a sum of £29,626 (Rs. 2,96,260). The details of Portuguese trade in the nineteenth century are extracted from Mr. Pritchard's Memorandum.

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Course of sea trade, 1876.

Balsár on the river Auranga, Umarsári on the river Pár, and Kolak on the river Kolak, in the Párdi sub-division. With the exception of Surat, Bilimora, and Balsár, the trade at these ports is insignificant, its yearly value ranging from £14,451 (Rs. 1,44,510) to £1,241 (Rs. 12,410).

Statement showing the estimated value of the trade at each of the seven ports of Surat in 1874.

Name of Port.	Import.	Export.	Total
	£	£	£
Surat ..	32,902	240,339	273,241
Bilimora	25,858	98,645	124,503
Balsár	6,268	78,637	84,905
Umarsári . .	1,679	12,772	14,451
Navsári	2,531	9,788	12,319
Kolak	1,255	3,232	4,487
Bhagwa .	12	1,229	1,241
	70,505	444,642	515,147

Articles of sea trade, 1876.

Of the articles that form the present (1876) sea trade of the Surat ports the chief are: Of exports—grain, pulse, the fruit of the *mahura* tree (Bassia latifolia), timber, and bamboos. The grain is chiefly wheat, brought down by bullocks from Khándesh, and exported by sea to Gogo, Bháunagar, and other ports of Káthiáwár. Under pulse come kidney beans, or *math* (Phaseolus aconitifolius); *láng* (Lathyrus sativus); gram, or *chana* (Cicer arietinum); *arad* (Phaseolus mungo); and *tuver* (Cajanus indicus). These are sent chiefly to the Káthiáwár ports. Most of the *mahura* flowers come from the lands of Rájpipla, Baroda, and Kaira. Except a little exported to Káthiáwár, this *mahura* goes to Uran, a great distilling port in the Tanna district. The articles second in importance are timber and bamboos. They are brought in carts from the forests in the east of the district and sent to Dholera, Cambay, Gogo, Bháunagar, and other Káthiáwár ports. Of imports the chief is rice. This, brought in husk from the Konkan ports, is, except a small quantity that goes by sea to Káthiáwár, sent by rail to Ahmedábád. Stone for building purposes is also to a considerable extent imported from Porbandar in Káthiáwár. At Balsár, of exports, the chief is timber. This, of which teak is the most valuable variety, comes from the Dáng forests, and is sent north to Surat, Cambay, the Káthiáwár ports, and Cutch, and south to Bombay and other Konkan ports. Besides timber, grain, molasses, and tiles, chiefly the produce of Balsár and Párdi, are exported. Of imports, tobacco comes from Cambay, cotton seed from Broach, iron from Bombay, cocoanuts from Goa, rice in husk from the Konkan ports, and fish from Bombay, Daman, and Diu.

Comparative Statement showing the fluctuations in the chief articles of import and export from the ports of the Surat District, 1801-1874.

Value of sea trade, 1801-1874.

Articles.	1801-2. (a)		1830-31 (a)		1844-45. (b)	
	Import.	Export.	Import.	Export	Import.	Export.
	£	£	£	£	£	£
Cotton	..	42,685	.	1,39,390	144	105,142
Cotton tape, twist and yarn	32,168	22,280	23,585	4,911	22,458	.
Grain of all sorts ..	4	.	..	..	6,681	28,971
Metal	10,591	2,319	10,662	5,482	17,510	881
Oil	3,158	100	411	344	.	1,271
Piece-goods . ..	212,595	359,830	57,121	105,179	55,602	84,676
Silk	64,514	9,116	45,373	10,972	25,168	353
Sugar and molasses	22,069	1,498	23,717	1,163	17,470	13,536
Sundries .	124,720	59,474	87 020	31,078	63,891	147,623
Treasure .. .	74,495	..	178,549	90,410	88,464	21,725
Wood (timber, bamboos, and firewood)	787	819	587	391	1,898	15,768
Total.	545,101	498,121	427,025	389,320	299,286	419,976

Articles	1859-60 (c)		1874-75		Estimated value of goods conveyed by rail in 1874		Total, 1874	
	Import	Export	Import	Export	Inward	Outward	Inward	Outward.
	£	£	£	£	£	£	£	£
Cotton .	.	178,834	3,243	47,465	23,199	244,929	26,442	2,92,394
Cotton tape, twist and yarn	22,067	6,192	196	8,080	60 564	15 498	60,760	23,578
Grain of all sorts .	1,407	91,498	2,047	109,903	115,418	59,605	117,465	1,69 503
Metal	28,043	1,208	3,732	103	60 800	15,600	64,532	15,703
Oil	1,033	10,187	1,392	19,980	4,500	8,8 0	5,892	28,780
Piece-goods	126 045	134,747	34	4,188	86,128	59,136	86,162	63,324
Silk .. .	66,504	5,417	.	53			..	53
Sugar and molasses .	11,101	3,462	3,371	18,289	38,218	59,394	41,589	77,683
Sundries .	379,506	197,846	56,063	158,768	177,413	92,852	233,506	2,51,620
Treasure .	508,649	9,696	..	30,585	..		..	30,585
Wood (timber, bamboos, and firewood)..	1,252	34 004	427	47,228	3,867	13 459	4,294	60,687
Total	1,145,607	673,280	70,505	444,642	570,137	569,273	640,64-	3,013,915

(a) These returns seem to refer only to the port of Surat.
(b) Statistics for the minor ports of Navsári and Bilimora are not available for this year.
(c) The increase under the heads of sundries and treasure in the totals for this year is attributable to the carriage of railway materials, included under 'sundries' for the construction of the line, as also of the cash included under 'treasure' for payment to the railway workers.

Fluctuations in trade, 1800-1874.

The following details show the changes in the chief articles of import and export since the beginning of the nineteenth century:—

Imports.

In 1801 metal was imported by sea to the value of £10,591 (Rs. 1,05,910). Within thirty years more there was but little increase in the import of this article. In 1844 it was valued at £17,510 (Rs. 1,75,100), rising within fifteen years more to £28,043 (Rs. 2,80,430), and then falling as low as £3,732 (Rs. 37,320) in 1874.

The railway returns show that 608 tons of metal, valued at £60,800 (Rs. 6,08,000), were imported in 1874 as compared with 449 tons in 1868.

The import of sugar and molasses by sea was in 1801 valued at £22,069 (Rs. 2,20,690). In 1830 it had risen to £23,717 (Rs. 2,37,170). Since 1830 it has kept continually falling from £17,470

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(Rs. 1,74,700) in 1844 to £11,101 (Rs. 1,11,010) in 1859, and to £3,371 (Rs. 33,710) in 1874.

Fluctuations in trade, 1801-1874.

The railway returns show that the inward trade under this head in 1874 amounted to 1,388 tons, valued at £38,218 (Rs. 3,82,180), as compared with 869 tons in 1868.

Imports.

Cotton does not seem to have been imported by sea in 1801 or in 1830. The import of this article in 1844 was valued at £144 (Rs. 1,440). In 1874 it had risen to £3,243 (Rs. 32,430).

The railway returns show that 407 tons, valued at £23,199 (Rs. 2,31,990), were imported in 1874 as compared with 387 tons in 1868.

In 1801 and 1830 no grain seems to have been imported by sea. In 1844 the import was valued at £6,681 (Rs. 66,810). It fell to £1,407 (Rs. 14,070) in 1859, and has again (1874) risen to £2,047 (Rs. 20,470).

The railway returns show that the inward trade in grain amounted in 1874 to 10,969 tons, valued at £115,418 (Rs. 11,54,180), as compared with 2,592 tons in 1868.

The import of yarn by sea was in 1801 valued at £32,168 (Rs. 3,21,680). It fell gradually until, in 1859, the amount was only £22,067 (Rs. 2,20,670). Within the last fifteen years it has still further decreased to £196 (Rs. 1,960) in 1874.

The railway returns show that 373 tons, valued at £60,564 (Rs. 6,05,640), were imported in 1874 as compared with 338 tons in 1868.

The import of piece-goods by sea was in 1801 valued at £212,595 (Rs. 21,25,950), falling off to £27,526 (Rs. 2,75,260) in 1805. After twenty-five years the returns show an increase to £57,121 (Rs. 5,71,210) in 1830, going down but little in 1844, and rising again to a yearly average of £57,950 (Rs. 5,79,500) during the five years ending with 1849. Within ten years more the import value of piece-goods seems to have doubled, the totals rising in 1859 as high as £126,045 (Rs 12,60,450). Since 1859 the import by sea has again fallen till, in 1874, it was as low as £34 (Rs. 340).

The railway returns for 1874 show an inward trade of piece-goods amounting to 769 tons, valued at £86,128 (Rs. 8,61,280), as compared with 677 tons in 1868.

In 1801 silk was imported by sea to the value of £64,514 (Rs. 6,45,140), falling to £45,373 (Rs. 4,53,730) in 1830, and continuing to decline till, in 1844, it stood at £25,168 (Rs. 2,51,680). During the next fifteen years the import of silk seems to have immensely increased, as in 1859 it stood as high as £66,504 (Rs. 6,65,040). In 1874 no silk seems to have been imported by sea. The railway returns contain no separate heading for silk.

In 1801 and 1830 no grain would seem to have been exported. In 1844 the export value is returned at £28,971 (Rs. 2,89,710). The amount has since steadily risen until, in 1874, the total reached £109,903 (Rs. 10,99,030).

The railway returns show that 5,720 tons of grain, valued at £59,605 (Rs. 5,96,050), were exported in 1874 as compared with 8,641 tons in 1868.

Fluctuations in trade, 1801-1874.

Exports.

Cotton, though not produced to any great extent in the district, comes, as an article of export, next in importance to grain. During the five years shown in the above contrasted statement, the export value of this article seems to have alternately risen and fallen, showing in 1874 but little increase over the total of 1801. The export value in 1801 was £42,635 (Rs. 4,26,350), rising within thirty years to £139,390 (Rs. 13,93,900) in 1830, and within the next fifteen years again falling to £105,142 (Rs. 10,51,420) in 1844. In 1859 the total rose as high as £178,834 (Rs. 17,88,340), but again fell to £47,465 (Rs. 4,74,650) in 1874.

The railway returns show that 4,297 tons of cotton, valued at £244,929 (Rs 24,49,290), were exported in 1874, as compared with 4,126 tons in 1868.

Among articles of export, timber ranks next in importance to cotton. Since the beginning of the century the timber trade would appear to have considerably increased, the value of exports by sea being £47,228 (Rs 4,72,280) in 1874, as compared with £819 (Rs. 8,190) in 1801. As far as the returns are a guide, they would seem to show that the development of the timber trade dates from about 1840. In 1844 the total was £15,798 (Rs 1,57,980), rising within the next fifteen years to £34,004 (Rs. 3,40,040).

The railway returns show that in 1874, 3,336 tons of timber, valued at £13,459 (Rs. 1,34,590), were exported as compared with 544 tons in 1868.

The returns show an immense increase in the export of oil by sea, the value in 1874 being £19,980 (Rs. 1,99,800), as compared with £100 in the returns for 1801 The export of oil in any quantity seems to date from 1841, when the total was £1,271 (Rs. 12,710), rising in the next fifteen years to £10,387 (Rs. 1,03,870).

The railway returns show that in 1874 the quantity of oil exported was 352 tons, valued at £8,800 (Rs. 88,000), as compared with 555 tons in 1868

Under the head of sugar and molasses the chief article of export is molasses. This is one of the staple products of the Baroda as well as of the Surat portions of southern Gujarát. There is a considerable increase in the export trade by sea of this article, the total, which in 1801 was only £1,498 (Rs. 14,980), rising in 1874 to £18,289 (Rs. 1,82,890).

The railway returns show that in 1874 the total export of sugar and molasses was 5,388 tons, valued at £59,394 (Rs. 5,93,940), as compared with 6,942 tons in 1868.

In 1801 the export of yarn by sea was valued at £22,280 (Rs. 2,22,800). Until 1844 this trade kept decreasing, the export value in 1830 being £4,911 (Rs. 49,110), and in 1844 there being no export at all. But within the next fifteen years the export of yarn seems to have revived, the value in 1859 being £6,192 (Rs. 61,920), rising to £8,080 (Rs. 80,800) in 1874.

Chapter VI. Trade.

The railway returns show in 1874 an export of yarn amounting to 137 tons, valued at £15,498 (Rs. 1,54,980), as compared with 144 tons in 1868.

Fluctuations in trade, 1801-1874.

Exports.

At the beginning of the nineteenth century, though the use of them was forbidden in England, Gujarát piece-goods were much worn in Europe, and not only the Dutch and French, but the English exported large quantities. But, with the improvement of English manufactures, the market for Surat goods in Europe declined. At the same time, in consequence of the abolition of the slave trade, the demand for the African market was much reduced [1]

The export by sea under this head was in 1801 valued at £3,59,830 (Rs. 35,98,300), falling off within five years to £97,232 (Rs. 9,72,320) in 1805. In 1830 the value rises to £105,179 (Rs. 10,51,790), but within fifteen years again goes down to £84,676 (Rs. 8,46,760). The total for 1845 was returned at £67,475 (Rs. 6,74,750), and the amount continued to rise in the following years till, in 1849, it reached £90,491 (Rs. 9,04,910.) These piece-goods are said to have been almost all of Surat manufacture, and to have been sent to other ports of Gujarát, Bombay, Mocha, Jedda, and Aden [2] This export trade continued to rise for about fifteen years more till, in 1859, the export value was returned at £134,737 (Rs. 13,47,370). It then began to decline, and by 1874 had fallen as low as £4,188 (Rs. 41,880).

The railway returns show that in 1874 the outward traffic of piece-goods amounted to 528 tons, valued at £59,136 (Rs. 5,91,360), as compared with 430 tons in 1868

The returns show a considerable decrease in the export of metal by sea, the totals being £103 (Rs. 1,030) in 1874, as compared with £2,319 (Rs 23,190) in 1801. The highest total under this head is £5,482 (Rs. 54,820) in 1830.

The railway returns show in 1874 under metal an export of 156 tons, valued at £15,600 (Rs. 1,56,000), as compared with 220 tons in 1868.

The export of silk by sea seems to have considerably fallen off, the value in 1874 being only £53 (Rs 530), as compared with £9,116 (Rs. 91,160) in 1801. The highest total under this head is £10,972 (Rs. 1,09,720) in 1830.

Silk does not appear separately in the railway traffic returns.

Shipping.

With regard to the shipping of the ports of Surat and Balsár, it will be seen from the following statements that during the year

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[1] Milburn's Or Com , I , 289 In 1791 the value of Surat goods sold at L'Orient is returned at £45,678 (Rs. 4,56,780). The decline in the English East India Company's export of Surat piece-goods appears from the fact that, while for the five years ending with 1802, the sales are returned at £154,514 (Rs 15,45,140) for the five years ending with 1807, the corresponding return is £67,930 (Rs. 6,79,300).—Milburn's Or. Com., I., 290.

[2] Mackay's Western India, 251.

1874-75, 1,533 vessels, of an average burden of 18·53 tons, visited the port of Surat, and 2,065 of 18·72 tons visited Balsár[1]:—

Shipping.

Statement showing the number and tonnage of the vessels trading to Surat and Balsár, 1874-1875.

No.	Ports. Names.	Vessels arrived at: No	Tonnage	Average size	Vessels departed from: No	Tonnage	Average size.
		SURAT					
1	Karáchi	7	262	37·42	8	288	36
1	Cutch Port (Mándvi)	1	40	40	9	166	18·44
9	Káthiáwár Ports	294	5,801	19 73	382	5,383	14 09
13	Gujarát Ports	637	10,492	16 47	767	9,507	12 39
1	Bombay	299	7,788	26·04	188	3,678	19 56
19	Konkan Ports	267	3,220	12 05	247	2,907	11 76
3	Foreign or Portuguese Ports (Diu, Daman, and Goa).	18	339	18 83	24	223	9 29
1	Calicut	10	465	46·5	3	128	42 66
48	Total	1,533	28,407	18 53	1,628	22,280	13 68
		BALSA R.					
1	Karáchi ...	5	122	24 4	6	170	28·33
5	Cutch Ports	29	1,139	39 27	70	2,697	38 52
19	Káthiáwár Ports	791	14,889	18 82	609	13,334	21 89
16	Gujarát Ports	719	9,977	13 87	700	9,664	13·80
1	Bombay	260	6,816	26 21	220	5,099	23·77
21	Konkan Ports	153	2,112	13 80	186	3,838	20 63
2	Portuguese Ports	39	539	13 82	173	2,223	12 84
1	Calicut	69	3,078	44 6	64	3,062	47 84
66	Total	2,065	38,672	18 72	2,028	40,087	19 76

Manufactures.

Manufactures.—Of the industries of the district, except agriculture, the spinning and weaving of cotton is the most important[2] Except among the aboriginal tribes, almost the whole female population of the district, both in towns and in rural parts, is to some extent engaged in spinning cotton-thread. The thread is spun both for home consumption and for sale; and hand-spun yarn is used in the coarser qualities of cloth, in tape for cots, and in ropes The spinning of yarn by the hand, though still generally practised, yields a much smaller return than was formerly the case. The competition of steam has of late years so greatly reduced its price that at present (1876) a woman would by a day's spinning earn little more than a penny.

[1] Shortly after the beginning of the nineteenth century, ship-builders would seem to have deserted Surat Most of the vessels required for foreign trade were built either at Bombay or Daman. (Milburn's Or Com , I., 158) Though some of its monopoly of ship-building had been transferred from Bombay to Bengal, yet (1812) for the skill of its naval architects (Pársis), who built merchant ships of six hundred to one thousand three hundred tons, superior to any in the world, the superiority of its timber (Malabar teak) and the excellence of its docks, Bombay was considered of the first importance to the British empire in India.—Milburn's Or. Com., I., 172.

[2] As the manufactures and industries of Gujarát form the subject of a general chapter, only a few local details are given here.

Chapter VI. Trade.

Manufactures.

The weaving of cotton cloth in hand-looms is carried on in the chief towns of each sub-division and in the city of Surat. The hand-loom weavers are Hindus of the Khatri caste, and Musalmáns, chiefly the classes of converted Hindus known as Momnás and Táis. Dhers also manufacture the coarse cloth called *doti*. Of 9,705, the total Khatri population, 6,941, or 71·51 per cent, live in Surat. The rest, 2,764, or 28 49 per cent, are distributed over the chief towns of the district. The Khatris manufacture cloth of various patterns and sizes, chiefly for women's robes and bodices.

The taste for the finer descriptions of cloth is almost entirely confined to the people of the city of Surat. Among country-people the coarser varieties are still almost the only wear. The produce of the local hand-looms is brought to the weekly fairs, or *hátwárás*, where, in exchange for grain, it is bought chiefly by the aboriginal tribes. Again, on account of the greater strength of the hand-made cloth, as well as from their dislike to change, even among towns-people many women continue to use country-made cloth for their robes and bodices The demand for their goods is therefore still considerable, and the condition of the hand-loom weavers by no means bad. Within the last four or five years the Khatris, or Hindu weavers, have begun to manufacture cloth of a new pattern. This new cloth is used chiefly for bodices, and for that reason is called *cholikhand*. Almost the whole of it is exported from Surat to the Deccan.

Steam factories.

Besides the spinning and weaving of cotton by hand, two steam factories[1] are now at work in Surat. Of these, one, called the Mir Jáfar Ali mill, was opened in February 1866, and the other, known as the Mir Ghulám Bába factory, began to work in June 1876. In both of them weaving as well as spinning is carried on. The company to whom the older or Jáfar Ali factory belongs, has a capital of £15,000 (Rs. 4,50,000) The machinery, driven by two engines of thirty and twenty-five horse-power, works 15,796 spindles and 112 looms. The company, to whom the second or Mir Ghulám Bába factory belongs, has a capital of £50,000 (Rs 5,00,000). This factory, which is provided with a steam-engine of sixty horse-power, working 14,688 spindles and 100 looms, was built at a cost of £67,600 (Rs. 6,76,000). Of the weavers employed in these mills, some are Musalmáns and a few are Kolis and Maráthás, but the majority are Dhers. The carpenters are Hindus and Pársis, and the fitters Pársis. Except as clerks, no high-caste Hindus are employed[2] The demand, both for the yarn and the cloth, is chiefly local The yarn is worked up by the hand-loom weavers of the district, and the cloth worn chiefly as body cloths by people of the poorer classes. In addition to these two spinning and weaving factories there are (1876) eighteen

[1] As far back as 1835 some movement took place in Surat in favour of the introduction of a steam factory. The first project was a paper manufactory, and with the assistance of Captain Fulljames, some progress was made in organizing a joint stock company. The scheme, however, was never carried out, and, instead of a paper factory, a cotton spinning association was started. But this also came to nothing —Briggs' Cities of Gujaráshtra, 131

[2] Some further particulars regarding the workers in these mills will be found at p. 206.

Manufactures.

cotton ginning and pressing factories in the district worked by steam, with a total of 518 gins and twenty-five presses. Of these, three are at Sáen, one at Kim Kathodra, one at Kim, two at Olpád, two at Ránder, one at Katárgám, three at Nawágám, one at Nána Warácha, one at Bhestán, one at Maroli, one at Sachin, and one at Isroli. All of these factories have been established within the last ten years. Steam factories.

Very recently (1877, January 1st), near the Sara gate, Mr. Jamáludin Muhammad Bhái, a Musalmán merchant of Surat, has opened a steam factory for the manufacture of paper. Two engines—one of sixteen, the other of twelve horse-power—are at work, and about fifty persons are employed daily. Rags and sacking are worked into material as nearly as possible the same as the present Gujarát hand-made paper. The average daily out-turn is about five hundred pounds. The consumption is almost entirely local—about one-half in Ahmedábád, and the rest in other parts of Gujarát.

Calico-printing.

As European prints are now to a considerable extent worn by women of the trading classes, the work of the calico-printer has greatly declined. Besides their regular occupation as calico-printers, Bhávsárs now in some cases act as dyers, and some of the calenderers, or *chhipás*, deprived of their former employment, now gain a livelihood as brick-layers. The best prints in the district are prepared by the Bhávsárs of Surat, who go to Warácha on the Tápti, about three miles east of Surat, where sweet water is abundant.

Silk.

Considerable quantities of silk goods are manufactured in Surat. The classes engaged in this branch of trade are Musalmáns and Pársis, and of Hindus, Kanbis, Khatris, and Khamárs. *Masru* and *Eláicha*, two varieties of mixed cotton and silk cloth, formerly much used for coats by the men of all well-to-do classes, are now out of fashion; and their manufacture has almost entirely ceased. On the other hand, the demand for the smooth polished silk cloth, known as *gáji*, now commonly made up into bodices and worn even by the poorer classes, is on the increase.

Brocade.

The weaving of brocade, or *kinkháb*, is an important industry in Surat. The weavers belong chiefly to the Kanbi caste But of late years some Golás, Hindus of the rice-pounding caste, have been taught the craft, and shown themselves good weavers. The dealers in brocade belong to two classes, well-to-do Kanbis and Bohorás, followers of the Mulla Sáheb. It is almost entirely by Musalmáns of this class that Golás have been employed as brocade weavers. As regards the market for brocade, till within the last twenty years the consumers were chiefly the well-to-do Hindu town population of Gujarát. The fashion of wearing imported goods has considerably reduced the local consumption. At the same time, in the markets of Siám and China, an increased demand has sprung up for Surat brocade. This trade is chiefly in the hands of Musalmán merchants of the sect of Shia Bohorás.

Embroidery.

Surat still retains its reputation for embroidered work. The demand for silk embroidery, with gold and silver thread, has of late years revived. The workmen, or *jardost*, who embroider with gold and silver thread, are all Musalmáns. But Hindu women, chiefly of

the Wániá, Bráhman, and other high castes, work with silk thread on a silk ground. The consumers of embroidered articles are chiefly the Pársi population of Surat and Bombay.

Manufactures.

Lace.

The preparation of the gold and silver thread and lace used for embroidery is a separate industry. The manufacturers are Hindus, chiefly of the Khatri caste. Surat made gold and silver thread holds a high place in the market.

etal.

Except its betel-nut-cutters, which have a good name for sharpness and strength, the Surat metal-work is not held in any great esteem. Most of the brass vessels offered for sale in the markets of the district come either from Násik or from Ahmedábád. During the last ten years the use of iron pots and pans has greatly increased, and the working up of plates of sheet iron forms a new trade. This iron industry is chiefly in the hands of Musalmáns of the sect of Shia Bohorás. In 1875, near the Mecca creek, Mr. Mánekji Dorábji, a Pársi merchant of Bombay, started an iron factory. At this foundry, which gives daily employment to about thirty-five men, iron railings, pipes, machinery, and other castings in iron and brass are made up to one ton in weight.

Wood.

Of the different branches of wood-work, cart-making employs about fifty families of Hindus; ship-building, in the eighteenth century one of the chief industries in Surat, is now practised only in the construction of small boats and coasting craft. It gives employment to several families, chiefly of Pársis. Turning on the lathe is a more prosperous branch of the wood trade, supporting about four hundred families. Workers on the lathe belong to two classes, the *chudgars*, or turners of wooden bracelets, *chudi*, and the makers of miscellaneous articles, such as toys, bed-posts, and other articles of furniture, who are known simply as Kharádis, or workers on the lathe. With the exception of a few Musalmáns who turn miscellaneous articles, all workers on the lathe are Hindus. Good chairs, tables, couches, and other articles of furniture are made in Surat both by Pársis and Hindus, but chiefly by Pársis. Of ornamental wood-work, both carving and inlaying, are carried on with success in Surat, and of late years have given employment to an increasing number of workmen. In wood-carving about sixty families are engaged, of whom fifty are Hindus and ten Pársis; and of inlayers there are thirteen families, eight of Pársis and five Hindus.

Miscellaneous.

Of miscellaneous industries there are ivory-turning, the making of spangles, of paper, and of preparations from mercury. The turning of ivory for toys and ornaments gives employment to five families, Hindus and Pársis. Spangles, or *chándlás*, made of leaves of mica, ornamented with minute silver and gold cusps and pieces of coloured gelatine arranged in various patterns, are much worn by Hindu women, especially of the middle classes of towns-people, as ornaments for the forehead. The workers belong to the *mochi*, or shoe-maker caste, but form a distinct sub-division known as the *chándlágars*, or spangle-makers. The work is chiefly done by the women. This industry is at present prosperous. Besides the local demand, considerable quantities of Surat-made spangles are exported

to Bombay and the Deccan. To a small extent paper is still manufactured in Surat by the hand. The workers are all Musalmáns. They do not manufacture the paper directly from the raw material, but from sacking, rags, and old paper. This industry is at present in a declining state. The two preparations from mercury, the white precipitate, or *raskapur*, and vermilion, are manufactured on a very limited scale. White precipitate is used as a medicine. A trifling amount is consumed in Surat, the rest is exported to Northern India. Except small quantities used in Surat for dyeing, vermilion, or *hinglok*, is chiefly exported through Bombay to China. The knowledge of these processes is confined to a few families of the Lewa Kanbi caste, by whom the craft has been practised in Surat for several generations.

Weekly fairs.

Besides at market towns, much business is, as will be seen from the accompanying statement, carried on at the *hátwárás*, or weekly fairs held in different villages of the eastern and southern sub-divisions, where the aboriginal tribes form the bulk of population. Wánias and Márwáris regularly frequent these fairs, offering for sale a variety of piece-goods, clothes, cutlery, cooking utensils, beads, bangles, native ornaments, pepper, ginger, tobacco, and other articles of general consumption. The neighbouring villagers attend, bringing with them garden produce, wood, and grain. The mode of transacting business is generally by barter, and little money is used.

Statement showing the character, number, and distribution of the Surat rural weekly fairs, 1876.

Sub-division.	No of markets.	How often held	Articles of sale	Caste of sellers.	Caste of buyers	No of visitors.	
						Min.	Max.
Bárdoli ..	4	Weekly.	Dates, cocoanuts without shells, molasses, spices, vegetables, salt and other necessaries, tobacco, coarse cloth for the use of poor and low castes, bamboo manufactures and brooms	Wánias, Káchhiás, Bohorás, Chhipás, Darjis, Kanbis, Máhs, Musalmáns	Chiefly Kolis, Dublas, Chodhrás, and the other aboriginal tribes.	100	500
Chikhli	1	Weekly..	Dates, shelled cocoa nuts, salt, spices, vegetables, coarse cloth	Grocers, Darjis, Bohorás, Káchhiás, and Máchhis	Do.	400	500
Balsár	3	Weekly..	Copper, brass, and iron pots, coarse cloth, liquor, toddy, dates, and shelled cocoanuts.	Wániás, Káchhiás, Bohoras, Chhipás Pársis, Musalmáns, and Máchhis	Do.	1,000	2,000
Párdi	5	Weekly..	Grain of all sorts, dates, cocoanuts with and without shells, salt, spices, fish, copper and brass vessels, leaves (used for dining dishes), fire-wood, mats, and coir	Khatris, Káchhias, Wánias Kánsárás Darjis, Chhipás, Máchhis, Kumbhárs.	Do	100	3,000
Mándvi	3	Weekly..	Dates, shelled cocoanuts, oil spices, vegetables, fish, parched gram, and coarse cloth.	Brahmáns, Wánias, Kanbis, Káchhiás, Ghánchis, Bohorás, Bhois, and Kolis.	Do.	400	500

CHAPTER VII.

CAPITAL.

Chapter VII.
Capital.

CAPITALISTS.

According to the census returns there were, in the district of Surat in the year 1872, 3,936 persons in positions implying the possession of some capital. Of these 557 were bankers, money-changers, and shop-keepers ; 1,320 were merchants and traders ; and 2,059 were supported by incomes derived from funded property, shares, annuities, and the like. The amount of wealth in the possession of these capitalists cannot be accurately ascertained. The only source of information is the income-tax returns, of which the following is an abstract :—

Extract from Income-tax Returns showing the estimated number and income of the different classes of holders of capital, 1869-1873

	From £50 to £100				From £100 to £200				From £200 to £1,000				From £1,000 to £10,000				£10,000 upwards.			
	1869-70	1870-71.	1871-72.	1872-73	1869-70	1870-71	1871-72.	1872-73	1869-70	1870-71	1871-72	1872-73	1869-70	1870-71	1871-72	1872-73	1869-70	1870-71	1871-72.	1872-73
Bankers and money-dealers .. .	151	159	293		118	97	237	113	56	55	117	61	14	3	3	2	.			..
Merchants . .	284	556	126		76	76	96	94	27	17	52	46	..	.		1	.			.
Holders of government securities *a* .	..	.	..		..		.	..	2		.		.	.	.	.	.	..	.	..
Persons receiving interest from other than government securities.	352	523	.	..	178	207	..	217	47	38	..	48	4	.	.	1		.	.	..

a Almost all holders of government securities do not appear under this head, as they are in receipt of income from other sources. They are probably included either under the head of bankers or under that of merchants

From this table it will be seen that in the year 1870-71, of a total of 1,725 persons assessed, 1,238, or 71·7 per cent, were taxed on yearly incomes of less than £100 (Rs. 1,000) ; 374, or 21·6 per cent, on incomes varying from £100 to £200 (Rs. 1,000 to Rs. 2,000); 110, or 6·3 per cent, on incomes from £200 to £1,000 (Rs. 2,000 to Rs. 10,000); and three on incomes ranging from £1,000 to £10,000 (Rs. 10,000 to Rs. 1,00,000).

The[1] normal condition of almost all the well-to-do, especially of the well-to-do portion of the Hindu community, may be said to be a state

[1] Where no special reference is given, the information contained in this section and in the section on money-lending has been compiled from materials supplied by government officers and other gentlemen resident in the district of Surat.

of saving. But, with most of them, the savings of months disappear in the expenses of one great festivity. Still almost all classes contain some individuals able to lay by money. Increase of wealth, they say, is at present commonest among the higher classes of government servants, pleaders, money-lenders, town-artizans, and labourers in factories and on the railway. Classes who save.

The openings at present available in Surat for the investment of savings and of capital may be roughly grouped under two classes,—those restricted to certain sections of the population, and those available to the whole community. Under the former head come trade, and the purchase of land and house property, while state savings banks and government securities, shares in joint stock companies, hoarding, and money-lending, are means for disposing of their capital and savings, open to the well-to-do of all classes. Investments.

During the last fifty years some of the merchants and bankers of Surat have transferred their capital to Bombay, and live there, though the greater number continue to regard themselves as citizens of Surat. Only a few of the large trading houses remain in Surat; and as trade has left them, these houses, to an increasing extent, engage in banking and money-lending.

For purposes of investment there are two distinct classes of land—plots in the city of Surat suitable for building, and culturable land in the rural parts of the district. Land of the first class is, it is said, sought for as an investment by well-to-do townsmen of all classes, from bankers to artizans; and so keen at times is the competition for such plots of land that within the last eight years (1868-1876) sales have been effected in Surat at as high rates as £23 8*s*. per square yard.[1] The failure of joint stock enterprize in Bombay in the year 1866, and the continuance of the high prices of agricultural produce led those of the Surat capitalists who retained a portion of their wealth, to invest it in the purchase and cultivation of land. This competition for a time increased the value of land; and it is said that in the years 1867 and 1868 instances occurred of cultivators, tempted by the large sums offered them, parting with portions of their holdings. In some cases, for one acre of land prices were paid varying from £40 to £50 (Rs. 400 to Rs. 500). The subsequent fall in the prices of agricultural produce has again reduced the value of land. Land.

The purchase of house property is a form of investment almost unknown in the rural parts of the district. In Surat, on the other hand, among all classes of the townspeople, house property in well-situated streets is much sought after for shops and markets, and yields interest of from nine to twelve per cent per annum. Houses.

As it is not a form of investment that brings in any direct return traders and merchants, as a general rule, except when forced to do so by the increase of their families, seldom spend their money in improving their dwellings. On the other hand, among artizans, shop-

[1] These rates were for land along the line of the Delhi gate road.

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keepers, cultivators, professional men, and government servants, a fashion is said of late years to have sprung up of building new dwellings, or of repairing and enlarging their old ones. A new style of house-architecture has, at the same time, been introduced from Bombay, less picturesque than the old, with its richly carved wooden ornament, but providing larger, brighter, and more airy rooms.

Government securities.

Of investments open to the whole community the state provision of government securities and state savings banks would seem, to an increasing extent, to be taken advantage of in Surat. The yearly payment of interest to the holders of government securities has risen from £2,137 (Rs. 21,370) in 1865 to £6,072 16*s.* (Rs. 60,728) in 1874; while during the same period the deposits in the district savings banks have, in spite of certain restrictions,[1] increased from £11,624 6*s.* (Rs. 1,16,243) to £22,122 10*s.* (Rs. 2,21,225).[2] In the year 1874, of a total number of one hundred and twenty holders of government securities, sixty-three were Pársis, forty-two Hindus, fourteen Europeans, and one was a Musalmán. The greater number of these persons are said to be rich, the possessors of £5,000 (Rs. 50,000) and upwards. Among the holders of government paper are some wealthy Pársis; savers of small sums, who have still the fear of the crisis of 1866 before their eyes; professional men, pleaders, doctors, and others who have not leisure to look after investments attended with risk, and a few bankers, merchants, and the higher class of government servants. The greater facilities and security afforded by the government savings bank, and the acceptance by it of small sums, attract the savings of many persons who, before the financial disasters of 1866, used to deposit their small earnings with bankers.

Shares in joint stock companies.

The capitalists who invest their money in shares in joint stock companies belong to various classes. Of £61,725 (Rs. 6,17,250) the total value of shares available in the Jáfar Ali steam factory at Surat, £51,862 10*s.* (Rs. 5,18,625) are in the hands of capitalists carrying on business in that city. This amount is distributed among 341 individuals, or an average investment of £152 2*s.* (Rs. 1,521) to each share-holder. Of 341 the total number of persons interested in this undertaking, 281 are Hindus, twenty-eight Pársis, thirty-one Musalmáns, of whom twenty-eight are members of the Bohora community, and one is an European.[3]

Ornaments.

The rich and poor of all classes lock up their earnings in the form of gold and silver ornaments. The labourer or artizan, if fortunate enough to save some rupees, has them melted down as an anklet for his wife, or a waist-band for his child. In addition to his love of display, a common saying counsels the merchant to keep one-quarter of his wealth near him in the form of ornaments lest the chances of trade should go against him.

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[1] In 1874-75 a rule was introduced limiting to £50 (Rs. 500) the amount allowed to stand in one year at the credit of any one depositor.

[2] These details have been obtained from the accountant general.

[3] Supplied by the registrar of joint stock companies. Details for the Mir Ghulám Bába steam factory, opened in 1876, are not available.

Of all forms of investment money-lending is the favourite. Money-lenders are of two classes, professional and non-professional. In the latter may be included successful shop-keepers, traders, and well-to-do cultivators—all, in fact, whose position enables them to borrow at low and lend at high rates of interest. Of professional money-lenders there are four distinct varieties: the banker, or *sáhukár*; the pawnbroker, or *jansáu sáhukár*; the usurer, or *kisatia*, that is, the man of instalments; and the village money-lender, or *márwári*.

The banker.

In the Surat district banking establishments are to be found only in the city of Surat and in the towns of Ránder and Balsár. The bankers of the district are by caste Gujarát Wánás, Gujarát and Márwár Shráváks, and a few Bráhmans and Pársis. Among bankers the representatives of one or two firms of long standing and tried respectability hold a position of special honour. These men, in token of respect, are accosted by the title of *parikh*, instead of simply *sheth*, or '*sir*.' In former years men in this position confined their transactions to granting and cashing bills of exchange. They did not engage in money-lending, and so high was their credit that, till as recently as the year 1860, depositors were content to receive from them rates of interest as low as one, or one and a half per cent per annum. In some cases, it is said, their credit was so good that small payments, or *sanchámani*, were actually made by the depositors for the privilege of having their money in such safe keeping. Of late years, in consequence of the misfortunes of 1866, bankers of this class have been forced to invest their capital in joint stock companies or to employ it in money-lending.

The pawnbroker.

The second variety of money-lender is the pawnbroker, or *jansáu sáhukár*, so called because he lends money only on the security of articles, or *janas*, deposited with him. In practice money-lenders of this class make advances only on the security of gold and silver ornaments. Those who engage in this business are small capitalists, many of them widows of bankers or of other well-to-do traders, prosperous cultivators and artizans unwilling to trust their savings in the hands of speculators, and at the same time are without the inclination or the leisure to push an active money-lending business on their own account. By caste pawnbrokers are chiefly Wánás and Kanbis, but some Bráhmans and a few Shrávaks and Pársis also engage in the trade. Though the nature of the transactions offers opportunities for fraud,[1] pawnbrokers, as a class, are said to bear a good name for honesty and for forbearance towards their debtors. The institution, too, is popular, the secrecy with which advances can be obtained enabling respectable families to tide over a domestic difficulty without incurring the exposure and risk of seeking help from the ordinary usurer. The pawnbroker's business is generally carried on in the following way: The person in want of ready-money either sends by a broker, or

[1] The chief opening for fraud is the secrecy with which the transactions are carried on. When the pawner comes to redeem his property, as there is no evidence to prove it, the pawnbroker is, if he chooses, generally in a position to repudiate the whole transaction.

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The pawnbroker.

himself brings to the pawnbroker's house, the ornament to be pledged. The value is stated, and the rate of interest discussed. But before settling the terms the article is, as a general rule, sent to a *chaksi*, or tester of ornaments, to be tested and its value assessed. A sum, about ten per cent less than the assessed value of the ornament, is then made over to the pledger, who, in return for the accommodation, agrees to pay interest at rates varying from four to six per cent per annum. To save troublesome calculations the advance is generally a lump sum, £10, £15, £20, or more, according to the value of the ornament pledged. In some cases the interest is deducted from the amount lent. The date of the transaction, the description and value of the ornament pledged, the rate of interest agreed upon, and the day on which the sum lent is to be repaid, are entered in a memorandum book. Corresponding notes are made on a slip of paper. The paper is then tied up in a cloth with the ornament, and placed in a wooden-box, or in an underground treasure room. The transactions of these pawnbrokers are limited, their yearly dealings seldom exceeding £500. The business is generally personal. When a pawnbroker dies, his affairs are gradually wound up by his heirs.

The town-usurer.

The third variety of money-lender is the low class town-usurer, the *kisatia*, or man of instalments The usurer is a Hindu, by caste generally a Gujarát Wánia, though Kanbis and Márwár Shrávaks also engage in the business Men of this class generally live in the suburbs of the city of Surat, where the money-lender's house, with its two storeys and walls of brick, may often be seen, the only well-built tenement among rows of wattle and daub huts. The house inside is without furniture or decoration, the owner preferring to have his spare capital invested in ornaments of gold and silver to laying it out on articles whose value must gradually fall off. Though frugal in ordinary life, and giving little in charity, the usurer will, on great family occasions, spend on caste entertainments sums varying from £40 to £100. This lavish expenditure helps to keep him in the good graces of his caste fellows. But by other classes the usurer is hated. The name of his calling is a bye-word for ill-nature and stinginess. The *kisatia* is cursed, men say, and will die childless. The usurer keeps two account books, the cash book, *rojmel*, and the account-current book, *sámádaskat*. The entries in the latter are signed by the borrower, so that their genuineness cannot be questioned. As a general rule, a bond on stamped paper is in every transaction drawn up, binding the borrower by stringent penalties to repay the amount due; and as debtors are often irregular in their payments, the usurer has not unfrequently an opportunity of enforcing the penalties. For greater security the bond is sometimes signed by all the members of the debtor's family, or by friends who have agreed to stand security for him. With these precautions, and as he seldom lends a large amount to any one man, and never trades with borrowed capital, the usurer has but little chance of severe loss, and runs no risk of bankruptcy.

In spite of the saying that usurers die childless, their employment is generally hereditary. The son or, failing a direct heir, some member of the family carries on the business. Occasionally a clerk or a

weaver with a genius for economy starts a business of his own. Saving £4 or £5 from his pay or from the profits of his loom, in his leisure hours,—for at first starting he cannot afford to give up his regular employment,—he advances sums of from 10*s.* to £1 to the lowest and most dissipated classes of the people Careful to lend but little to any one man, and to bind the borrower by stringent penalties, the usurer rapidly gains wealth, incurring but few bad debts When his capital has increased to £200 or £300, he by degrees gives up his original employment, and engages a clerk to prepare his account books and help him to dun his debtors He now begins to make advances to the poorer class of shop-keepers who, in laying in their stock, require the aid of capital. With these men the usual arrangement is for the debt to be paid by daily instalments of from 2*d.* to 1*s* Each day the usurer or the usurer's clerk appears at the shop front dunning the debtor for the day's payment. With few exceptions, the creditor passes no receipt for the money paid to him, and as the debtor does not keep any record of these transactions, he is in the usurer's hands. If unable to pay, the debtor is pressed to execute a fresh bond, and should he agree to the money-lender's terms, his account may be allowed to remain unsettled for a year or two. Should the debtor refuse to draw up a fresh bond, the creditor files a suit in the civil court, generally in the small cause court. When once in court, the usurer does not scruple to make use of all the power the law gives him in attaching the property and imprisoning the person of his debtor. In transactions of this nature the nominal rate of interest varies, according to the position of the borrower, from twelve to twenty-five per cent. This is, however, but a small part of the usurer's actual gains. In many cases, if a sum of £10 is to be lent, a bond is drawn up for £12 10*s.* with compound interest on the latter amount. Again, from the £10 sums varying from four to six per cent of the whole are deducted on account of premium, or *mandámani* Finally, the usurer makes an additional profit of one or two per cent by paying his debtor in Broach currency instead of in government coin. The rates of interest and the amount of bonus depend upon the character and necessity of the borrower. When his need is great, a borrower, in lieu of about £9 actually received, may have to pass a bond for £12 10*s.*

Money-lending.

The pawnbroker.

The village money-lender of the Surat district belongs to one of three classes. He is either a Gujarat Wánia, or Márwár Shrávak, a trader by birth and a usurer by profession, an Anávla or Bháthela Bráhman, a well-to-do landed proprietor or cultivator; or a Pársi liquor-seller. Of these classes of money-lenders the Márwár Shrávaks are by far the most numerous and successful. So completely indeed have these foreigners in the rural parts of the Surat district monopolized the business of bankers and usurers, that, in the villages south of the Tápti, Márwári is the term in common use for money-lender. No information has been obtained as to when and from where these Márwár Shrávaks came into the Surat district. But, as money-lenders of this class are not found north of the Tápti, the common opinion that they have worked their way north from the Deccan through the Tanna district may perhaps be correct. Though as aliens in race

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and religion, and related to them by the least amiable of ties, the Márwár money-lender bears, among the people of the Surat district, a character for unscrupulous greed and dishonesty; towards strangers of his own caste he would seem to show much sympathy and active kindliness. Arriving in Surat without money or education, the Márwár Shrávak is taken in hand by his caste fellows, fed by them, set to work, and in his leisure hours taught to write and keep accounts. With this help at starting, the immigrant, who is frugal, temperate, and hard-working, soon puts together a small sum of ready-money. From this amount, by advancing to the poorest classes sums seldom exceeding 10*s.*, his capital has, after a few years, increased to £200 or £300. With these savings he returns to Márwár, and at this stage of his life he generally marries Practising economy even in his native land, the Márwári brings back with him to the village where he formerly had dealings enough ready-money to enable him to start as a trader. His shop once opened, he settles in the village, leaving it only when forced by urgent private reasons to visit Márwár, or because—an event that seldom happens—he has become a bankrupt Except hamlets chiefly inhabited by aboriginal tribes, almost every village in Surat has its Márwári shop-keeper and money-lender. In the larger villages, with enough trade to support more than one shop, the Márwári keeps little but grain in stock In smaller and outlying villages, where he is the only trader, the Márwári starts as a general dealer, offering for sale, in addition to grain, spices, salt, sugar, oil, cloth, and bracelets of brass. The settler is now a member of the community of Márwári shop-keepers and money-lenders. This body has a social life distinct from that of the villagers with whom its members have dealings. Though the families of the different sub-divisions of the Márwári money-lender caste do not intermarry, they are connected by many ties In the event of the death of one of their number, the members of his caste from the neighbouring villages meet together to attend his funeral. Before the anniversary of the death has come round, his near relations, arriving from Márwár, unite with the other members of the deceased's family in giving an entertainment to the Márwári community As the number of guests is small, and as all are possessed with a love of economy, the expenditure on such entertainments is, unlike the cost of a funeral feast among Gujarát Shrávaks, moderate. Almost all Márwáris of this class are Shrávaks, or followers of the Jain religion, and in the largest of a group of villages a temple of Párasnáth is generally to be found. To meet the expense attending the maintenance of worship the settler devotes a fixed portion of his gains. At the same time he subscribes to a provident fund for the help of the widow and children of any member of his community who may die leaving his family in straitened circumstances. When a Márwári shop-keeper dies young, until his son is of age, the widow, with the help of a confidential clerk, or *munim*, generally manages the business. In such cases, it is said, the shop-keepers of neighbouring villages are of much help to the widow, giving her advice as to the conduct of the business, aiding her in keeping her accounts and in recovering her outstanding debts. Connected by such ties as these, a community of interest is said to prevail among the Surat village money-lenders, and there would

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seem to be less of that competition of capital which, in the districts of northern Gujarát, helps the debtor to play off the Wánia creditor against his rival the Shravak money-lender. Settled in one of the best houses in the village, with a good store of cattle and grain, spoken of by all with respect as the *sheth*, or master, and seldom without some family of debtors bound to perform any service he may stand in need of, the village money-lender, though he seldom becomes a large capitalist, lives in a state of considerable comfort. Village money-lenders have dealings with all classes of the rural population; with the village artizans; with the fair people, or *ujliparaj*, as the better class of Surat cultivators are commonly called, and with the dark people, or *kálhparaj*, the aboriginal tribes, of whom, especially in the southern parts of the district, there are large numbers. The remarks made by the collector of Surat in 1840 still hold good: "When a cultivator has come under obligation to him for advances, the Márwári either relaxes his demand, invites further loans, or exacts strict enforcement of the bond, according to the circumstances of his debtor; but, as he is too profitable a dependent to be allowed to go free, the debtor is seldom encouraged to pay off the whole of his debt. The same artful management is employed to keep the poor artizan or mechanic the slave of his creditor, and to convert the chief fruits of his labour to the use of the money-lender, the latter always dealing out such assistance as will keep the labourer in work, but never allowing him to advance so far in prosperity as to free himself entirely from thrall"[1] The village money-lender's chief record of his dealings with the better class of cultivators is the account-current book, or *thámkháta*. Except that the memorandum of payment entered in the *thámkháta* is not signed by the borrower, this book corresponds to the *sámá daskat* kept by merchants. This *thámkháta* is a large carelessly kept book, with entries of transactions extending over several years, and relating to the affairs of distinct debtors. As these different accounts are in some cases separated from each other by blank pages, and as in other cases one page contains a rough statement of the dealings with several debtors, there is little to guard against the insertion of false entries. In a court of justice but small weight is attached to entries in a *thámkháta*, and, for this reason, the money-lender generally takes the further precaution of holding bonds drawn up on stamped paper.

Of well-to-do cultivators who lend money, the chief are the Anávla or Bháthela Bráhmans. Their rules as to rates of interest, and their dealings with their debtors, would seem to differ to no material extent from the practices of other country money-lenders The last variety of village money-lender is the Pársi liquor-seller. Men of this class, by combining together, have, in many parts of the district, contrived to keep the liquor contract of a certain group of villages in one family for several generations. Leaving his family in some town in Surat or Baroda territory, the Pársi liquor-contractor

[1] Mr. Simson, Principal Collector of Surat, to the Revenue Commissioner, No. 322, dated 29th July 1840.

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chooses some good spot in one of the larger aboriginal villages. Here he builds a large brick house, two storeys high, apart from the village and surrounded by an enclosure of from two to three acres in extent. Inside of the enclosure are out-houses and stables for cattle, of which the liquor-seller has almost always a good supply. Investing their savings in land, these Pársis have in several cases acquired considerable estates. Their profits are almost entirely derived from dealings with men of the dark races, or *káliparaj*. Catering to their passion for strong drink, the Pársi advances them liquor, to be repaid, if the customer is a cultivator, in grain at the time of harvest; if he is a labourer, making him clear off his debts by working in the liquor-seller's fields In this way it is that the Pársi's lands are tilled, for neither he nor his family personally take any part in the actual work of cultivation. So great authority does he gain, that the Pársi money-lender is commonly called the master, or *seth*, of the village. His people obey his orders in preference to the summons of the headman of the village or of an officer of government Of the liquor-seller's dependents some are bound to work for a time to clear off a particular debt, and others have permanently sunk into the position of servants. While they are working off their debt, men of the first class generally receive each day a few pounds of grain The latter class of labourers are said to be entirely in their master's hands, and being kindly treated, seldom, if ever, leave his service.

Borrowers.

Borrowers may be arranged under five classes i., stipendiary servants of government and hereditary holders of allowances, ii., traders; iii., artizans, iv, domestic servants; and v., cultivators and labourers. Ten years ago government servants of all grades, and chiefly Hindus of the Nágar and Káyasth castes, were, it is said, with the exception of a few highly-paid officials, deeply involved in debt. This condition was the result partly of heavy expenses connected with marriages and caste dinners, and partly of an extravagant style of living. The increased rates of salaries introduced in 1867, and the steady fall in the price of grain which has since then taken place, have enabled a large portion of this class to free themselves from debt. In point of credit, however, government servants are still, as a rule, said to rank low. The chief reasons for their want of credit are: i., their habit of making irregular payments; and ii., the special difficulty of recovering debts in case of their death, dismissal, or transfer Under these circumstances the best class of money-lenders will seldom make advances to government servants. Most men of this class are, therefore, forced to resort to usurers, and others of the worse sort of money-lenders. These usurers, not content with interest varying, in the case of advances upon personal security, from twelve to twenty-four per cent per annum, under the name of premium, or *mandámani*, make a deduction of from five to ten per cent on the amount nominally advanced. Bonds on stamped paper, containing stringent conditions, have to be passed, and in some cases securities provided. The credit of holders of state allowances, or *watandárs*, who live upon an income derived from landed property, is also low. Men in this position hold themselves bound to incur considerable expense in celebrating marriages and in giving caste

dinners; and as they have a character for carelessness and want of thrift, they are required to pay heavy rates of interest. The terms generally vary from eight to twelve per cent per annum if the hereditary allowance is pledged. When only personal security is offered, the charge rises as high as twenty-four per cent. Borrowers.

Shop-keepers, including cloth-sellers, grain-sellers, milk-sellers vegetable-sellers, grocers, oil-sellers, and sweetmeat-sellers, belong to two classes,—small capitalists and those who trade with borrowed funds. The former, as a rule, carry on their business, with a stock of seldom more than £50 in value, without borrowing money. Sometimes, however, the prospect of a profitable speculation tempts them to lay in an unusually large store of goods or merchandize. In such cases money is borrowed, generally on the personal security of the tradesman. The arrangement for the most part includes a stipulation that the amount borrowed shall be repaid within a fixed period. The interest charged for the advance is moderate, seldom exceeding nine per cent per annum. Bankers are always ready to accommodate any trader of this class who has credit and is known to be honest in his dealings. The second class of traders is to be found only in the city of Surat, where large quantities of goods, merchandize, and articles of food, have to be kept in store. In other parts of the district the style of business adopted by small dealers does not force them to borrow money. On passing a bond on stamped paper, with promise to make daily or monthly payments, the small trader in Surat finds little or no difficulty in obtaining from an usurer sums of money up to £30 or £40 In such cases the rate of interest varies from twelve to eighteen per cent per annum. Traders of tried honesty and of long standing conduct transactions with money-lenders of position, and are not required to pay more than nine per cent per annum. To meet expenses incurred in celebrating marriages, in holding caste dinners, and on other such occasions, traders have also sometimes to seek the help of a money-lender. As a rule, they go to the same capitalist with whom they have had dealings in connection with their trade. In both classes of transactions the rates of interest are the same. But the creditor is more careful in lending money to meet domestic expenditure, and refuses to make an advance until the borrower has satisfied him that he owns property equal in value to the amount required. Traders.

Artizans may be divided into two classes: those whose business requires a certain amount of capital, and those who have to borrow only to meet the expense of their domestic ceremonies. In the first class, come coppersmiths, braziers, weavers, and other manufacturers. Such men, when of good personal credit, can generally borrow from respectable money-lenders at rates not above twelve per cent per annum. Carpenters, goldsmiths, and blacksmiths, belong to the second class. To meet the expense of a marriage or a death, the village carpenter has recourse to the village money-lender. He borrows from £15 to £20 (Rs. 150 to Rs. 200), and, as security, pledges his house or his wife's ornaments. For such advances he pays, in addition to a premium of from one to five per cent, interest varying from twelve Artizans.

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to twenty-four per cent per annum. Legal proceedings are seldom taken against artizans. As men of this class have no property in land, they receive advances of money only on the security of movable or house property. The condition of both classes of rural artizans would seem to be on the whole good. About two-thirds in the Mándvi subdivision and one-half in Balsár are reported to be free from debt. Compared with the town artizan, the country mechanic has the advantage of not being compelled to have on hand so considerable a stock of goods. In two ways he is better off than the cultivator. He has no government cess to pay, and as his caste fellows are few, he can perform family ceremonies at much less cost than the cultivator is compelled to incur.

Servants.

A domestic servant or a labourer, when in need of £2 or £3 (Rs. 20 to Rs. 30) to meet the cost of a marriage or a death, goes either to his master or to some low class money-lender. On his servant passing a bond, the master will, generally without charging interest, advance up to £5 (Rs. 50), recovering the amount by instalments deducted from his servant's wages.

Cultivators.

The agriculturists of the district are divided into two main classes; the fair races, or *ujliparaj*, and the dark races, or *kálíparaj*.

The fair races include the Anávla or Bháthela Bráhmans, numbering, according to the census of 1872, 26,158 souls; Rajputs, numbering 5,787 souls; Kanbis, with a total of 25,196; about 10,000 Musalmáns and 67,496 Kolis, a total of 134,637 souls, or 22 17 per cent of the whole population of the district. In the class of cultivating Bráhmans there are two divisions, the ordinary Bháthelás and those called *desáis*. The latter belong to the families who, in former times, were farmers of the land revenue. Fifty years ago these *desáis* were, as a rule, in a state of opulence. The bulk of the peasantry were practically their tenants-at-will,[1] or their bondsmen. At that time the profits of their position enabled them to spend as much as from £100 to £400 (Rs. 1,000 to Rs. 4,000) upon marriages and other family ceremonies. The abolition (1816-1820) of the practice of farming the land revenue, and the establishment of the mass of cultivators as direct holders from government, took away from the *desáis* their chief source of wealth. And as they retain their habits of indolence, leaving the actual work of cultivation for the most part to their dependents, and refuse to lower the scale of their social expenditure, many of them are said to have sunk into a position of extreme indebtedness, having mortgaged their land and their houses to Márwári money-lenders. On the other hand, the position of the ordinary Bháthela cultivator has improved, and, though they are less saving in their habits than some of the cultivating classes, as a body they may be said to be almost free from large and ruinous debts. The Kanbi and Bohora cultivators are industrious and thrifty.[2] Careful not to become involved in debt, they borrow

[1] The Collector of Surat, to Revenue Commissioner, No 54, dated 13th November 1846. See also Report from W G Pedder, C.S., President of the Gujarát Watan Commission, No. $\frac{14}{145}$, dated 14th August 1865.

[2] Mr. Beyts' account of the cultivating classes of Surat.

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only small sums, and are punctual in making re-payments. As a rule, they procure advances on reasonable terms either from their fellow-cultivators or from the village shop-keeper. On the other hand, the small holdings and scanty capital of the Rajput cultivators force them, in times of scarcity, to seek the money-lender's help, and few of them are said to be free from debt. The Kolis, who belong to the class known as *talabda*, or indigenous, are, as cultivators, intelligent and hard-working.[1] At the same time they are much addicted to drink, and it is probably from this cause that, while some of them are prosperous and independent, many have sunk to the level of the black races, and become the hereditary servants, or *hális*, of the Bráhman cultivators.[2]

At present (1876), though indebtedness is common, few of the better class of cultivators are dependent for support on the money-lender's capital. In years of scarcity, cultivators of all classes may have to borrow in order to meet the government demand; they may have lost their cattle, and be unable to replace them from their own savings; or a valuable crop may fail, and the owner of the land may be unable to repay the capital advanced on the security of the out-turn of his field. Special causes, such as these, at times may force even thrifty cultivators to seek the money-lender's help. But at present, as in 1840, the origin of indebtedness among the better class of peasants would seem, as a rule, to be the large sums they consider themselves bound to spend on their marriages and other family ceremonies.[3] This is said to be especially the case with the Bháthelás, who still spend from £50 to £200 (Rs 500 to Rs. 2,000) on each marriage occasion. The corresponding charges among Kanbis vary from £20 to £100 (Rs. 200 to Rs. 1,000). But, in addition to their necessary expenses, well-to-do Kanbi families, especially if connected with the house of the headman of the village, are anxious to entertain the people of their own and of neighbouring communities. In parts where they form the bulk of the population, the expenses of the Bohora cultivators fall but little short of those incurred by Bháthelás. Kolis, on the other hand, are said to have comparatively moderate ideas on the subject of marriage expenses, seldom spending, on such occasions, more than £10 (Rs 100).

A cultivator of the better class in want of small advances, say of not more than £10, will, unless he already has dealings with a professional money-lender, seek to obtain the amount he requires from a fellow-cultivator. When, on the other hand, sums from £20 to £100 (Rs. 200 to Rs. 1,000) are required, the cultivator will generally have recourse to the village shop-keeper or Márwári. In neither case will a man of this class, unless previously involved, be asked to furnish any special security. A stamped paper is prepared, binding the debtor to repay the amount advanced either in a lump sum or by instalments. If the borrower fails to meet his engagements,

[1] Párchol settlement report, para 45.

[2] Chikhli settlement report No. 310 of 1865, para. 50.

[3] Mr. Simson's letter No 322 of 1840, para. 3.

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the money-lender demands some articles in pledge, or requires the debtor to mortgage his house or a portion of his land. If the debtor refuses to mortgage his property, the creditor will demand sureties, or, failing this, will have recourse to the headman and other leading villagers,[1] or to some friend of his debtors, to whom he states his version of the case, asking them to bring the debtor to reason. The arbitrators, on hearing both sides of the question, generally suggest some arrangement for meeting the creditor's most pressing demands. If the headmen of the village decline to come between the debtor and the creditor, or if the arrangement suggested by them cannot be carried out, the money-lender has recourse to the civil court. His object will not, however, be to recover his full claim, for now, as in 1840, 'a cultivator is too profitable a dependent to be suffered to achieve his freedom.'[2]

Dark races.

According to the census returns of 1872, the aboriginal tribes, the dark races, or *kálíparaj*, numbered 166,565 souls, or no less than 33·31 per cent of the entire population of the district. From the following tabular statement it will be seen that of the different tribes or clans—of which no fewer than twenty are to be found within the limits of the district of Surat—the most important are the Dublás, numbering 71,533, the Dhondiás, with a strength of 46,433; the Chodhrás, with 19,153; and the Náikás, with 17,632. It also appears that, while settlements of the dark races remain in all parts of the district, their number varies considerably according to the character of the country. Most numerous in the hilly tracts towards the east and south, they attain their greatest strength in Mándvi, where they form 70·98 per cent of the entire population. Towards the north-west the dark element becomes gradually scantier till, in the neighbourhood of the city of Surat, it reaches its minimum; the fair races of the Chorási sub-division out-numbering its dark tribes by nine to one.

Statement showing the distribution of the chief aboriginal tribes of the Surat District

Sub-division.	Bhil.	Dubla	Náika	Dhondia.	Chodhra.	Gámin.	Other Tribes.	Total of Aborigines	Total population of the District	Per cent of Aborigines.
Olpád . .	211	8,377	..	..			..	8,591	66,256	12 93
Mándvi . .	5,388	4,855	53		19,153	1,501	379	31,332	48,367	70 98
Chorási .. ,		5,159					9	5,168	48,435	10 60
Bárdoli ..	7	18,714	836	571	.	.	604	21,803	77,600	28 13
Jalálpor ..	8	9 762	2,318	681	..	.		12,761	70.112	18 20
Chikhli ..		8,886	4,289	16,293	..	.	317	29,775	59,312	50 20
Balsár	.	7,726	5,206	11,848		.	107	24,887	78,207	31 82
Párdi	4	7,054	4,940	17,940			210	29,248	51,749	56 51
Total	5,684	71,533	17,632	46,433	19,153	4,504	1,626	166,565	499,938	33 31

Though among these tribes marked differences in character, and considerable variety in condition, are to be found, as compared

[1] Recourse to arbitration is still practised in the rural parts of the district, though, on account of the decay of the personal influence of village headmen, it is becoming less common

[2] Mr. Simson's letter No. 322 of 1840.

with the fair cultivators, all of them are distinctly inferior in mental and bodily power[1] Desire for strong drink is a passion with the members of these tribes. The Chodhrás in the Mándvi sub-division, though numbering less then 20,000, and all miserably poor, have been estimated by the settlement officer to spend on liquor a yearly sum of £3,000 (Rs. 30,000).[2] Again, in the Chikhli sub-division, the Náikás 'will sell all they possess, even the rags that cover them, for a small quantity of liquor'[3]; and, 'except the state demand, the Pársi liquor-seller gets every farthing the Dhondia tribe can scrape together.'[4]

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Dark races.

Arranged according to their social position, the members of these tribes belong to three classes—small landholders, independent labourers, and hereditary servants In spite of arrangements under which cultivators of the dark races held land at specially easy rates,[5] their condition in 1850 would seem to have been wretched in the extreme. The landholder of this class was at that time described as "a prey to the money-lender, who eats the hardearned profits of his labour. The very seed he sows is often not his own, and the rates of interest he has to pay leave him with only a bare subsistence of the coarsest grain."[6] In 1856 the collector, Mr. Liddell, gave a similar account of the condition of the cultivators of the dark races[7] In 1869, in spite of the high prices and prosperity of the preceding years, the settlement officer found that in Párdi even the better class of the aboriginal tribes rarely tasted rice, subsisting almost entirely on the coarsest and cheapest grains supplemented by large draughts of liquor.[8] "Their supplies," he adds, "of even those cheap grains generally fail before June, so that they are compelled to beg from the money-lender seed and food to suffice till next harvest, when the loan has to be returned with fifty per cent more grain than the quantity received. Any thing the money-lender does not absorb goes to the liquor-seller." The six years that have since passed seem to have wrought but little change in the condition of the cultivators of the dark tribes. They admit that, without the help of the money-lender, they cannot till their land, and so poor are they that for two months in the year, from the middle of April till the middle of June, many of them live on roots. The only advance these tribes have made under British management would seem to be, that in some parts of the district

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[1] As shown above, more than 80 per cent of the whole number of aboriginal tribes are known as *Dublas*, a word said to be a corruption of *Durbalas* or 'weaklings.'

[2] Mándvi settlement report No. 1745 of 1872, para. 17.

[3] Chikhli settlement report No 310 of 1865, para. 46

[4] Chikhli settlement report No 310 of 1865, para 48

[5] Colonel Prescott's report No. 310 of 1865, on the introduction of revised rates of assessment in the Chikhli sub-division, page 60. The deduction on account of colour was as much as 25 per cent.

[6] Letter from Mr. A. F Bellasis, First Assistant Collector of Surat, No. 42, dated 15th October 1850, para 13.

[7] No. 588, dated 7th July 1856.

[8] Report on the revision of the land assessment of Párdi sub-division, 1869, page 15.

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they have been raised from the position of wild, unsettled squatters to that of fixed and steady cultivators.[1]

These men are the village shop-keeper's most constant customers. With them he opens an account, giving a few farthings' worth of tobacco, or lending a penny or two that they may buy liquor. When a death happens, a marriage has to be celebrated, or an instalment of rent is due, and silver is nowhere to be had except at the money-lender's, a bond is drawn up on stamped paper, at rates of interest varying from twenty-four to thirty per cent, and in some cases rising to as much as seventy-five per cent per annum. But this is not all the borrower has to pay for the accommodation. The village money-lender is no less skilful than the town-usurer in increasing his profits by deductions and penalties, and by turning to his own account varieties in the value of the currency. Before long the debtor fails to pay the instalments as they fall due; his crop is handed over to the money-lender; and, though his family during the hot-weather month feed chiefly on roots and fruit, a certain amount of grain has to be borrowed for their support, and at the beginning of the rainy season a further supply is required for seed. These grain advances are charged for at special rates according to the proverb—*biju bamnu, khâwânu dohoru;* for seed double, for food one and a half. The advances of grain are entered in a separate account, the grain book, or *dâmâni nondh.* In this account the borrower is debited, if the advance is for seed, with double the quantity of grain actually received, and with half as much again as the quantity received, if the advance is for food. If by the end of the year the borrower has failed to repay the whole amount advanced, double the balance against him is entered in the new books. Instead of repaying the advance in grain, should the borrower wish to repay it in money in addition to double the value of the grain advanced, he has to pay one-quarter more. Thus, if *A* borrows twenty pounds of millet in April (Chaitra) he is debited with forty pounds, which he may pay at any time within a year If he pays in grain in December, only forty pounds are required, but if he prefers to pay in cash, he will have to give the value of fifty pounds. In the eastern parts of the district, as soon as the rains are over, the money-lender goes round, from hamlet to hamlet, claiming his share in the crop. Beyond this he can do little to recover his debts For the Bhils and Chodhrás, the dark people of those parts, are not by their habits tied down to any particular spot, and, if too hard pressed, will forsake their huts and set up a fresh hamlet beyond the reach of the money-lender. The following extract from a shop-keeper's account books, furnished by the mámlatdár of Mándvi, shows how the money-lender deals with his customers of this class, and what record he keeps of their transactions:—

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[1] Twice in the five years, before its acquisition by the British, the aboriginal population of Balsár had left their lands They subsequently came back, and in 1828 formed a large portion of the agricultural population. But, again falling into debt, they forsook their houses and fields, and in 1833, except in three villages, had almost disappeared from Balsár At that time they were extremely unsettled A death in a family, disease, misfortune, or any trifling circumstance affecting their highly sensitive fancies, would cause them to leave their houses and property and move to another village.—Mr. Chambers' report dated 23rd December 1833

Extract from the account of Khusál Fakira Chodhra, of the village of Gantoli, for Samwat year 1920-1921 (A.D. 1864-65).

Receipts *(Jama)*.	£	s	d	Payments *(Udhár)*.	£	s.	d.
Posh Wad 4th.				*Waisákh Wad* 3rd (Page 70 of the day book)			
Castor-oil seeds, 60 lbs	0	4	6	Copper coins paid to self	0	2	0
Clarified butter, 15 lbs.	0	8	0	*A'shád Sud* 3, page 130 Copper coins paid to self	0	0	3
	0	12	6	*A'shad Sud* 14, page 136 Paid to self	0	0	3
Balance due	0	8	10½	*Shrávan Sud* 15, page 151 Paid to self	0	0	4½
				Peas, 5 lbs, given to his sister	0	0	4½
				Salt to self	0	1	0
				Posh Sud 4, page 37. Paid to self copper coins	0	0	6
				Máha Sud 6, page 59. Paid to self government coins, Rs 4 (8s), and exchange 2 as (3*d*.)	0	8	3
				Maha Sud 12 Paid to self	0	2	0
				Chaitra Sud 7 Copper coins	0	0	3
				Page 121 Cloth	0	2	5½
				Interest	0	3	8
Total	1	1	4½	Total	1	1	4½

In the rural parts of the district almost all unskilled labourers who, according to the census of 1872 numbered 69,757 souls, belong to the dark races, including Kolis. The increased demand for labour in the year 1859, when railway works were in progress, and again during the years of high prices (1863-1866), when in many cases well-to-do cultivators ceased to work with their own hands, improved for the time the position of this class. But their improvidence and fondness for intoxicating drinks prevented them from putting by any of their savings, and the fall in wages, which has again taken place, has reduced the labourers of the dark tribes almost to their former condition. As a borrower of this class can seldom give any but personal security, the ordinary shop-keeper refuses to deal with him; sometimes the well-to-do cultivators, for whom he generally works, will make him a small advance; but, as a rule, men of this class, when in want of money, resort to the Pársi liquor-seller. When once indebted to the liquor-seller, these labourers have but little chance of setting themselves free, and, as a rule, sink by degrees into a position of entire dependence upon him.

The third position occupied by members of the dark tribes is that of serfs, or hereditary servants, attached to families of the fair class of cultivators. These bondsmen are called *háli*, literally ploughmen. They are to be found throughout the district, and belong to different branches of the aboriginal population. In Mándvi they are Chodhrás; in Párdi, Náikás; in Balsár, Dhondiás; and Dublás

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in all parts of the district. Kolis, though reckoned one of the fair races, contain, among their number, families who have sunk into the position of serfs. In Chikhli many, and in Párchol most, of the *hális* are said to belong to the Koli caste.[1] The total number of *hális* in the Surat district has not been shown in the census returns. Roughly it may be estimated at about 27,500 souls, or one-sixth part of the entire strength of the aboriginal population.[2]

The proprietors of these serfs, called by their hereditary servants *dhaniámo*, or master, are, for the most part, members of the fair tribes, Bháthela Bráhmans, Kanbis, and Rajputs. Originally, it seems probable that families of the dark tribes attached themselves as bondsmen, especially in years of scarcity and famine, to the households of men of the cultivating classes only. At present, however, serfs are to be found in the service of some village shop-keepers. For, though the practice of openly buying and selling bondsmen no longer prevails, Márwáris are said, at times, if in want of a workman, to take over from a cultivator of the better class a *háli* or two in part payment of a debt. Pársi liquor-sellers have also in their power families of the aboriginal races who have mortgaged their labour at the only means of obtaining an advance of money. And in years of scarcity, instances still occasionally occur in which members of the dark tribes agree to enter into the service of a cultivator on condition that he supplies their families with grain Though practically holding the position of bondsmen, such servants are not called *háli*. The use of this term is confined to families who, for generations, have held the position of hereditary servants. In different parts of the district the relation between landowner and serf would seem to vary considerably. Thus, in 1816, Captain Newport found that the *hális* of the Párchol (now Jaláipor) sub-division, unlike those of other parts of the district, were subject to be sold at their master's wish.[3] And while in Balsár and Chikhli, when his services were not required by his master, the *háli* might work as a labourer on his own account, in Párchol the masters were said to hire their *hális* out as labourers, keeping to themselves whatever wages might be earned. No social degradation attaches to the position of a *háli*. Men of this class intermarry with the independent labourers of their own tribe; and the female *hális* are, even in high-caste families, employed as domestic servants—drawing water, cleaning the house, and looking after the cattle.[4]

The *hális* live sometimes in groups, forming by themselves a distinct hamlet, or *falia*. In other places a portion of the village site has been assigned to them. But, as a rule, two or three families may be found settled in the fields, squatting on some open plot on their master's land. Their dwelling is a small hut, consisting of a single room; the walls made of cane, plastered with mud, and the roof of

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[1] Chikhli settlement report, para. 50, and Párchol settlement report of 1816, para. 45

[2] Ráv Sáheb Kesavlál Nathubhái, Mámlatdár of Balsár.

[3] Settlement report of the Párchol pargana, 1816.

[4] Captain Newport's Párchol settlement report, para. 45.

thatch. Some pieces of matting to sleep on, and a few earthen-ware cooking vessels, are all the furniture these huts contain. The clothes worn by the *hális* are of the scantiest and coarsest description. Two cloths,—one for the loins, called *dhotar*, and the other to wrap round the head, called *fáliu*,—and a pair of shoes, is all the man requires; and, except in a few clans, among whom the practice of wearing a boddice, or *choli*, prevails, one large sheet, or *sállo*, suffices for the woman's clothing. These articles they obtain, in some parts of the district, once a year from their master. But, as a rule, *hális* are expected to clothe themselves from their earnings at odd times, as labourers. Ornaments they have none, except a few rings of brass, tin, or polished wood, which the women wear in tiers, on their legs and arms.

From June to December is the cultivator's busy season. During these months, when he has to be early at field, the *háli* and his wife rise at dawn and cross over from their hut to the master's house. Here they meet with the rest of their master's *hális*, from two to twenty families, according to their master's position[1] All pass into the public room, or *parsál*, of their master's house; and, sitting in groups on the floor, receive their morning meal from the hands of the females of the family. To each one, a cake or two of millet bread, some pulse, *wál*, and a jugful of whey; perhaps some pickles, and a small supply of tobacco. The meal is over by about six o'clock, and, except one or two women who stay in the master's house as domestic servants, the *hális* set off to the fields. Generally the master or one of his sons goes with them, and they work together till eleven or twelve o'clock. About this time the females of the master's family come into the fields, bringing the *hális'* mid-day meal. This meal consists of millet cakes, pulse, and whey. The master eats the same food as his ploughmen. After a short rest—for if well fed the *hális* would seem also to be well-worked—and a smoke, work is resumed and carried on till sunset. They then return to the master's house and receive their daily allowance of grain. Four pounds of unhusked rice, or *bhát*, for a man; two pounds for a woman; and for a child from a half to a whole pound. These rations are distributed by the females of the master's family to the *hális'* wives. Only what is wanted for the evening meal is taken, and the rest left in the master's hands. The balance of the *háli's* allowance of grain is not placed by itself, and nothing is put down in writing. But, when she receives her allowance, the *hali's* wife talks over with her mistress the state of their grain account. After a hard day's work, before leaving the master's house, the ploughman generally is allowed a drink of liquor, or *tádi*. Many masters have palm-trees on their fields, and set apart the produce for the use of their servants. When the farm work is light, the ploughman, after breakfast, finishes off what there may be to do in the fields, and returns to his hut, where he spends the rest of the day. In the evening his wife fetches the allowance of grain.

[1] Captain Newport, in his Párchol settlement report (1816), para. 46, foot-note, mentions the case of an old village manager, or *desái*, who had as many as 400 *hális*. There are no such households now.

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At times, when there is nothing for him to do in his master's fields, the ploughman is expected to seek for work, or to employ himself in cutting faggots and taking them to market. When thus engaged, the *háli* receives no food or grain from his master, but is allowed to keep what wages he may earn Should he fail to find work, the *háli* will, in the evening, send his wife to the master's house for a supply of grain from the balance at his credit. It seldom happens that the *háli* exhausts all the grain at his credit If all is expended, the master advances what additional grain the *háli* requires.

When employed by his master on other than field work, the *háli* occasionally receives wages in cash. If, for example, the *háli* takes the grain to market, he is paid wages for the time he has been absent. Again, he occasionally has a piece of luck, as when he is sent to escort a female member of his master's family to the house of her husband or father. On leaving to return, the *háli* generally receives a present of a rupee or two from the master of the house. On the chief holidays of the year, about eight days in the twelve months, the *hális* rest, but receive their meals and allowance of rice as on ordinary working days. The actual expenses at a *háli's* wedding are paid by the master The expenditure, which consists chiefly of the liquor drunk by the guests, generally amounts to from £1 to £2 (Rs. 10 to Rs. 20), and never exceeds £10 (Rs. 100). When the serfs of different masters intermarry, the general practice would seem to be that the man continues to work for his master, and the woman for hers. The children are divided, or, if there is only one son, his services are shared. Sometimes the wife works for her husband's master. In the event of a *háli* dying, the widow is free to marry again. But any son she may have had by the first marriage is bound to the service of her first husband's master On the occasion of a marriage in the master's family, the *hális* are presented with clothes The men with a sheet to throw round the body, *dhotar*, and a cloth to wrap round the head, *fália*, worth together about three shillings (Rs. 1-8); the women with a long cloth, *sállo*, costing about two shillings, and those who wear it, with a boddice, *choli*, worth not more than ninepence (6 as) The four or five days of the wedding festivities are a busy time for the servants, and, though their ordinary supply of rice is not distributed to them, they are well treated, eating the same food as the guests, and kept freely supplied with liquor.

Treated with 'kindness and consideration,' the *hális* are contented[1] 'They suffer neither want nor oppression, and, from their extreme ignorance, are happier, and perhaps better and more regularly fed, than if they had themselves to depend on.'[2] In their leisure hours, allowed to earn money for themselves, and, aided by their master to bear the expense of their weddings, it is not to be wondered at that, till recently, instances of desertion were extremely

[1] Colonel Prescott's Chikhli settlement report No. 310 of 1865, para. 49. Captain Newport (1816) says: "I have heard several of the owners say they would sooner dispose of their wives, their jewels, or their houses, than sell their slaves." Parchol settlement report, para. 46.

[2] Captain Newport's Parchol settlement report, 1816, para. 45.

rare. Though the temptations of high wages have induced *hális* to abandon their masters, and the inability of the masters to enforce their claims of service in courts of law have perhaps of late years combined to make the relations of master and servant less kindly than they formerly were, in the opinion of local officers well acquainted with their relative conditions, *hális* are still, as a rule, better off than those of their clan who are nominally free labourers [1]

Relations between debtors and creditors.

With the exception of the banker, or *sáhukár*, and the pawnbroker, or *jansáu*, the several varieties of money-lender, the town-usurer, the village shop-keeper, the well-to-do cultivator, and the Pársi liquor-seller, have the reputation of taking an unfair advantage of the ignorance and necessity of the poorer class of borrowers. It would appear from the civil courts returns that, during the five years ending with 1874, the pressure of the civil courts upon the indebted classes, though with some variations from year to year has, on the whole, considerably increased. During these years the total number of suits disposed of has risen from 5,723 in 1870 to 6,623 in 1874, an advance of 15·72 per cent Calculating on the basis of one debtor to each suit, this figure (6,623) shows that during the year 1874 the representatives of 4 36 per cent of the families of the district were taken into court by their creditors, and in only 136 cases, or 2 53 per cent of the entire number of suits was the decision of the court in the defendant's favour. Of the decrees thus passed, 41·01 per cent have, on an average, during the period of five years, been given against the defendant in his absence. The practice of making orders in the defendant's absence is, it would seem, on the increase ; the numbers having risen from 2,165 in 1870 to 2,834 in 1874, an increase of 30 9 per cent. There is also an advance in the total number of transfers of property from 1,345 in 1870 to 2,234 in 1874, an increase of 66·09 per cent. Of these, transfers of movable property have increased from 411 in 1870 to 813 in 1874, or 97 81 per cent, and transfers of immovable property from 934 in 1870 to 1,421 in 1874, or 52·14 per cent. Again, with regard to the measures taken against the persons of debtors, creditors seem year by year, to an increasing extent, to be proceeding to extremes. The number of debtors arrested having, during the past five years, increased from 160 in 1870 to 195 in 1874, an advance of 21·87 per cent.

In 1840 Mr. Simson reported that, in spite of their exactions, the prevailing feeling of the cultivating classes towards the village money-lenders was kindly. They considered him a friend, without whose help gaiety on the occasion of family festivities would be impossible, and life not worth having.[2] From the answers lately received, it appears to be the opinion of the local officers that at present but little of this friendly feeling remains. The nearest approach to such a feeling on the part of the borrowing classes is reported to be a somewhat sullen admission that the money-lender is necessary. Still the relations between the lender and the borrower would seem to be less un-

[1] Mr. Beyts, superintendent of survey, letter dated 8th July 1875.

[2] Mr. Simson, No. 322 of 1840, para 2.

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satisfactory than is the case in some other districts of Gujarát. The steps taken by creditors to recover their debts are said seldom to give rise to acts of violence in the district of Surat. Within the last two or three years one instance occurred, in the Balsár sub-division, in which a Márwári money-lender was killed by his debtors but this is said to be an exceptional case[1] The dark tribes of the Surat district seldom have recourse to acts of violence, preferring, as has been noticed above, when they consider themselves badly used, to remove out of the money-lender's reach. The cause of the difference in this respect between the Surat and Kaira districts would seem, however, to lie in the more patient character of the borrower, rather than in the greater moderation of the lender. In Surat the nominal rates of interest are as high as in Kaira, and the additional exactions but little less extreme. In one respect, indeed, the Surat rural money-lender, the Márwári shop-keeper, would seem to hold a stronger position than the Kaira Shrávak. He has less to fear from the efforts of rival capitalists. On the other hand, their very poverty acts to some extent as a safeguard to the dark races of Surat. Knowing their unsettled habits, and that they are always ready to seek a refuge in the tracts of forest and hill on the eastern borders of the district, the money-lender is careful to refrain from exactions which might drive his clients beyond his reach.

Rates of interest.

In 1797 a committee appointed to inquire into the state of trade in Surat, reported that exorbitant rates of interest were charged, cultivators in some cases paying monthly rates of from two to two and three-quarters per cent.[2]

In 1827, when a cultivator had to apply for a loan, the usual terms were at the rate of twelve and a half per cent (2 annas in the rupee) for six months. If the debt was not paid at the end of six months, interest was added nominally at the rate of twelve, but really at the rate of twenty-four per cent. At the end of the year, if the debt was not paid, the principal and interest were joined to make one sum, on which interest ran at the rate of twenty-five per cent a year.[3] In 1840 the highest legal rate of interest was twelve per cent, and nine per cent was the rate commonly awarded by the courts. These rates were, however, much below the actual usury daily practised in advancing small sums of money.[4]

At the present time, 1876, according to the returns received, in small transactions, when an article is given in pawn, artizans and well-to-do cultivators pay interest at rates varying from nine to eighteen per cent per annum, the charge in the case of the poorer cultivators rising to twenty-four per cent. In such transactions, if

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[1] Mámlatdár, Balsár, and the sub judge, Balsár.

[2] Surat Papers, 90

[3] Mr Pyne's report —Letter of the collector of Surat to Government, 26th March 1828.

[4] Mr. Simson's letter No. 322, of 1840

The following statements of the histories of some debts were collected in 1876 by Rao Sáheb Keshavlál Nathubhái, mámlatdár of Balsár. They are given as a foot-note, as it

personal security only is received, the corresponding rates are said to vary from nine to twenty-four per cent per annum for the richer, rising as high as seventy-five per cent for the poorer class of borrowers. In large transactions, if movable property is mortgaged, in the case of artizans and well-to-do cultivators who can offer in pledge, houses, jewels, or other articles of lasting value, the rates are said to vary from nine to eighteen per cent per annum. When cattle or other movable property is pledged by the poorer cultivators, interest is charged at from twelve to twenty-four per cent per annum. When land or an hereditary allowance is mortgaged, the rates are reported to vary from eight to twelve per cent per annum. Except in the case of members of the wilder tribes, from whom interest exacted on personal security is said to rise as high as seventy-five per cent per annum, there would seem to be but little variety in the amount of interest charged in different parts of the district. These rates form but a small part of what the borrower is actually forced to pay. From the amount entered as principal in the bond, before the borrower receives it, certain deductions or *mándámani* are

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seems doubtful how far such statements can be trusted as accurate, while, at the same time, they are useful as illustrating the character of the transactions that pass between the cultivators of Surat and their money-lenders —

In the village, Undáchluwárfália, the land is rich, the money-lenders are rich, but the state of the cultivators is bad One Walabh Gosái, a cultivator, by caste a Kanbi, gave me this account of his indebtedness "In the year 1865, I and Chhiba Gosái borrowed £20 (Rs 200) from Nichha Makan, the headman of the village, and a Kanbí by caste Two years after this, in 1867, I gave 880 lbs of sugar at 9*s* per *man*, or 40 lbs, or in all worth £9 18*s* In 1868 I paid £7 in cash In 1869 I paid £5 more also in cash. In 1870 I gave teak timber worth £1 16*s* and £3 in cash. In 1871 I paid nothing In 1872 the account was balanced, when £33 10*s* were declared due by me Nichha Makan told me that if I paid £20 down, the balance of £13 would be remitted Hearing this, I sold my family jewels and offered Nichha Makan £20, but this he refused to take I then made use of this sum of £20 to meet the claim of another creditor. Nichha Makan continued to press for payment of his debt There was a field of mine, with a crop of sugar-cane worth £20. This I gave up to the patel for £11 12*s*, and for the remaining £21 18*s* I mortgaged to him three houses of the aggregate value of £70 As the crop of sugar-cane was sold, I could not pay the government assessment on that field, and so a balance of £5 remained against me Of this sum I paid £3 2*s* The patel, however, said that £3 10*s* were still due on account of the government assessment, and on this account attached a bullock of mine worth £10. Afterwards the patel got me to execute a bond, and to mortgage in his favour one acre and half of government land I then went away into the Gáckwár's territory "

2nd Case —Another cultivator of the same village, Parág Ratan, a Koli by caste, said "I, twenty years ago, stood security for 14*s*. After four years I gave sugar worth £1 15*s* There still remained a balance against me of from 12*s* to 14*s* After fours years more I gave two bullocks of the value of £3 18*s* There was still a balance against me of £1 10*s*. After four years more I paid £3 12*s* Three years ago my creditor got a bond from myself and Chhiba Gosái for £9 18*s* At the same time he obtained from myself alone a second bond for £2 10*s* On account of interest on this latter bond he last year filed a suit against me for £4 He had my bullocks attached, and I then paid £2 in cash Now, instead of £2 balance, he asks £2 8*s*. The bond for £9 18*s* is still standing against me."

3rd Case —The statement of Ráma Chhiba, a fisherman of Wágrej "About fifteen years ago I borrowed £1 4*s* from Tekchand Bhudar, Marwári of Bilimora. I paid nothing on account of this debt for six years, when I passed a bond for £5. Still, I paid him nothing for three years more. The Márwári then filed a suit for £9 4*s*. against me. I gave him a bullock worth £3 10*s* and a cart worth £2 10*s*. To recover the remainder of his claim he had a crop of sugar-cane attached. As the crop was then ready for cutting, it lost £4 of its value."

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made, varying from two to five per cent. Besides this, if the conditions for payment are not carried out, penalties are imposed, and special allowances for the intercalary month and to cover variations in currency have to be paid. Six per cent per annum is said to be generally considered a fair return for money invested in buying land.

Currency.

In 1800, at the time of the introduction of British administration, two coins, Broach and Surat rupees, were in circulation.[1] From a custom, at that time prevalent, of cutting into coins to test their genuineness, pieces of both these currencies were known by the name of the bored, or drilled rupees.[2] In 1867 some inhabitants of Surat presented a petition, dated 9th August 1867, to the collector complaining of the state of the currency. From this memorial it appears that, at that time, in addition to the company's coin, known as the broad, *poliyu* rupee, there were in circulation no fewer than eight inferior varieties.[3] To lessen the evil, instructions were issued[4] that the different coins complained of should be received at the government treasuries at a rate not exceeding one-half per cent over their current market value Subsequently[5] the acceptance of coins according to the system of exchange by weighment was authorized, and when the operations were brought to a close, debased pieces of an aggregate value of £121,544 14*s* (Rs. 12,15,447) were found to have been withdrawn from circulation.[6] At present (1875), in the villages near the city of Surat, the government rupee is the coin in common use. In the Balsár sub-division there are in circulation, besides the standard coin, the Broach and to a small extent the Surat rupee, the former from two to three, and the latter from one to two per cent less in value than the standard coin. In the Mándvi sub-division the Broach rupee is in almost universal use. Bankers and merchants who carry on regular business transactions make deductions on account of exchange. But town-usurers and village money-lenders are said to turn the difference of rates to their own profit, advancing Broach or Surat rupees and requiring payments to be made in the standard currency.

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[1] Mr Morrison, collector of Surat, letter to Government, dated 13th November 1812.

[2] The terms in use were *edddi* from *edi*, a punch, and *solaki* from *solaki*, a drill used by carpenters and cobblers

[3] *Statement showing the names and values of the Rupees in circulation in Surat in* 1867.

Local Name of Coin	Touch per cent	Value of 100 in Surat market
		Rs a p.
Nákel (with hole)	89 52	93 12 0
Sisel (lead)	44 23	43 12 0
Támbáno (copper)	8 07	12 8 0
Tánelo (bad)	91 58	90 10 0
Untario (not known)	89 25	90 10 0
Balelo (fired)	91 85	90 10 0
Sukáli (good Sika)	No value given.	
Liso (smooth)	....	

Balelo, or fired — This was the name given to the rupees found in houses burnt down in the great fire of 1837 —Government Resolution No 95, dated 2nd July 1868.

[4] Resolution, Government of Bombay, No. 1471, dated 2nd October 1868.

[5] Resolution, Government of Bombay, No. 1652, dated 10th December 1869.

[6] Resolution, Government of Bombay, No 1250, dated 8th May 1872, Financial Department.

Transfers of land commonly take place in one of three ways: (*a*) land is relinquished by cultivators or sold by government on account of the failure on the part of the holder to pay his rent; (*b*) land is sold under the orders of the civil courts; and (*c*) land is transferred by voluntary sale or by mortgage. Information as to the extent to which land is relinquished by cultivators or sold by government is not available; while, under the head of civil court sales, transfers of immovable property other than land are included. Information as to the extent to which land is changing hands is, therefore, limited to the records of voluntary transfers to be found in the books of the registration department. From the abstract of the details compiled by the registration department, it would seem that, as regards the sale of land, the area of state land transferred rose from 731 acres in 1866 to 2,898 acres in 1874, an increase of 296·44 per cent; while, at the same time, the area of alienated land transferred rose from 760 acres to 1,102 acres, or an increase of 45 per cent. That is, the total area transferred by sale rose from 1,491 acres in 1866 to 4,000 acres in 1874, an increase of 168·27 per cent. The average price per acre of state land in 1866 was £8 19*s.* (Rs. 89-8), and in 1874 was £2 4*s* 1*d.* (Rs. 22-0-8), a fall of 75 37 per cent. The corresponding figures for alienated land were £36 2*s.* 3*d.* (Rs. 361-2-0) in 1866, and £5 1*s* 2*d.* (Rs. 50-9-4) in 1874, a fall of 85 99 per cent. That is, the average price per acre of the total land sold fell from £22 15*s.* 11*d* (Rs. 227-15-4) in 1866 to £2 19*s* 9*d.* (Rs. 29-14) in 1874, a decrease of 86·89 per cent. As the registration returns fail to show the assessment on the lands transferred, no accurate conclusion can be drawn as to the extent to which the value of land has declined. The competition for land for a time increased its value, and it is said that in the years 1866 and 1867, in some cases cultivators, tempted by the large sums offered them, parted with portions of their holdings. One acre of land is said, in some cases, to have fetched from £40 to £50 (Rs. 400 to Rs. 500). The subsequent fall in the prices of agricultural produce, averaging as shown in the margin for the staple grains a decline of 53 per cent, has again reduced the value of land:—

Name of Produce	No. of pounds per Rupee		Percentage fall in value
	1864	1874	
Wheat...	14	26	46
Rice	11	25	56
Juwár ..	14	34	58

Statement of the sale-value of land in the Surat District between the years 1866 and 1874.

Sale-value of land, 1866-1874.

Year	State Land			Alienated Land			Total Land		
	Acres	Value in £	Price per acre £ s. d.	Acres	Value in £	Price per acre £ s. d.	Acres	Value in £	Price per acre £ s. d.
1866	731	6,543	8 19 0	760	27,446	36 2 3	1,491	33,989	22 15 11
1867	594	3,268	5 10 0	812	9,020	11 2 2	1,406	12,288	8 14 9
1870 ..	1,719	9,193	5 6 11	682	12,029	17 12 9	2,401	21,222	8 16 9
1874 .	2,898	6,391	2 4 1	1,102	5,575	5 1 2	4,000	11,966	2 19 9

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From the following statement it would appear that the number of mortgages of land has fallen from 1,817 in 1869-70 to 1,118 in 1873-74 :—

Mortgage of land, 1870-1874.

Statement showing the number and value of the mortgages of land registered during the following years :—

1869-70			1870-71			1871-72			1872-73.			1873-74		
No	Value		No	Value		No	Value		No	Value		No.	Value	
	£	s		£	s		£	s		£	s.		£	s.
1,817	80,556	12	1,256	83,229	18	1,389	80,264	2	1,376	71,336	17	1,118	70,966	19

When land is *bonâ fide* mortgaged, the common practice is for the mortgagee to pay the government assessment on the land and to sub-let it to some third party for cultivation. The mortgagee sometimes cultivates the land himself, and in a few cases, on his passing a deed to pay rental, the land is left in the hands of the original holder. In some cases the government assessment is paid by the tenant.

Rate of wages, 1800-1876.

In 1802, carpenters and bricklayers were paid 6*d*. (4 as.), and unskilled labourers 3*d*. (2 as.) a day.[1] In 1819 these rates were still in force.[2] In 1825 the daily wages of a carpenter had risen to 9*d*. (6 as.), and that of an unskilled labourer to 4½*d*. (3 as.) In 1837 there was a further rise of skilled labour to 1*s*. (8 as.), and of unskilled labour to 6*d*. (4 as.) a day. Before many years were over wages again fell till, in 1841, they sank to the same level as they stood at in 1825 In 1857 the construction of the railway caused a demand for labour, and wages again rose. In 1859 a carpenter received 1*s* (8 as.), and a labourer 6*d*. (4 as.) a day In 1864 a further important increase took place, and from that year to 1869 the rates of daily wage remained steady at 1*s* 6*d*. (12 as) for a carpenter, and from 10½*d* to 1*s*. (7 to 8 as.) for a labourer. Since 1870 wages have again fallen, and at present (1876) the daily wage of a carpenter is 1*s*. (8 as.), and that of an unskilled labourer 6*d* (4 as.) The following are the rates of wages at present (1876) paid to the different classes of workmen in the steam factories at Surat : Bricklayers earn from 1*s*. 9*d*. to 2*s*. (14 as. to Re. 1) a day ; fitters and blacksmiths from 16*s*. to £5 (Rs. 8 to 50) a month ; firemen from £1 4*s*. to £1 16*s* (Rs. 12 to 18) a month ; unskilled labourers from 6*d* to 7½*d* (4 to 5 as.) a day. Women employed in the card-room as drawers, slubbers, and rovers, earn from 12*s*. to 18*s*. (Rs. 6 to 9) a month. With the exception of three Musalmáns, all the women employed in the mills are Dhers. Boys, from ten to fifteen years of age, at work in the throstle department, earn from 6*s*. to 10*s*. (Rs. 3 to 5) a month ; men and boys employed in the mule department, from 8*s*. to £1 10*s*. (Rs. 4 to 15) a month. An ordinary day's work in the factory lasts for ten and a half hours. Except

[1] and [2] Collector's letter to Government dated 21st January 1819. The details of wages and prices given in the text have been obtained from district officers and from government records in Surat and in Bombay.

Rate of wages, 1800-1876.

Párśis, who have their food brought to the factory, the work-people bring their dinner with them. Three-quarters of an hour, from a quarter past one to two o'clock, are allowed for the mid-day meal. Sundays and all Hindu holidays are allowed as days of rest Coal is chiefly used as fuel in the Jáfar Ali Factory. Ginning factories use wood.

Agricultural labourers earn about one-quarter less than town labourers. Some account of the earnings of dependent field labourers is given above, p. 199. Among independent field labourers, adult men receive (1876) 4½*d.* (3 as), women 3¾*d.* (2½ as.), and children 2*d.* (1½ as) a day. In ordinary seasons people of this class find employment throughout the year When not weeding, attending to irrigation, watching crops, or harvesting, the men cut wood, collect sticks, clear out reservoirs and limestone pits, or labour on public works. Their wives attend to milch cows, or collect cow-dung for fuel cakes. Among the members of a labouring family, it seldom happens that their joint earnings fall short of 12*s.* (Rs 6) a month, a sum sufficient to keep them fairly well off. The condition of field labourers (1876) is much the same as it has been for some years past. Though labour is plentiful, the rise in the price of food-grains has been accompanied by at least an equal increase in the rate of wages. An adult field labourer receives now (1876) 4½*d* (3 as), and in some cases 6*d.* (4 as) a day, instead of about 3*d.* (2 as), the ordinary rate of rural wages before the rise of prices in 1862. In the cotton season, picking is paid by contract at the rate of ¼*d* (2 pies) for five pounds. As an expert labourer can in one day pick as much as forty pounds of cotton, a man, his wife, and one child can, when so employed, earn in one day as much as 1*s.* (8 as.) The better class of independent field labourers are not without credit with the village banker. On the personal security of two labourers of this class, the borrower and a friend, the village money-lender will, at rates varying from eighteen to twenty-four per cent a year, advance sums of from £3 to £4 (Rs. 30 to 40). In the suburbs and city of Surat the wages are generally paid entirely in cash; in the country, both in cash and in grain, but more often in cash. As a rule, wages are paid daily. But in Surat and other towns, when large buildings are under construction, skilled labourers are paid by the week, or by the fortnight.

Prices, 1824-1876.

Returns showing the prices of the staple products of the district are available from 1824 to 1876. The following statement may be roughly divided into five periods. The first from 1824 to 1842, a time of high prices; the second from 1843 to 1854, years of falling prices; the third from 1855 to 1860, a time of reaction; the fourth from 1861 to 1866, a time of high prices, due chiefly to the American war; and the fifth from 1867 to 1876, a period of reaction:—

Chapter VII.

Weights and measures.

Stones.

Porbandar stones are bought by the hundred. The price varying according to the size of the stones. Rough-hewn stones and pebbles, called *khadi*, used as metal for roads, are spread and piled on the ground, and measurements taken of the length, breadth, and height of the heaps. The unit of measurement is one cubic foot.

Land.

A *bigha* of 25,600 square feet was formerly the unit of land measure. The *bigha* was sub-divided into twenty *wasa*, and the *wasa* into twenty *viswási*. Since the introduction of the revenue survey, an acre of 43,560 square feet has been substituted for the *bigha*. The acre is sub-divided into forty *gunthás*, and the *guntha* into sixteen *ánnás*. The present acre is, therefore, equal to about one *bigha* and two-thirds, or, more strictly, to one *bigha* and fourteen-twentieths of a *bigha*.

Miscellaneous.

Fruits, such as plantains, cocoanuts, oranges, pomegranates, pomelo, limes, figs, and sugarcane, are generally sold by quantity. Almonds, cardamoms, cinnamon, cloves, betel-nuts, and other spices and drugs, except betel-leaves, are sold by weight. Groceries and other articles of every-day use, such as sugar, sweetmeats, butter, vegetables, meat, and fish, are sold by weight.

In the year 1848 an attempt was made by government to introduce the Bengal system of weights and measures into Surat, but, in consequence of the opposition of the people, it was abandoned. Dealers have their weights and measures stamped at the collector's office for the satisfaction of the police, who are empowered by law (Act X. of 1872) to inspect them In Surat a fee, varying from three halfpence to threepence (annas one to two) is levied for stamping weights and measures.

The details of weights and measures are supplied by Ráo Bahádur Jagjiwandás Khusháldás, huzur deputy collector, Surat.

CHAPTER VIII.

ADMINISTRATION OF THE LAND.

In 1800, on the occasion of the assumption of the entire government of the city of Surat, the establishment of chief and council was abolished. Instead of 'chief' the head officer was styled lieutenant-governor. As lieutenant-governor he was 'to exercise all duties of a political or other nature not directly belonging to the administration of justice or the collection of the revenue' He was to continue, as before, president of the commercial board and president of the quarterly criminal court, and the officer commanding the troops was placed under his orders. The other leading officials appointed were a judge and magistrate with civil, criminal, and police powers in and over the city and port of Surat, the town of Ránder and their dependencies, and a collector to let by auction all the cesses, to take charge of the general treasury, and to supervise the customs.[1] At the same time, to guide these officers in the exercise of their duties, a code of nine regulations was drawn up Of these, the first provided for the trial of civil suits; the second laid down the procedure to be followed in the trial of civil suits; the third regulated the apprehension and trial of persons charged with crime and misdemeanour; the fourth prescribed the duties of the subordinate officers of the civil and criminal courts, the fifth framed rules for the regulation of the Hindu and Musalmán law officers of the civil and criminal courts; the sixth provided for the reference to arbitration of suits for money or personal property, the amount or value of which did not exceed £20 (Rs. 200); the seventh determined the extent to which the right of appeal should be sanctioned; the eighth prescribed rules for the provision of the company's investment in Surat; and the ninth regulation was for the collection of customs.

Acquisition of land, 1800-1840.

The possessions, for whose management these arrangements were made, consisted, in the first instance, of the 'city of Surat and its dependencies' acquired by the British in 1800. Under this phrase were included the town of Ránder, and a share, estimated at about £21,063 (Rs 2,10,630) a year, in the territorial revenues of the districts formerly subordinate to the Moghal governor of Surat. In 1801 (December

[1] The first officers who held these appointments were Mr Seton, lieutenant-governor, with a yearly salary of £3,600 (Rs 3,000 a month, besides fees, estimated at between £400 and £500 a year, to be applied to the payment of his establishment); Mr Ramsay, judge, salary not given; and Mr. Galley, collector, on a yearly pay of £2,400 (Rs. 2,000 a month).

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Administration of the Land.

1800-1875.

Acquisition of land, 1800-1840.

29th) these possessions were increased by the transfer from Govindrav Gáekwár of the lands in the neighbourhood of the city of Surat, which now form the Chorási sub-division. Govindráv, at the same time, agreed to cede the Gáekwár's share in the city revenues of Surat.[1] Two years later (1802, June 7th), 'A'nandráv Gáekwár, as a spontaneous mark of his gratitude for the assistance given by the British in effectually reducing his rival Malhárráv and taking the fort of Kari, granted them in full sovereignty for ever the sub-division of Chikhli, situated in the district of the Surat Athávisi.'[2] In the following year, under the provisions of the treaty of Bassein (1802, December 30th), the Peshwa Raghunáthráv, for the regular payment of the subsidiary force furnished by the Honourable East India Company, agreed to cede the portions of the district of the Surat Athávisi, at present represented by the sub-divisions of Olpád, Balsár, and Jaláipor, parts of Párdi and Bárdoli, and three villages, Katárgám, Kumbhária, and Fulpára, in Chorási.[3] Besides this cession of land, the tribute of the small state of Mándvi (called Nandári in the treaty), estimated at £6,500 (Rs. 65,000) a year, was made over to the British, and it was provided that the Peshwa should relinquish all rights, claims, and privileges affecting the city of Surat and the sub-divisions of Chorási and Chikhli. It was subsequently (1803, December 16th) arranged, in deference to the wish of the Peshwa, who was anxious that Olpád should remain in the possession of Narsinh Khanderáv, the chief of Vinchur, that in its stead lands should be ceded in Bundelkhand.[4] At the same time it was stipulated that as Olpád by its nearness to Surat was particularly valuable to the British, it should be managed so as to suit the convenience of the city, and that as the sovereignty of the river Tápti belonged to the British, the Olpád authorities should have no right or concern in the wreck of any vessel cast away on any part of the Olpád territory connected with the river Tápti. The next increase of territory was in 1816 (June 5th), when the lands of Karod, now part of the sub-division of Bárdoli, were made over to the British.[5] In the following year (1817) three further additions were made to the Surat district. Of these, the first was Bagwára, now part of the Párdi sub-division, the revenue of which, under the terms of the treaty of Poona (1817, June 13th), was, along

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[1] Surat Papers, 517, and Government letter, dated 29th December 1801, to the collector of Surat This cession made in consideration of the protection and military aid given by the East India Company was, in 1803 (March 15th), confirmed by Govindráv's successor A'nandráv.—Aitchison's Treaties, VI., 292.

[2] Aitchison's Treaties, VI., 294.

[3] The following are the details and estimated value of these cessions : Olpád, Rs. 3,16,000, now represented by Olpád; Balsár, Rs. 85,000 ; Párnera, Rs. 27,000 ; Bhutsar, Rs. 6,200, now represented by Balsár and part of Párdi ; Párchol, Rs. 1,07,000 ; and Supa, Rs. 51,000, now represented by Jaláipor ; Sarbhon, Rs. 30,000 ; Válod, Rs 30,000 ; Bárdoli Kasba, Rs. 7,900 , Buhári, Rs. 8,800, now represented by Bárdoli ; and the three Chorási villages, Rs. 5,000,—give a grand total of Rs. 6,73,900. From this total it was agreed that 20 per cent should be deducted on account of loss from mismanagement.

[4] Supplemental Treaty of Bassein.—Aitchison, III., 73.

[5] Reg. I., Sec. II., of 1817.

with the revenue of other districts in Gujarát, ceded by the Peshwa instead of the contingent of troops he had formerly, under the terms of the treaty of Bassein, agreed to provide.[1] A few months after (1817, November 28th), under the terms of the supplemental treaty with the Gáekwár, on relinquishing all claims on the revenues of the Gáekwár portion of the Surat Athávisi, the British acquired the lands of Tarkesar, now part of the Mándvi sub-division, and the town of Mota, now attached to Bárdoli.[2] The third cession was the sub-division of Olpád. This territory, though under the terms of the original treaty of Poona (1817, June 13th), specially excepted in favour of its holder the Vinchurkar, was, in November of the same year, on account of his 'conspicuous and persevering hostility,' taken possession of by a detachment of the Bombay army.[3] Finally, in 1839 (December 13th), on the death without heirs of the chief of Mándvi, his territories, which since 1803 had been tributary to the British, were after a prolonged inquiry (1839-1843) treated as an escheat and annexed.[4] These estates included the present sub-division of Mándvi in the north-east, and the fort of Párdi, with five villages in the south-west of the district now forming part of the Párdi sub-division.

Administrative changes.

Besides the increase of area consequent on these acquisitions, the territorial charge of the collector of Surat has, from time to time, been altered. In addition to the territories mentioned above, the collector of Surat had under his charge from 1802 to 1805 the lands of Ankleswar and Hánsot, also ceded under the terms of the treaty of Bassein, now part of the district of Broach. In 1830 the charge of the collector of Surat, who was styled 'principal collector,' was extended over Broach, and that district was reduced to the position of a sub-collectorate.[5] In 1843 the limits of the collector's charge were reduced to the old district of Surat, and Broach was again made a distinct charge.[6] This arrangement continued till, in 1861, Broach was a second time placed under the Surat collector.[7] In the general revision carried out in 1869, Broach was for a third time raised to form an independent district, and this arrangement has since 1869 remained in force.[8]

The history of the British administration of the lands of Surat contains two chief divisions,—the first, from 1804 to 1817, when the land revenue was collected through a class of middlemen; and the second, since 1817, during which the settlement of the land revenue has been direct with the cultivators.

Condition of the districts, 1804.

The territories that came under British management in 1803 were found to be suffering from two evils: public order was disturbed by

[1] Bombay Government Order dated 17th November 1817.
[2] Aitchison's Treaties, VI., 333 and 338.
[3] Hamilton's Description of Hindustán, I, 711.
[4] The Mándvi tribute had never been exacted.—Aitchison's Treaties, VI., 254.
[5] Government Order of 15th February 1830.
[6] Government Notification of 25th October 1843.
[7] Government Notification of 27th May 1861.
[8] Government Resolution No. 2817 of 10th July 1869.

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the excesses of armed bands, and the great body of the cultivators were impoverished by the exactions of the middlemen, or revenue contractors. The armed bands were in the employment of the class of men who, under the name of *garásiás*, claimed, as the representatives of the original Hindu land-owners of the district, a share in its land revenue. These *garásiás* were not settled within the limits of the Surat territories then held by the British. Some of them lived northwards in Rájpipla, and others beyond the eastern frontier.

Garásia exactions, 1800-1816.

During the early years of British rule, it was usual for men of this class to send an agent, or *selot*, at the head of a body of armed followers, to collect their share of the revenue.[1] The *garásiá's* agent generally arranged for the payment of his master's claims with the farmer of the revenue, or *desái*. In some instances, *garásiás* and *desáis* are said to have combined to increase the *garásiá's* charges, dividing between them the additional receipts These demands often led to a breach of the peace. Villagers refused to pay, and, in retaliation, a stack of hay or straw was burnt, or one of the villagers was murdered. If this failed, the whole village was plundered, and the children were carried into captivity. To put a stop to this state of affairs, the *garásiás'* agents were, in 1812, allowed to bring with them only a certain number of followers, and, to prevent all intrigues with the *desáis*, the *garásiás'* agents were furnished by the collector of the district with a written statement of the amount due from each village.[2] In the following year (1813), under an arrangement between the collector and one of the chief *garásiás*, a further improvement in the mode of collecting these claims was effected. The collector realized from the different villages the amount due to the *garásia*, and, in a lump sum, paid it over to the *garásia's* agent. The new system was popular with the *garásiás*, as it saved them the expense of keeping up an agent's establishment. Before the close of the year 1816 it had become universal, and from that time the claims of the Surat *garásiás* ceased to disturb the public peace.

The middlemen, by whom the land revenue of the district was farmed, were known by the name of *desáis*. Almost all of them be-

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[1] Bom Rev. Sel , 722 The *garasás'* share of the district revenue amounted, in 1812, to a total sum of £7,962 (Rs. 79,620).

[2] Bom. Rev Sel , 721. Some account of the origin of *garásia* rights, and of the nature of their chief claims, is given in the section on the Musalmán period of Gujarát history. Of peculiar local cesses, Mr Morrison, in a report dated the 13th November 1812, notices the following 'Some women of the village of Ua, going to draw water, found a stranger gazing into the village well Asking him what he sought, they were told that he was conversing with his father, who had for years lived in the well. The women, in derision, advised the stranger to give his father some clothes as the well must be but cold quarters for him Approving of their suggestion, he threw part of his dress into the water, and moved away. Shortly after the stranger, who, unfortunately for the village, was a *garásia*, visited Ua a second time, and setting fire to some houses and grain, called on the people to pay him for his father's clothes, according to the recommendation of the ladies of the village From that time, Ua was saddled with a yearly charge of £3 (Rs 30).' In another case, a *garásia* woman, while at the village of Dungri, was delivered of a son, and on the occasion received a little dry ginger and molasses from the headman of the village When the child grew up, he claimed this grant as a right, and after some dispute, it was settled that, in its stead, he should receive a yearly allowance of 3*s*. (Rs. 1-8).—Bom. Rev. Sel., 725.

longed to the class of cultivating or Anávla Bráhmans. Unlike the *desáis* of northern Gujarát, the Surat *desáis* were more than mere government servants appointed to superintend the collection of the land revenue. They were contractors, or farmers, of the revenue for large districts, and so firmly established were they in this position that, in many cases, a large group of villages was distributed among the members of one family, each of whom styled himself *desái*. As manager of a village, or of a group of villages, the *desái* was also called *tálukdár*, In this position he exercised the functions of a *patel*, or village headman, 'collecting their rent from the different cultivators, seeing that the land actually in the possession of each cultivator agreed with what he ought to hold and bore the crops stipulated in his engagement, helping the village clerk to make out the cultivators' agreements, encouraging fresh cultivators to resort to the village, bringing its waste lands under tillage, and acting as an officer of police.'[1]

Revenue contractors, or *desáis*, 1800-1816.

The *desái* was thus the perfect master of the people without any one to check him. The collector made his assessment entirely in the dark; and though it was his intention not to enhance the revenue unless where there was an increase in the cultivation, yet the want of information on his part, as well as the fraud of the *desái*, often operated to raise the government demand.[2] This was the chief evil of the system. But in addition to this, the *desáis* were, as landlords, in no way a useful class. They did not improve the district,[3] and were found to be systematically defrauding the state on the one hand, and the cultivators on the other.[4] It was therefore determined, as far as possible, to reduce their power and influence. The first measure

Their power and exactions.

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[1] Mr. Assistant Collector Pyne's report of 1827, on Balsár

[2] Mr Elphinstone's Minute, dated 6th May 1821. (Bom Rev. Sel, 699.) Custom was, however, to a certain extent, a check on the *desai's* demands. In 1812 Mr Morrison writes, "To secure the cultivators from oppression the *desais* are always bound by a writing, with a penalty attached, to collect no more than the usual rates." Besides this, they were 'obliged to give security, *bandjamin*, for the cultivation and population of the village in the ensuing season.' But, in spite of these checks, their exactions were sometimes most oppressive. Shortly before the introduction of British rule, the whole population of Balsár twice within five years deserted their villages and took refuge in Dharampor.—Watan Commission Report (1865)

[3] 'No capital has been employed in improvements or in introducing new cultivation . . . all wells and tanks have been made either by government or the cultivators.'—Mr. Elphinstone, in Bom. Rev. Sel., 699.

[4] In addition to their regular emolument of 2½ per cent, and to the possession of lands granted to them by former governments, the *desais* increased their revenues I. At the expense of government—(i) By arranging with the stipendiary officer, or *kumávisdár*, to pay none of the tribute due to government for the grants of land held by them. (Mr. Morrison's Report, 1812) (ii) By reducing the area of the government or *talpat* lands in their villages This they did in several ways (*a*) by mortgaging it to *garásás*, (*b*) by alienating lands nominally to village servants and others, but actually themselves drawing the assessment, (*c*) by cultivating lands by their bondsmen, or *hális*, and so being allowed to hold it at specially low rates. II. The *desáis* increased their revenues at the expense of the cultivators—(i) By recovering from them land revenue in excess of the government demand (ii) By levying 'innumerable taxes.' 'Shepherds had to pay them in wool, butter, and milk; oil-sellers in oil; tanners in leather; cotton-cleaners in cotton No one escaped; even the cultivators had, without hire, to lend cattle and ploughs for the use of the *desáis* and the village managers.'—Mr. Morrison's Report dated 20th September 1820.

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taken with this object was to appoint a fresh set of village clerks, or *talátis*, as far as possible independent of the *desái*, and bound to keep so detailed a record of the demands on the cultivator that wholesale exactions on the *desáis'* part would be no longer possible. Men whom the existing state of affairs favoured so greatly were naturally averse from any change of system. "The opposition I experience," writes the collector of Surat in 1812, "is principally from the *desáis*, jealous and alarmed, lest they should lose part of their present incomes and emoluments."[1] So strong was their position, and so complicated their claims, that, for the first fourteen years of British rule, the appointment, in 1814, of a body of village clerks dependent upon government, and not upon the village managers, was the only step taken to reduce the power and influence of the *desáis*.

The *desái* and government, 1800-1816.

Under the original system the mode of settling the revenue was for the collector to send for the *desái* and make as good a bargain with him as he could for the year's revenue of the villages under his charge.[2] These agreements were generally made in the month of April, when, subject to some adjustments, the amount to be paid by the *desái* was determined. Of the sum agreed upon about two-thirds, though the share varied in different parts of the district, were due in October. Of the final instalment, the amount was to a certain extent variable, and in each year, with the view of determining it, the collector in the months of December, January, and February moved about the districts under his charge, examining the accounts of the preceding year, and comparing them with the probable produce of the current season. The government demand, estimated at about one-third of the total out-turn, was paid by the contractors in cash.[3] The revenue contractors, or *desáis*, generally kept their engagements and paid the

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[1] Mr. Morrison's letter to Government dated 13th Nov. 1812. Writing of the village clerks Mr. Morrison, in this same letter (1812), says: "The clerks were formerly nominated by the managers of villages, *desais* and *patels*, and are even now too much under their authority and control. I have endeavoured, hitherto with little success, to convince them that they are the immediate servants of government, but I hope, by collecting whatever income they may be entitled to from the village and paying them direct from this office, to render them more independent of the village manager." In this Mr. Morrison would seem to have been successful, as in 1821 Mr. Elphinstone writes, "Nothing can be more complete than the state of the village clerks' books. They contain every point of information contemplated by the regulation."—Bom. Rev. Sel., 699.

[2] This account is compiled from Mr. Morrison's report of 1812, and Mr. Elphinstone's minute (1821) Bom. Rev. Sel., 699.

[3] In the southern district of Surat, the system of a division of the produce between government and the cultivators seems never to have prevailed. At some time during the Muhammadan rule (probably about 1590), *bigoti* rates,—that is, an acre-age charge payable in cash,—had been introduced. These rates, though disregarded long before the introduction of British rule, were always referred to as a sort of standard. So much was this the case that the rates in force under the Maráthás, and even the reduced assessment afterwards (1833-36) fixed by Messrs. Law, Chambers, and others, was always called '*bamani bigoti*,' or 'the double rates.' As to the payment of the revenue in cash, Mr. Morrison (1812) writes: "I have consulted both men and books, but cannot discover that it has ever been usual to collect the revenue in kind." The coin in which the revenue was paid was the Broach rupee, but calculated on an average at ½ per cent more than that coin, because the cultivators, afraid to trust to the opinion of money-changers, were in the habit of making small holes and incisions to ascertain that the coin was not counterfeit. These were the rupees called *eriddr* and *suláki*.

amount agreed upon with punctuality. Except that the *desáis* were responsible for one another, the practice of requiring a surety, or *manotidár*, was not at all, or in only a very few cases, enforced in Surat. Nor, with the exception of the agent, or *selot*, of the *garásia*, who was forced to give this pledge of good behaviour when he came into the district, was the security of a *bhát* ever required. In the case of default of payment, a government messenger was posted in the contractor's village, and, until payment was made, levied a daily fine, or *talbána*, of 3*d*. or 4*d* (as. 2 to 3).

The *desái* and the cultivator, 1800-1816.

As regards the relation of the contractors to the cultivators, Mr. Morrison (1812) divided the villages of the district into three classes— *japti*, *bhágdár*, and *uparwária*. A few of these villages, he says, had no *desáis*, and others had no *patels*; but, as a general rule, each village had both a *patel* and a *desái*, and under them a *haváldár*, some sweepers, *dhers* or *bhangiás*, and in some cases a village clerk, or *táláti*. *Japti* villages were those inhabited by settled or *japti* cultivators, who had in many cases owned the same fields for generations. These were always the most flourishing communities. In the case of the *bhágdári*, or sharehold villages, the lands were distributed among the village managers, *desáis* or *patels*, who found their own cultivators, and were answerable for the payment of the state demand, whether the land was cultivated or not.[1] In villages with unsettled, or *uparwária*, cultivators, the population was changed at the pleasure or discretion of the *desái* or *patel*. From these villages it was not uncommon for the cultivators to remove in a body on any supposed or real oppression of the manager. The contractor or village manager collected the revenue from the cultivators either by agreeing beforehand what was to be paid, or by an estimate of the value of the crops at harvest time.[2]

The history of the administration of the lands of Surat since 1816, when the system of collecting the land revenue direct from the cultivators was introduced, contains three sub-divisions: i, from 1816-1833, when the rates previously in force were continued; ii, from 1833 to

[1] There is some difference of opinion as to the existence of a body of patels distinct from the *desáis*. Mr Elphinstone (1821) remarks, "in general the *desai* displaced the old patel, and managed each village by means of their own agents called *talukdár*." On the other hand he writes again, "the establishment of patels in a plurality of villages is one of the advantages of the new system"—(Bom Rev Sel, 698, 699) Mr Chambers, assistant collector of Surat, in his report dated 23rd December 1833, says "It will be imagined perhaps that the *desáis* have supplanted the patels, but I am more inclined to the opinion that there never were any patels in the villages of which the *desáis* claim the proprietary right."

[2] This agreement, or *pata*, was based on the quantity and character of the land. The rates varied in different parts of the country. Rice paid from Rs 3 to Rs. 15 per *bigha*; millet from Rs 3 to Rs. 7, and sugar-cane from Rs 25 to Rs. 100 and upwards. These were the rates commonly inserted in the *patas*, but in favourable seasons an increase was generally levied from the cultivators. Of the average out-turn and market value of the different varieties of produce, Mr. Morrison has (1812) furnished the following estimate: "A *bigha* of the best millet ground will produce 45 *mans* of grain, which, at the usual market price, sell for Rs 30. The first sort of rice ground in the sub-divisions of Balsár, Chikhli, and Párchol (Jaláipor) will give 60 *mans* per bigha, and these can usually be sold for Rs 45." "Of the yield of sugar-cane, it is," he adds, "impossible to give any very correct idea. But in Párchol, where it grows in the greatest perfection, a *bigha* can produce 125 *mans*, which may be sold at from 200 to 250 rupees."

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Farming system discontinued, 1817-1822.

1863, when the rates were from time to time raised by the district officers; iii, 1863 to 1876, when, under the working of a special survey department, the lands of the district were remeasured and fresh rates of assessment introduced. Except in Olpád, where, partly on account of its prosperous condition, and partly because of its share-hold villages, no alteration was made, the practice of farming the revenues was between 1817 and 1822 by degrees discontinued, and in its stead a system of collecting the land revenue direct from the cultivators was introduced. Under the new mode of assessment every holder of land attended before the stipendiary officer of his sub-division.[1] In the cultivators' presence, from the books of the village accountant, the amount of land held and the rent paid by him in the previous year were ascertained. If the cultivator should wish to take up more land or to throw up part of what he already held, or if it should be necessary to increase or diminish the rent of any portion of his lands, the requisite alterations were made and agreed to. If no changes had to be made, the cultivator held the land on the same rent as the year before. In any case the cultivator received from the sub-divisional officer a written statement of the agreement. A paper, specifying the lands and rent of each landholder in the village, was signed by the collector and deposited with the village accountant.[2] The agreement to cultivate was generally concluded in the month of April. After the settlement was made, nothing further passed between government and its tenants till, shortly before the ripening of his crops, each landholder was called upon either to pay up the amount of the first instalment, or to furnish security that he would pay it.[3] The settlements so made were, in the first instance, binding for three years.

The new settlement.

Against the new system of settling with individual cultivators, it was urged[4] that it lessened the power and consequence of the head of the village, and that it prevented the employment of large capital in agricultural improvements. But, in the actual state of the Surat district, these objections did not, in Mr Elphinstone's opinion (1821) apply with force, for, i, the *táluhdárs* or *patels*, as they now began to be called, still held the position of village headmen; and ii, as already noticed, the *desáis* had spent none of their capital in improving the land. Except in Olpád, where the assessment was moderate and the people were in easy circumstances, the Surat cultivators seemed (1821)

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[1] This is Mr Elphinstone's account (1821). So, also, in 1828, Mr. Stubbs writes (30th November), "that the *kamavisdar*, or mámlatdár, proceeds in person to the different villages, assembles the cultivators, and settles the amount of their holdings."

[2] Mr. Elphinstone, Bom. Rev. Sel., III, 699.

[3] Formerly two-thirds of the whole demand was levied as the first instalment. Under the new arrangements, the amount was reduced to one half. This practice of exacting part of the rent before the crops could be sold was felt to be a hardship to the cultivators. The question was fully discussed, and in 1822 the collector, Mr. Lumsden, was directed to choose six villages with the object of testing how far, without this safeguard, the cultivators could be trusted to fulfil their engagements to government. The results were unfavourable, and the experiment was not again tried. Mr Stubbs' letter dated 20th November 1828.

[4] Mr. Elphinstone, Bom. Rev. Sel., III., 699.

to be ill-clothed and ill-lodged, and in parts of the district the cultivation was very imperfect.[1] From these evils, the result of the former system of revenue farming, the measures introduced were, in Mr. Elphinstone's opinion, calculated to relieve the district. This, he hoped, chiefly because the new system supplied the collector with a clear view of the real state of the district, enabling him to check any undue exaction from the cultivator, and to increase or remit revenue according to the actual circumstances of the individual. But the chief effect of the change in the system of collecting the land revenue was to deprive the *desáis* of their former position as revenue contractors. In this altered state of affairs the question arose how far their services as government officers were required, and what claims they had upon the state. In 1816, the court of directors expressed the opinion that, by the appointment of collectors and native stipendiary officers, the agency of the *desáis* had been superseded, and 'that the abolition of the office would be a great relief both to government and to the community at large.[3] Accordingly, in 1818, the Bombay Government issued orders that 'the *desáis* should be superseded, the principal persons among them receiving such rates of pension as might be considered necessary.'[4] Mr. Morrison, then collector of Surat, did not, however, at once carry out these instructions, and instead, in the following year, suggested to government that though the functions of *desáis* as village managers were superseded, 'to avoid the odium of abolishing the office,' it might still be advisable to maintain two or three *desáis* in each sub-division.[5] At the same time, Mr. Morrison submitted a draft Act providing that the *desáis* should receive a cash allowance calculated at two and a half or three per cent on the revenues of the villages they formerly managed, and that their service, or *watan*, emoluments should be resumed. This suggestion was not approved by the Bombay Government, who held that government had full power to employ the *desáis* or not as they chose.[6] This decision was not immediately enforced, and it was only after the subject had received two years' further consideration that final orders were passed. It was then determined[7] 'that, where they had been superseded, the *desáis*' functions as agents between government and the cultivator should not be revived, and where they were still employed, they should be allowed to fall into disuse.'[8] At the same time the *desáis* were

The *desáis* as government officers, 1816-1822.

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[1] Mr Elphinstone, Bom Rev Sel, III, 699

[2] Mr. Elphinstone, Bom. Rev. Sel, III, 700

[3] Honourable Court of Directors' letter dated 5th June 1816.

[4] Bombay Government letter dated 29th September 1818.

[5] Collector of Surat to Government, dated 25th September 1819

[6] Government of Bombay to the Collector of Surat, dated 22nd October 1819.

[7] Government Circular dated 26th July 1821.

[8] This order referred only to the *desáis* or district revenue superintendents. The office of *majmudár*, or district accountant, of whom (1812) there was one or more in every sub-division except Buhári (now under the sub-division of Bárdoli), was continued. Their payment in 1812 was, according to Mr. Morrison, a fixed sum of money from each village, a few *mans* of grain and other trifling perquisites at the end of the season.

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still to be made useful in any other way the collector might deem expedient. Unlike other districts of Gujarát, to which as well as to Surat this order applied, in Surat no attempt was made to exact service from the *desáis*. The reason of this would seem to have been that the families of Surat *desáis* refused to choose representatives, and, under the orders then existing, the collector had not the power to select an officiator and pay him from the different shares.[1]

Forms of land tenure, 1816-1828.

As regards the relation of the holder of land to the state, the lands of the district may be divided into two classes—lands subject to, and lands exempt from, the full government demand. I. Of the holders of land of the first class, there were the following varieties: The cultivators known as settled, or *japti*, holders, who paying for their holding, or *kháta*, at a fixed rate per acre, were also said to hold on the *kháṭábandi* tenure. Men of this class, to which the largest number of cultivators belonged, were said, though this privilege was little attended to, to hold their land free from the risk of an increase of rent. For this reason, and as they enjoyed special privileges with regard to the use of trees and grass land, they were charged higher rates than those paid by other landholders. A second class of cultivators, instead of being charged a certain rate per acre, paid a lump sum, or *hunda*, on their entire holding, and so were known as *hundábandi* cultivators. A third class were the annual leaseholders, or *ganwatiás*, who, though never expelled from their lands, changed a good deal from field to field and from village to village. A fourth class of cultivators, who, under the name of *uparwáriás*, lived in one village and tilled the lands of another, are spoken of as particularly common. Finally, in the cultivated lands to the east of the district two special arrangements were in force. Under one of these a rough uniform cess, *udhar fúlo*, was imposed on each acre; under the other a certain sum was charged on each plough. Though not noticed by Mr Elphinstone, there were included in Surat three villages managed under the form of joint proprietorship known as the *narwádári* tenure. Of these, two have since come under the ordinary system of distinct holdings. Only one, the village of Mehdhar, maintains its former constitution. II. Lands exempt from the full state demand, or alienated lands as they are generally called, are of two kinds—lands held free of service, and lands held on condition of rendering service. The most important body of the land-owners of the first class were the representatives of the original Rajput proprietors known as *garásiás*. Of the lands to which men of this class laid claim, there were first the *wánta* or share lands which, under the arrangements introduced by the emperor Akbar about the year 1590, were assigned to them as the original landlords. In addition to this allotment the *garásiás* had from time to time added to their property by obtaining village lands in mortgage. Many of these transfers, which are generally spoken of as *garánio* pledged, or *vechánio* sold, were fraudulent, the result of a combination between the village managers and the

[1] Watan commission report of 1865.

garásiás. The ordinary excuse for such transfers was that they took place in the days of Marátha over-assessment,[1] when the revenue farmers and village managers succeeded in meeting the government demands only by selling or mortgaging portions of the village lands. Another form of transfer that arose out of the same condition of affairs is that known as *walatdárnio*, or the transfer of land in favour of the village surety. As the *desáis* did not generally require a surety, this form of transfer was unusual in Surat.[2] Of the other lands held practically free of service were those known as *inám*, or *wajifa*, grants, to which originally some service had in most cases been attached, but was no longer enforced. From these different varieties of alienated lands the following quit-rents were (1828) obtained: i, from the cultivators, or *ganotiás*, of the *garásiás*' share or *wánta* of the village lands, a quit-rent called *khandni*, varying in amount from 1*s*. 6*d*. to 18*s*. (as. 12 to Rs. 9,) a *bigha*, with, in some cases, an additional allowance called *sukhri*; ii, from the holder of alienated or *jágir* land a quit-rent or *salámi*; iii, from lands granted by the Musalmán rulers, and called *wajifa*, a small quit-rent of from 9*d*. to 6*s*. (as. 6 to Rs 3) a *bigha*.[3] With regard to service lands, though it was known that under this plea village managers had brought into their own possession considerable quantities of land formerly subject to the full rates of assessment, no inquiry was made. The holders, on the condition of performing service when called upon to do so, were allowed to remain in possession.

Rates of assessment, 1816-1833.

Under the new system the chief rule for fixing the amount of assessment was that it should not exceed the rates formerly levied.[4] Within these limits the government demand was determined by a consideration of the following points: i, the area under cultivation; ii, the character of the soil; iii, the nature of the produce raised; iv, the condition on which the cultivator held the land; and, v, the caste of the landholder. With regard to the area under cultivation, it would seem that this was for several years determined by measurements taken by a subordinate in the establishment of the sub-divisional officers, or *kumávisdár*. How rough this system was, appears from the fact that the standard of measurement, or *áshra bigha*, varied in different parts of the district from three-quarters of an acre to an acre and a half. A survey known as the *shaksanni-mápni* was begun in Chorási in 1815, but it would seem never to have been applied to revenue purposes. This was succeeded in 1823 by Captain Newport's survey, which, including the sub-divisions of Olpád, Chorási, Supa and Párchol, now Jalálpor, formed the basis of the settlements effected up to 1827. On the close of the operations under Captain Newport, the survey of the remaining parts of the district was entrusted

[1] Bird's History of Gujarát, 409. Mr Morrison's report dated 13th November 1812.

[2] Mr. Morrison's report of 13th November 1812.

[3] Mr. Stubbs' report dated 30th November 1828.

[4] The only exception to this rule was an increase in the rates levied on lands cropped with sugar-cane. But the area of land affected by this change was extremely small.—Mr. Lumsden's report dated 31st January 1822.

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to an establishment under the collector's surveyor. But till the year 1863, when a fresh Gujarát survey was organized, little progress was made. Second, as regards the nature of the produce, this consideration was taken into account only in some parts of the district. If, however, by sinking a well, or by raising embankments, land was made fit for the growth of rice or sugar-cane, it was the regular practice to increase the rate of assessment. Third, as regards the quality of the soil, though with less nicety of distinction than had been attempted by the Maráthás, the quality of the soil was considered an important element in fixing the rates of assessment. Fourth, in consequence of the favourable conditions under which their land was held, the established, or *japti*, holders were charged somewhat higher rates than the unsettled yearly tenants, the *ganwatuis* and *uparwáriás*. Lastly, in consideration of their thriftless and unsteady character, Dublás and Dhoudiás were allowed to hold land at easier rates than the skilful and intelligent cultivators of the Bráhman and Kanbi castes.

Rates of assessment, 1822.

The following statement shows the rates charged under the settlements of this period, both according to area and according to crop. For purposes of reference the corresponding rates introduced in the revised settlements are also given —

Contrasted Statement showing the rates of assessment according to area in 1822 *and* 1876.

Year.		Dry crop			Garden			Rice	
		Black soil	Light soil.	Land near villages	Black soil	Light soil	Land near villages	Irrigated	Unirrigated
		Rs. a p	Rs a p	Rs a p	Rs a p	Rs. a. p	Rs a p	Rs a p	Rs. a p
1822.	Minimum per acre .	0 13 7	0 13 7	2 8 10	2 8 10	1 11 2	3 6 5	6 12 10	3 3 0
	Maximum ,,	19 5 4	22 1 10	25 8 4	24 10 8	30 9 8	7 0 0	30 9 8	28 1 1
1876	Minimum per acre .	Rs 0 1 6			Rs 1 2 6			Rs 0 15 0	
	Maximum ,, .	Rs 15 5 0			Rs. 25 5 0			Rs 23 1 6	

Contrasted Statement showing the rates of assessment according to crop in 1822.

Year.		Cotton	Rice	Wheat	Juwár	Bájri	Tuver	Gram	Nágli.	Kodra.	Sugar-cane.
		Rs a. p	Rs. a p.	Rs a p	Rs. a p	Rs a p.	Rs a p	Rs a p	Rs a p	Rs a. p	Rs. a p.
1822.	Minimum	3 6 5	6 12 10	2 8 10	3 6 5	2 8 10	2 8 10	2 8 10	2 8 10	2 8 10	4 4 0
	Maximum	11 7 9	25 8 4	11 7 9	11 7 9	11 7 9	11 7 9	11 7 9	6 12 10	6 12 10	27 3 4

An examination of this statement seems to show that the rates then levied were much in excess of those (1876) now in force. At the same time, one custom formerly observed did much to reduce the actual burden of the assessment. This was the practice of granting cultivators private grass lands free of charge. The area thus allotted varied in different parts of the district. In the more generally cultivated tracts, such as Bárdoli and Olpád, the allotment of pasture land was equal to one-fifth of the area of land held for culti-

vation; for every £10 (Rs. 100) of rent paid, there were allowed in Supa and Karod eight, in Chikhli ten, and in Wálod twelve, *bighás* of grass land; in Balsár, where much land was untilled, the same quantity of waste as of cultivated land was granted, and in Bagwára, now Párdi, where cultivation was still scantier, every landholder was allowed to take as much waste land as he chose. Whether with these special allowances the rates were still higher than the profits of tillage could well bear was a question on which opinions were much divided. In 1821 Mr. Elphinstone, while opposed to any scheme of general reduction, was of opinion that in some cases the rates were excessively high.[1] Mr. Lumsden in 1822, though unwilling to hazard any estimate as to the share of the total produce taken by government, was satisfied that it was not excessive. He held this opinion: i, because of the large number of unattached cultivators, who, if they thought right, were free to seek in other districts a better investment for their labour and capital; and ii, from certain particulars collected in 1821 by the collector of the district, which tended to show that the government demand did not represent more than from one-third to one-half of the total produce of the land.[2] In Balsár Mr. Pyne, in 1827,[3] after making lengthened inquiries into the state of that sub-division, and finding the condition of the great body of the cultivators most depressed and hopelessly sunk in debt, came strongly to the conclusion that the rates were excessive, and that, had it not been for the profits of the Dharampor timber trade, they could not have been paid by the cultivators Mr. Stubbs, then collector, did not, however, agree with Mr. Pyne's estimate of the cultivators' condition, and no steps were at that time taken to reduce the rates in the Surat district.

Revised settlements, 1833-1863.

The thirty years between 1833, the date of the first revision of settlements, and 1863, when a fresh survey was introduced, contain three periods: i, from 1833-1836, when, in consequence of the fall in the prices of agricultural produce, a considerable reduction was made in the rates levied by the state;[4] ii, from 1836-1845, when as the leases fell in, the rates were again generally raised; and iii, from 1845-1863, when, as leases fell in, they were continued from year to year at existing rates. During this time two changes were introduced in the system of assessing the land. The first was in 1832, when it was determined to test afresh the capabilities of the different descriptions of soil. For this purpose the soils were reclassified, and the result was that, in consideration of the fall in value of agricultural produce, existing rates were considerably reduced The second change was in 1836, when the practice of making

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[1] Mr. Elphinstone, Bom. Rev. Sel., 699.

[2] In Bagwára, now Párdi, the cultivators admitted that they received two-thirds of the total produce. In Balsár the contractors acknowledged that the rice lands assessed at £1 16*s* (Rs. 18) a *bighá* yielded crops valued at current rates at £4 12*s*. (Rs. 46)—Mr. Lumsden's No. 5 of 31st January 1822.

[3] Report without date, Bombay Secretariat, Vol. 213 of 1828, Rev. Dept.

[4] It appears that the net land revenue of the district of Surat fell from £141,897 (Rs. 14,18,970) in 1831 to £107,789 (Rs. 10,77,890) in 1833, a reduction of 24·03 per cent.

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Revised settlements, 1833-1863.

the produce of a field an element in its assessment was given up and the rule laid down that the rates were, as far as possible, to be determined solely by the inherent quality of the soil To carry out this change, committees, or *panch*, were appointed to divide the soil into three classes, and, as far as practicable, fix equitable rates. The result was that a very considerable reduction in the assessment was found necessary in consequence of the inequalities existing in the incidence of former rates. This revision was gradual, and extended over many years.

The first settlement undertaken by the Gujarát revenue survey department was Bárdoli in 1863, and the last, Mándvi, in 1873. The following statement contrasts the former rates with those introduced at the time of the last settlement —

Statement showing the rates under the old (1833-1863) *and new* (1863-1873) *settlements.*

Sub-division	Former Rates					
	Dry crop.		Garden.		Rice	
	Max	Min	Max	Min	Max	Min
	Rs a. p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p
Olpád . . .	12 12 1	1 4 5	17 0 0	5 8 5	17 0 0	2 2 0
Mándvi	14 10 8	0 13 7	9 5 7	8 8 0	8 8 0	5 1 8
Chorási	25 8 4	0 13 7	31 14 5	1 11 2	12 1 9	3 6 5
Bárdoli	17 0 0	1 11 2	25 8 4	3 13 3	28 14 8	4 4 0
Jaláipor	28 1 1	0 13 7	28 1 1	1 11 2	34 0 0	1 11 2
Chikhli	8 1 3	1 11 2	48 0 11	2 5 5	25 8 4	4 14 3
Balsár	10 3 4	0 8 2	23 13 0	2 8 10	23 13 0	3 6 5
Párdi	3 6 5	0 13 7	11 14 6	5 15 3	17 0 0	2 8 10
	Present Rates					
Olpád .	13 2 0	0 13 0	20 2 6	4 6 6	15 4 0	3 10 6
Mándvi	4 3 0	0 2 6	7 8 0	3 1 0	6 9 0	0 15 0
Chorási . .	15 5 0	0 7 0	20 10 0	4 14 6	14 4 0	4 8 6
Bárdoli	7 2 0	0 7 6	17 4 0	2 13 0	18 8 0	2 6 0
Jaláipor	7 7 6	0 4 0	24 6 0	3 12 0	23 1 6	1 13 0
Chikhli	3 13 0	0 2 6	17 4 0	1 3 0	15 8 6	2 0
Balsár .	6 4 6	0 1 6	25 5 0	1 2 6	18 7 0	2 1 6
Párdi	3 15 0	0 2 0	12 10 6	1 7 6	13 2 0	2 7 0

The new settlement, 1863-1873.

The chief changes introduced under the new settlement were: i, unassessed waste and grass lands were no longer added to the area, of assessed cultivated land; ii, special class rates were discontinued. The chief objection to these two practices was the opportunity they afforded for fraud In one village, to each field of cultivated rate-paying land, a considerable area of waste, called *badlán*, or grass, called *wára*, might be attached. In another village, with equally heavy rates, there might be very little waste or fallow land to distribute; or, again, it often happened that the *patel* or other leading villager succeeded in monopolizing the greater part of the grant. Similarly, by entering it in the name of one of their servants, villagers of the richer class were able to take advantage of the specially light rates intended to benefit the aboriginal tribes. The statement given above would seem to show that the former rates were higher than the revised rates. But this is due to the fact that, under the new system, rates are levied from all occupied waste and grass lands,

That the new rates are actually considerably higher, appears from the following statement :—

Statement showing the revenue realized under the old (1833-1863) *and new* (1863-1873) *settlements.*

Sub division.	Ten years' average collections	Collections of the year before settlement	Year of Settlement						Increase per cent	Decrease per cent
			Old System			Survey System				
			Total collections	Rate per acre		Total collections	Rate per acre			
	Rs	Rs	Rs	Rs	a. p	Rs.	Rs.	a. p		
Olpád	4,65,973	4,72,616	1,71,129	4	11 9	5,47,628	5	7 8	16¼	
Mándvi	1,18,256	1,28,887	1,28,585	1	13 11	1,36,518	1	10 8	6	
Chorásí	1,12,257	1,24,822	1,36,340	6	1 2	1,29,375	5	11 8		5
Bárdoli	2,52,490	2,91,022	3,21,730	3	10 3	3,03,866	3	12 5	21¼	
Jalálpor	2,25,418	2,45,318	2,45,293	4	8 6	3,01,526	5	8 5	23	
Chikhli	1,90,444	2,00,836	2,13,608	2	8 2	2,35,848	2	13 5	10½	
Balsar	2,11,726	2,19,611	2,20,849	2	15 0	2,40,610	2	10 7	9	
Párdi	1,03,384	1,08,115	1,07,888	1	11 7	1,24,983	1	9 0	16	
Total	16,82,948	17,90,730	18,48,426	3	2 8	21,10,357	3	6 8	Net increase 14¼	

The new settlement, 1863-1873.

The grounds for the increase of the government demand were two : i, the rise in the price of agricultural produce; ii, the presence of a railway throughout the whole length of the district The sub-letting rates are, as a general rule, said to be double of those charged by government ; and in many cases the sale of the occupancy right fetches large sums of money On the other hand, by the serious fall in the value of agricultural produce that has taken place since 1868, the pressure of the assessment has much increased. In consequence of this a large area of land has, as shown in the margin, during the last four years passed out of cultivation. This has been made the subject of special inquiry.

Year	Area taken up for cultivation
	Acres
1871-72	624 374
1872-73	615,682
1873-74 .	600,205
1874-75	584,180
1875 76 .	584,238

Unlike much of the land in northern Gujarát, in Surat government lands are almost entirely held under the regular survey tenure. Separate agreements are made with individual holders ; the rents are fixed, as far as possible, according to the intrinsic value of the soil, and are liable to revision at the expiry of a thirty years' lease. Only two special tenures, the *sarákati* and the *khudkhásta*, require notice. The *sarákati* is a tenure under which no less than twenty-two villages are held. The term is derived from the Arabic word *shirákat*, meaning a partnership. The origin of the tenure has not been traced. But, on account of the peculiar advantages attaching to it, this form of tenure is believed to have been granted to persons connected with the local government. The revenues of the villages are shared between the state and the partner in various proportions. The lands held under the second special form of tenure, called *khudkhásta*, are some of the lands that the *desáis*, in the time of Marátha rule when they enjoyed almost unchecked opportunities for disposing of land, brought into their own possession. This land was enjoyed by them as remunera-

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tion for their services as managers of villages. It was subject only to a nominal quit-rent. The remaining revenue, which came into the hands of the *desáis*, was known as *pál*, and supplied the funds from which maintenance to travellers and others was provided.

Service lands.

Besides completing a more correct survey of the district, the administration of the land has been improved by the settlement of the claims of such holders of land as are exempt from the full government demand on the ground of rendering public service. Hereditary holders of service lands belonged to two chief classes, district and village officers. The district officers were the district supervisor, or *desái*, and the district accountant, or *majmudár*. Though since 1821 the *desáis* had been allowed to remain in the receipt of their former emoluments without performing any public service, government had never waived its right to demand service, and in 1835 the *desáis* were warned that a refusal to perform service would be followed by the immediate resumption of their service emoluments. Under these circumstances, in 1869, a settlement of the *desáis'* claims was made, under which, on payment of 18¾ per cent of the regular state demand, they were allowed to continue in possession free from the liability to service.

As regards the lands and allowances held by village officers on condition of service, a distinction was in 1865 drawn between such as were useful only to the village community, such as barbers, shoe-makers, tanners, and village priests, and those who, like the village headman and the watchman, were useful to the state. The lands and allowances of the latter class were continued to them unchanged. The lands of the former class were freed from the burden of service, and continued to the holders on the payment of from twenty-four to fifty per cent of the ordinary government demand.

Existing administration

Supervising staff.

For fiscal and other administrative purposes the lands under the collector's charge are distributed among eight sub-divisions,[1] three of which are generally entrusted to the covenanted first assistant, three to the covenanted second assistant, and two to the uncovenanted district deputy collector. The uncovenanted assistant, styled the head-quarter, or *huzur*, deputy collector, is entrusted with the supervision of the district treasury. These officers are also assistant magistrates, and those of them who have revenue charge of portions of the district have, under the presidency of the collector, the chief management of the different administrative bodies—local fund and municipal committees—within the limits of their revenue charge.

Sub-divisional staff.

Under the supervision of the collector and his assistant or deputy, the revenue charge of each fiscal division of the district is placed in the hands of an officer styled *mámlatdár*. These functionaries, who are also entrusted with magisterial powers, have yearly salaries varying from £150 (Rs. 1,500) to £330 (Rs. 3,300). One of the fiscal divisions, Bárdoli, contains a subordinate division called *petámáhál*, placed under the charge of an officer styled *máhálkari*, who, except that he has no treasury to superintend, exercises the revenue and

[1] These are Olpád, Mándvi, Chorási, Bárdoli, Jalálpor, Chikhli, Balsár, and Párdi.

magisterial powers generally entrusted to a *mámlatdár*. The yearly salary of the *máhálkari* is £90 (Rs. 900).

Village staff.

In revenue and police matters the charge of the state villages of the district is entrusted to 763 headmen, of whom 638 are stipendiary and 125 are hereditary Eleven of the stipendiary and six of the hereditary headmen perform revenue duties only, eleven of the stipendiary and eight of the hereditary headmen attend to matters of police only, while 616 of the former and 111 of the latter are entrusted with both revenue and police charges. The yearly pay of the headman depends on the amount of revenue derived from his village. It varies from 6*s.* 6*d.* (Rs 3-4) to £16 4*s.* (Rs. 162), the average receipts amounting to £6 11*s.* 3¾*d.* (Rs. 65-10-6) Besides the headman there are in many villages members of his family in the receipt of hereditary grants from the state,[1] amounting altogether to a yearly sum of £177 (Rs 1,770), of which £90 6*s* (Rs 903) are met by grants of land, and £86 14*s* (Rs 867) are paid in cash Of £5,187 0*s.* 3*d* (Rs 51,870-2), the total yearly charge on account of the headmen of villages and their families, £829 2*s.* 10½*d.* (Rs. 8,291-7) are met by grants of land, and £4,357 17*s.* 1½*d.* (Rs 43,578-11) are paid in cash.

Headmen.

To keep the village accounts, draw up statistics, and help the headman of the village, a body of stipendiary village accountants, or *talátis*, is supported These men number 403 in all, or about one clerk for every two villages, each charge containing on an average 1,245 inhabitants, and yielding a yearly sum of £555 8*s.* 1*d.* (Rs 5,554-0-8) of land revenue to the state Their yearly salaries, which are paid in cash, amounting on an average to £17 5*s* 9*d.* (Rs 172-14), vary from £12 to £24 (Rs 120 to Rs. 240), and represent a total yearly charge to the state of £6,967 2*s* (Rs. 69,671)

Accountants.

Under the headman and the village accountant are the village servants with a total strength of 4,313. These men are liable both for police and revenue duties. They are either Musalmáns or Hindus belonging to the Bhil, Koli, Talávia, Dher, and Bhangia castes The total yearly grant for the support of this establishment amounts to £6,528 9*s* 8½*d.* (Rs. 65,284-13-8), being £1 10*s* 3*d* (Rs. 15-2) to each man, or a cost per village of £7 19*s* 9¾*d* (Rs 79-14-6). Of this charge £4,485 3*s.* 1½*d* (Rs 44,851-9) are met by grants of land, and £2,043 6*s.* 7*d* (Rs. 20,433-4-8) are paid in cash.

Servants.

The yearly cost of the village establishments of the district may be thus summarized —

	£	s	d	Rs.	a	p.
Headmen and their families ...	5187	0	3	51,870	2	0
Village accountants . .	6,867	2	0	69,671	0	0
Village servants	6,528	9	8½	65,284	13	8
Total. .	18,682	11	1½	1,86,825	15	8

Equal to a charge of £22 17*s.* 4½*d.* (Rs. 228-10-9) per village, or 8·34 per cent of the entire land revenue of the district.

[1] These men, called *betha bhágia*, or sitting sharers, are entitled to a portion of the perquisites of the office without doing any work in return.

CHAPTER IX.

ADMINISTRATION OF JUSTICE

Chapter IX.

Administration of Justice

1800-1875

Administrative changes.

The office of judge and magistrate was created in 1800, on the assumption by the English of the entire management of the city and port of Surat and of the town of Ránder.[1] As judge, this officer was vested with civil, and as magistrate, with criminal and police jurisdiction in and over the city and port of Surat and the town of Ránder His jurisdiction was, from time to time, extended to the territories subsequently ceded.[2] All appealable civil causes decided in the district or local courts of Surat were cognizable by the provincial court of appeal established at Broach in 1805.[3] In the same year the criminal court of session at Surat was abolished, and its powers were exercised by the provincial court of circuit at Broach. The seat of the provincial courts of appeal and circuit was, on the 5th December 1810, removed from Broach to Surat,[4] and at the same time the jurisdiction of these courts was extended to the districts of Salsette, Surat, Broach, and Kaira.[5] In 1818 the office of district magistrate was transferred from the district judge to the collector.[6] But the charge of the police of the Surat city remained with the judge till, in 1846, it was transferred to the magistrate of the district.[7] In 1820 the provincial court of civil appeal at Surat was abolished, and the chief civil court, or *sadar diwáni adálat*, was transferred from Bombay to Surat.[8] In the same year the power and functions of the criminal court of circuit and of appeal were united to form a chief criminal court, or *sadar faujdári adálat*, and stationed at Surat. In 1828 the chief civil and criminal courts were again removed from Surat to Bombay.[9] In the same year courts of appeal and circuit for the Gujarát districts were established and stationed at Surat. These courts were abolished in 1830.[10] The post of district judge of Broach was abolished in 1827,[11] and in his place an officer was appointed with the title of senior assistant judge, subordinate to the district

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[1] See I, Reg II of 1800
[2] Reg II of 1805
[3] Reg II of 1805.
[4] Reg III of 1810
[5] Reg VI of 1812
[6] Reg III. of 1818.
[7] Act V of 1846.
[8] Reg. V of 1820.
[9] Reg VII of 1828.
[10] Reg I of 1830
[11] Reg XXVII. of 1827.

judge of Surat. In the year 1869 the office of senior assistant judge of Broach was also abolished, and the district of Broach included in the local jurisdiction of the judge of Surat.

Civil justice. Administrative Staff.

Civil Justice.—Of the strength of the staff appointed to decide civil cases in the Surat district no details are available earlier than the year 1849. In that year the district was furnished with eight judges,—a district judge, an assistant judge, a *principal sadar amin*, a *sadar amin*, a subordinate judge, or *munsif*, stationed at Surat, and three subordinate judges, or *munsifs*, stationed respectively at Olpád, Balsár, and Bárdoli The total number of suits disposed of in 1849 was 3,836 against 4,035 in 1850, in which year the strength and description of the staff remained the same as detailed above Ten years later, in 1860, the only noticeable change in the constitution of the staff was the substitution of a *munsif* for the *sadar amin* at Surat. In 1860, 5,078 cases in all were decided. In 1870 the number of courts was reduced to five The judge, the assistant judge, and the first class subordinate judge were stationed at Surat, a second class subordinate judge at Olpád, and a second class subordinate judge at Balsár. The number of cases decided in 1870 was 5,723. In 1874 the court at Olpád was transferred to Surat, and the cases decided numbered 6,623. In September 1875 a new court, under the charge of a second class subordinate judge, was opened at Olpád. Besides these six, a small cause court was opened at Surat in 1869. At present (September 1875) there are seven courts in all. Two of these, with a jurisdiction extending over the whole district, are the courts of the district judge and the assistant judge respectively Four, with an average jurisdiction extending over an area of 417 square miles and including a population of 151,772 souls, are courts of subordinate judges The remaining court is a small cause court, situated at Surat. Of the four courts of subordinate judges, that of the first class subordinate judge at Surat has an ordinary jurisdiction over the city and suburbs of Surat, the town of Ránder, and a few villages of the Chorási sub-division. This officer has also a special jurisdiction over the whole district in respect of suits exceeding £500 (Rs. 5,000). The jurisdiction of the second class subordinate judge at Surat extends over the Nánpura ward of the city of Surat, seventy-six villages in the Chorási sub-division, and the Bárdoli sub-division, that of the second class subordinate judge at Balsár extends over the Balsár, Chikhli, Jalálpor, and Párdi sub-divisions; and that of the second class subordinate judge at Olpád, over the Olpád and Mándvi sub-divisions.

Average distance of courts, 1875.

The average distance of the three courts at Surat from the six most remote villages of the jurisdiction of the district and assistant judges and the special jurisdiction of the first class subordinate judge is sixty-one miles, and from the six most distant villages of the ordinary jurisdiction of the last is about seventeen and a half miles; the average distance of the fourth court at Surat from the six most remote villages of the jurisdiction of the second class subordinate judge is about thirty-five and a half, that of the court at Balsár is twenty-five, and that of the court at Olpád is sixty miles. The number of cases decided during 1875 was 5,316.

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It will be seen from the tabular statement given below that the average value of the suits decided during the five years ending with 1874 was £17 16½*s* (Rs. 178-4), the amounts showing a decrease from £19 12*s*. (Rs. 196) in 1870 to £15 11*s* (Rs. 155-8) in 1874.

Suits how decided.

Exclusive of suits settled by the small cause court, the average number of cases decided during the five years ending with 1874 is 6,072, the number having risen from 5,723 in 1870 to 6,623 in 1874.

Decrees *ex-parte*, 1870-1874.

Of the total number of cases decided during the five years ending with 1874, 41·01 per cent have, on an average, been given against the defendant in his absence. The proportion of cases decided in this way would seem to be on the increase, the percentage being 37 82 in 1870, as compared with 42 79 in 1874.

Year	Total number of suits	Decreed *ex-parte*	Percentage
1870	5,723	2,165	37 82
1871	5,286	1,901	35 96
1872 ...	5,843	2,402	41 10
1873 ...	6,886	3,152	45 77
1874	6,623	2,834	42 79
Total	30,361	12,454	41 01

Contested cases how decided.

Of contested cases only 17·48 per cent have during this period of five years, on an average, been decided for the defendant. The proportion of such cases decided in favour of the defendant would seem to be on the decrease, the percentage having fallen from 20·59 in 1870 to 16·83 in 1874.

Steps taken to enforce decrees.

In eighty-one cases, or 1·22 per cent of the whole number of suits decided in 1874, the decree has been executed by putting the plaintiff in the possession of the immovable property which he claimed. The number of cases of this kind would not seem to vary much from year to year, the total in 1870 being forty-nine, as compared with eighty-one in 1874. In 33·73 per cent of the decisions passed in 1874, decrees for money due have been executed by the attachment or sale of property; of these, 12·27 per cent have on average been by the sale of movable, and 21·46 per cent by the sale of immovable property. As compared with 1870, the returns of attachments of movable and immovable property for 1874 show a rise from 411 to 813, or an advance of 97 81 per cent in the former, and from 934 to 1,421, or an increase of 52·14 per cent in the latter.

Arrest of debtors.

Compared with 1870, the number of decrees executed by the arrest of the debtor has increased from 160 in 1870 to 195 in 1874. As information of the average number of debtors in each civil suit is not available, the proportion that the number of debtors committed to prison bears to the number of persons sued for debt cannot be shown. It will be seen, however, from the following table that the number of civil prisoners has pretty nearly remained constant during the five years ending with 1874, the total in 1874 being ninety-eight as compared with ninety-nine in 1870.—

Statement showing the number and disposal of Civil Prisoners during the five years ending with 1874.

Arrest of debtors.

Year	Number of prisoners committed to jail	Average number of days prisoner was confined in jail	Number of prisoners released: By decree being satisfied	On request of person who put prisoner into jail	On omission of such person to pay the subsistence allowance	On disclosure by prisoner of all his property under section 280, civil procedure code	On expiry of period for which imprisonment is allowed by law	Caste of prisoners: Hindus.	Musalmáns	Pársis	Others.
1870	99	30	4	41	40	6	1	89	8	2	
1871	117	22	5	46	35	9	4	97	17	2	1
1872	81	30	6	30	34	3		68	12	1	
1873	116	33	11	42	55	5	3	106	7	3	
1874	98	36	6	29	38	8	7	86	9	3	

Working of civil courts. 1870-1874.

The following statement shows, in tabular form, the working of the civil courts of the district during the five years ending with 1874.—

Statement showing the working of the Civil Courts of the Surat District, 1870-1874

Year	Total number of suits disposed of	Average value of suits disposed of in pounds sterling £	s	Uncontested: Decreed *ex-parte*	Dismissed *ex-parte*	Decreed on confession	Otherwise disposed of	Total	Contested: Judgment for plaintiff	Judgment for defendant	Mixed.	Total	Execution of decrees: Arrest of debtor	Decree-holder put in possession of immovable property	Attachment or sale of property: Immovable	Movable.
1870	5,723	19	12	2,165	207	242	2,339	4,951	543	159	70	772	160	49	934	411
1871	5,286	20	12	1,901	317	252	2,000	4,470	604	140	82	816	131	44	1,239	625
1872	5,843	17	11	2,402	386	205	2,164	5,157	529	123	34	686	233	73	949	613
1873	6,886	15	17	3,152	166	225	2,532	6,085	(*a*)	131	670	801	110	48	1,718	1,069
1874	6,623	15	11	2,834	32	165	2,734	5,815	(*a*)	136	672	808	195	81	1,421	813

(*a*) Not shown separately in the present administration returns

Small cause court.

As noticed above there is one small cause court at Surat, presided over by a native judge. This officer, who every fortnight also holds a court at Broach, receives an annual salary of £960 (Rs. 9,600).

From the following table it will be seen that during the five years ending with 1874, the total number of suits has increased from

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2,526 in 1870 to 2,797 in 1874, or 10·72 per cent, the highest number being 3,327 in 1872. A considerable increase appears to have occurred in suits to recover sums of less than £5 The numbers of suits of less than £20 and £50 have remained nearly constant, or have slightly fallen off. The average value of suits has declined from £5 11*s.* to £4 13*s.* 9*d.*, or 15 per cent. With regard to the execution of decrees, the number of attachments of property has increased from 112 to 446, or 298 per cent, and that of sales from 21 to 51, or 142 per cent, the highest number of sales being 88 in 1872. On the other hand, the number of debtors imprisoned has fallen from 15 to 12, the highest number being 41 in 1871 —

Small cause court, 1870-1875.

Statement showing the working of the Surat Small Cause Court, 1870-1874

Year	Total number of suits decided	Value of Suits			Average amount in litigation			Average cost per suit			Coercive Processes issued		Persons imprisoned
		Under £5	Under £20	Under £50							Movable property attached	Movable property sold	
					£	*s*	*d*	£	*s*	*d*			
1870	2,526	1,726	650	150	5	11	0	0	12	10½	112	21	15
1871	3,284	2,263	839	182	5	13	3	0	11	8½	272	61	41
1872	3,327	2,305	812	210	5	12	3½	0	11	7⅜	383	88	25
1873	3,170	2,298	706	166	5	0	7/16	0	10	2¾	417	65	15
1874	2,797	2,029	639	129	4	13	8⅜	0	10	1¼	446	51	12

Registration.

Registration.—The amount of registration is sufficient to employ nine sub-registrars, of whom five are special, and the rest, head clerks in sub-divisional revenue offices, belong to the ex-officio class of sub-registrars Of the whole number, eight are distributed, one at each of the head-quarters of the chief sub-divisions of the district, and the ninth is stationed at Wálod. In addition to the supervision exercised by the collector, who is the district registrar, and by his assistant or deputy, a special scrutiny is, under the control of the inspector general of registration and stamps, carried on by the inspector of registration for Gujarát. According to the registration report for 1874-75 the registration receipts for that year amounted to £1,082 3*s.* 7*d.* (Rs. 10,821-12-8), and the charges to £697 8*s* 6⅜*d.* (Rs. 6,971-4-3), leaving a balance of £384 15*s* ¼*d* (Rs 3,847-8-5) Of 3,071, the total number of registrations during the year 1874, 60 were wills, one under the head of 'written authorities to adopt, other than those conferred by wills;' 143 were documents affecting movable, and 2,867 documents affecting immovable property. Of the last class, in addition to 704 miscellaneous instruments, 14 were deeds of gift, 1,228 were deeds of sale, and 921 were mortgages. The registered value of the total immovable property transferred was £132,970 (Rs. 13,29,700).

Criminal justice Administrative Staff.

Criminal Justice.—At present (1874) twenty-six officers share the administration of criminal justice. Of these, two are honorary first class native magistrates appointed by government for municipal cases of the city of Surat. Of the rest, six are magistrates of the first class, and eighteen of the second and third classes. Of the

former, four are covenanted European civilians, and two are natives. With regard to the local jurisdiction and powers of these magistrates, one of them, the district magistrate, is placed in a special position, invested with a general supervision over the whole of the district. There remain, therefore, five regular first class magistrates, with an average charge of 334 square miles and a population of 121,417 souls. In the year 1874 the six first class magistrates decided 369 original and 51 appeal criminal cases. These officers have, as collector, assistant collectors, and deputy collectors, revenue charge of the parts of the district over which they exercise magisterial powers. Of subordinate magistrates there are eighteen, with an average charge of 93 square miles and a population of 33,727 souls. Of these, one is a covenanted European civilian, and the rest are natives. The total number of criminal cases decided in 1874 was 2,440 Besides their magisterial duties, these officers exercise revenue powers as assistant collectors, mámlatdárs or máhálkaris, or as head clerks in the offices of the different mámlatdárs in the district.

Criminal justice.

Administrative Staff.

None of the village headmen in the Surat district, of whom there are 763, with an average annual pay of £0 11*s* 3½*d*. (Rs 65-10-6) each, has been entrusted with the powers of fining and imprisoning, contemplated by the Bombay Village Police Act (VIII of 1867).

From the table of offences given below it will be seen that during the five years ending with 1874, 3,355 offences, or one offence for every 180 of the population, were on an average committed. Of these, there were on an average six murders and attempts to commit murder; four culpable homicides, 37 cases of grievous hurt; 42 cases of dacoity and robbery; and 3,265, or 97 per cent of the whole, minor offences.

Number of offences, 1870-1874.

Police.—When they first came under British management, Surat and its neighbourhood were in a most disorderly state. Bands of armed thieves committed robberies close to the walls of the city, and sometimes even in its streets. But, before many years were over (1816), these open breaches of the peace had been effectually suppressed.[1] At the same time burglaries were still frequent, and cases of poisoning were believed to be common; assaults were unusual, but drunkenness was very prevalent. In 1815 the senior judge of circuit was disposed to attribute the unfavourable state of morals at Surat to the loss of the influence and authority of heads of castes and the destruction of the respect formerly shown by the lower orders towards the higher. From this sprung 'numberless immoralities, trifling vices, increasing drunkenness,' and other irregularities which, though not cognizable by the legal tribunals, were likely to lead ultimately to the perpetration of greater crimes[2] In the rural parts of

Police.

[1] In 1800, besides the military guard of one company of European artillery, two companies of European infantry, and one complete regiment of Native infantry, a city police force, 100 strong, and paid at the rate of Rs. 5 a month, was placed under the management of the judge and magistrate (Surat Papers, 134-178.) The *nawab's* 'armed rabble' of 944 men were at the same time discharged.—Surat Papers, 448.

[2] Hamilton's Description of Hindustán, I, 723.

Chapter IX.

Administration of Justice.

1800-1875.

Of the whole number, exclusive of the district superintendent, 251 were provided with fire-arms and 397 with swords only, or with swords and batons; 152, of whom 67 were officers and 85 constables, could read and write; and 95 were under instruction.

Distribution of the police.

With the exception of the superintendent of police, who was a European, the members of the police force were all natives of India. Of these, 52 officers and 244 constables were Muhammadans, six officers and eight constables were Bráhmans, one officer was a Rajput, 30 officers and 160 constables were Maráthás, 30 officers and 116 constables were Hindu of other castes, and one officer was a Pársi.

Working of the police.

Of 153, the total number of persons accused of heinous crimes, 54, or 35·29 per cent, were convicted. In the matter of the recovery of stolen property, of £2,639 8*s.* (Rs. 26,394), alleged to have been stolen, £906 12*s.* (Rs 9,066), or 34·46 per cent of the whole amount, were recovered. Of the five districts of Gujarát, the Surat district came fourth both as regards the proportion of convictions to arrests and the proportion of the amount of property recovered to the amount stolen.

Statistics of crime, 1870-1875.

The principal details of the amount of crime and the working of the police during the five years ending with 1874 will be found in the following tabular statement:—

Statement showing the statistics of crime and the working of the Police, 1870-1875

Year	Offences and Punishment of Offenders															
	Murder and attempt to murder				Culpable homicide				Grievous hurt and hurt by dangerous weapons				Dacoities and robberies			
	Number	Persons arrested.	Persons convicted	Percentage.	Number	Persons arrested	Persons convicted	Percentage	Number	Persons arrested	Persons convicted	Percentage	Number	Persons arrested	Persons convicted	Percentage.
1870	5	7	1	14 28	9	10	3	30	34	65	24	36 92	56	124	13	10 48
1871	7	10	5	50	2	2	2	100	48	107	26	24 29	53	173	72	41 61
1872	4	8	6	75	2	2	1	50	33	63	24	38 09	40	98	31	31 63
1873	6	27			5	11	3	27 27	41	95	39	41 05	32	73	15	20 54
1874	8	19	5	26 31	2	2	1	50	30	72	32	44 58	32	60	16	26 66
Total	30	71	17	23 94	20	27	10	37·03	186	402	145	36·06	213	528	147	27 84

Year	Offences and Punishment of Offenders								Recovery of Stolen Property		
	Other offences.				Total.						
	Number	Persons arrested	Persons convicted	Percentage	Number.	Persons arrested	Persons convicted	Percentage.	Property stolen	Property recovered	Percentage.
									£ *s*	£ *s*	
1870	3,620	5,912	2,383	40 30	3,733	6,118	2,424	39 62	4,831 10	1,571 10	32·53
1871	4,029	6,583	2,705	41 09	4,139	6,875	2,810	40 87	4,106 0	1,879 4	45·76
1872	2,922	4,893	1,925	39 34	3,001	5,064	1,987	39 23	3,924 12	1,397 10	35 60
1873	2,843	4,651	1,920	41 28	2,927	4,857	1,977	40·70	3,667 18	1,088 6	29 67
1874	2,903	4,945	1,736	35 10	2,975	5,098	1,790	35 11	2,639 8	906 12	34 46
Total	16,326	26,984	10,669	39 53	16,775	28,012	10,988	39 22	19,169 8	6,843 2	35 69

But little information has been collected as to the comparative amount of crime at different periods since the introduction of British rule. The following is a summary of such details as are available :—

Numbers of offences, 1845-1875.

The total number of offences committed during the five years ending with 1849 was 16,622, representing an annual average of 3,324, or, on the basis of the census returns of 1846, one crime to every 130 inhabitants of the district. Corresponding criminal returns for the five years ending with 1874 showed a total of 16,775 offences, giving an average of 3,355 crimes per year, or, on the basis of the census returns of 1872, one crime to every 180 inhabitants of the district. Again, a comparison of the returns would seem to show that in the matter of murders and culpable homicides a slight improvement has taken place. For, while population has increased since 1849, the number of crimes has remained constant at six cases of murder and attempt to commit murder, and at four of culpable homicide. Under the head of robberies, including dacoities and thefts of cattle, there is a marked falling off, the yearly averages for the two periods being 390 for the earlier (1845-49), and but sixty for the later (1870-74).

Jail.

Jail.—Besides the accommodation provided for under-trial prisoners at the head-quarters of each sub-division, there is in the city of Surat, for the Surat and Broach districts, one district jail capable of containing 129 male and ten female prisoners.

Chapter IX.
Administration of Justice.
1800-1875.

Surat the mixture of territories increased the difficulty of suppressing crime. 'Before a thief could be arrested, or stolen property recovered, so many prefatory ceremonies and negotiations had to be gone through that, before an effectual search could begin, both were removed.' The two prevailing forms of crime were gang robbery and marine piracy. The gang robbers were an armed rabble enlisted by *garásiás* who had claims on the land revenues of the district. These ruffians were generally headed by some desperate leader renowned for his cruelties and extortions, who entering the British territory under pretence of collecting his master's dues, at the same time extorted double the sum for himself and his followers. When the villagers attempted to resist their houses were plundered and their children were carried into captivity to be held to ransom on some future opportunity.

Police.

Piracy.

There were two chief seats of piracy in Surat,—along the right bank of the Tápti, and southward between the mouth of the Tápti and Daman. North of the Tápti, and chiefly at Suwáli hole, this robbery was carried on under two forms. 1, captains of ships exchanged with the villagers in those parts their owners' cotton and other goods for tobacco, pepper, and vegetables; 2, vessels were intentionally run ashore, and captain and crew, the villagers along the coast, and the Maratha functionaries in charge of Olpád joined in sharing the plunder. To the south of the Tápti the depredations were still greater. One favourite device was, when near creeks and villages, where the captain and crew had friends, on the slightest plea of bad weather or distress, to throw overboard bales of cotton and other goods So general was this practice that, though hardly any cotton was grown to the south of Surat, every village between that city and Balsár was commonly full of cotton which they facetiously termed 'the cotton of the sea.' But 'for drawing a harvest from the sea' other measures, more openly lawless than this system of pilfering, were adopted. After the crops had been gathered from their fields, the inhabitants of some of the coast villages, chiefly of Dumas and others belonging to the nawáb of Sachin, putting off from the shore in bands, attacked and captured trading vessels, dividing the booty among the different villages along the shore.[1]

At present (1875) the chief obstacle to an efficient police is the ease with which offenders can escape into the Portuguese territory of Daman, or into one of the petty states whose lands border the district of Surat on the north and east. This difficulty is most felt in the north and in the south of the district. In the north bands of Bhils pass across the frontier, commit a robbery and retire with their plunder. So difficult is it to guard against the attacks of robbers of this class that, in the villages of the Mándvi, Olpád, and Bárdoli sub-divisions, a system of blackmail still prevails. In these parts, in each village, the people join together to support a certain number of watchmen, or *wasáwás*, who belong to the Bhil tribe. For the payment of these *wasáwás* each household contributes, according to its means, by the gift of grain, cloth, or coin. If a robbery

[1] Hamilton's Description of Hindustán, I., 717.

takes place the *wasáwás*, for whom the village contributes, are sent for, and are supposed to find out the culprit. Most of the *wasáwás* are in league with others of their tribe beyond the frontier. Their confederates plan robberies within Surat limits, and the Surat *wasáwás*, in their turn, arrange an attack on a village in one of the neighbouring states. Again, in the south of the district, gangs of robbers are constantly passing into the Surat district, and before they can be captured escape back into Portuguese territory. Here the Surat police cannot follow them, and as in the Daman courts all evidence short of the discovery of stolen property in the possession of the accused, or the testimony of two eye-witnesses, fails to procure a conviction, the offender generally escapes unpunished. Beyond an occasional petty theft, the wandering tribes of the district give the police but little trouble. Agrarian offences are rare. Cases that do occur are seldom more serious than assaults arising out of a disputed right of possession or damage done to a grain field. Serious crimes resulting from the pressure of the civil courts are almost unknown.[1]

Piracy.

In the year 1874 the total strength of the district, or regular police force, was 649 Of these, under the district superintendent, two were subordinate officers, 118 inferior subordinate officers, 23 mounted police, and 505 constables. The cost of maintaining this force was as follows · The one European officer—the district superintendent of police—received a total annual salary of £640 18*s.* (Rs. 6,409), the two subordinate officers a yearly salary of not less than £120 (Rs. 1,200) each, and the 118 inferior subordinate officers a yearly salary of less than £120 (Rs. 1,200) each, or a total yearly cost of £3,335 8*s.* (Rs. 33,354). The pay of the 23 mounted and 505 foot police came to a total sum of £5,909 2*s* (Rs. 59,091). Besides the pay of the officers and men there was a total annual sum of £348 18*s.* (Rs. 3,489) allowed for the horses and travelling expenses of the superior officers, £205 14*s.* (Rs. 2,057) annual pay and travelling allowance for their establishments, and £617 8*s.* (Rs. 6,174) a year for contingencies and other expenses, making a total annual cost to government for the district police of £11,057 8*s.* (Rs. 1,10,574).

Cost of the district police, 1874.

The area of the district, according to the survey department, is 1,669 square miles, and the population, by the census of 1872, 607,087 souls. According to these figures the total strength of the police of the Surat district is one man to every 2 57 square miles as compared with the area, and one man to every 935 souls as compared with the population. The cost of maintenance is equal to £6 12*s.* 6*d.* (Rs. 66-4) per square mile, or 4¼*d.* (as. 2-10) per head of the population.

Of the total strength of 649, inclusive of the superintendent, 72 in all—of whom 15 were officers and 57 constables—were in 1874 employed as guards over treasuries, lock-ups, or as escorts to prisoners and treasure ; 441 men, of whom 83 were officers and 358 constables, were engaged on other duties ; and 136, of whom 23 were officers and 113 constables, were stationed in towns and municipalities.

Distribution of the police.

[1] Contributed by the Superintendent of Police.

Chapter IX.

Administration of Justice.

1800 1875.

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Working of the police

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1873	6	27			5	11	3	27 27	41	95	39	41 05	32	73	15	20 54
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Year	Offences and Punishment of Offenders								Recovery of Stolen Property		
	Other offences				Total						
	Number	Persons arrested	Persons convicted	Percentage	Number.	Persons arrested	Persons convicted	Percentage	Property stolen	Property recovered	Percentage.
									£ s	£ s	
1870	3 629	5 912	2 383	40 30	3,733	6,118	2 424	39 62	4 831 10	1,571 10	32 52
1871	4 029	6 583	2 705	41 09	4 139	6 875	2 810	40 87	4,106 0	1,879 4	45 78
1872	2 922	4 893	1 925	39 34	3 001	5 064	1 987	39 23	3 924 12	1,397 10	35 60
1873	2 843	4 651	1 920	41 28	2 927	4 857	1 977	40 70	3 667 18	1,088 6	29 67
1874	2 903	4 945	1 736	35 10	2 976	5 098	1,790	35 11	2,639 8	906 12	34 46
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But little information has been collected as to the comparative amount of crime at different periods since the introduction of British rule. The following is a summary of such details as are available :—

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The total number of offences committed during the five years ending with 1849 was 16,622, representing an annual average of 3,324, or, on the basis of the census returns of 1846, one crime to every 130 inhabitants of the district. Corresponding criminal returns for the five years ending with 1874 showed a total of 16,775 offences, giving an average of 3,355 crimes per year, or, on the basis of the census returns of 1872, one crime to every 180 inhabitants of the district. Again, a comparison of the returns would seem to show that in the matter of murders and culpable homicides a slight improvement has taken place. For, while population has increased since 1849, the number of crimes has remained constant at six cases of murder and attempt to commit murder, and at four of culpable homicide. Under the head of robberies, including dacoities and thefts of cattle, there is a marked falling off, the yearly averages for the two periods being 390 for the earlier (1845-49), and but sixty for the later (1870-74).

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CHAPTER X

REVENUE AND FINANCE.

Chapter X.

Revenue and Finance.

Balance sheet, 1828-1875.

The earliest year for which a copy of the balance sheet [1] of the district is available is 1827-28. Since that time many changes have been introduced in the system of keeping accounts. But, as far as possible, the different items have been brought under their corresponding heads of account according to the system at present in force. Exclusive of £41,696 (Rs. 4,16,960), the adjustment on account of alienated land, the total transactions that appear in the district balance sheet amount to receipts £475,879 (Rs 47,58,790) in 1874-75 against £282,714 (Rs. 28,27,140) in 1827-28, and charges £455,152 (Rs. 45,51,520) in 1874-75 against £228,538 (Rs. 22,85,380) in 1827-28 Exclusive of departmental miscellaneous receipts and sums received in return for services rendered, such as the receipts of the post and telegraph departments, the amount of revenue raised in 1874-75 under all heads—imperial and provincial services,[2] local funds, and municipal revenues—amounted to £419,942 (Rs 41,99,420), or, on a population of 607,087, an incidence per head of 13*s.* 10*d.* As no census details are available for 1827-28, corresponding information for that year cannot be given. During the interval of forty-seven years, the following changes have taken place under the chief heads of the district receipts and charges.

Land revenue.

Land Revenue.—The receipts under this head, which includes 59·03 per cent of £419,942, the entire revenue of the district, have risen from £197,506 (Rs. 19,75,060) in 1827-28 to £247,932 (Rs. 24,79,320) in 1875. The increase is for the most part due to the enhancement of the state receipts arising from the large area of land brought under cultivation since 1827. Another source of increase has been the additional levies recovered since 1863 from all alienated lands except the service lands held by certain village and district officers. The charges under this head show an advance from £31,279 (Rs. 3,12,790)

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[1] The revenues of Mándvi in 1827 28, a distinct territory, are not included in the balance sheet. The land revenue of the Mándvi sub division amounted in 1874 75 to £12,900 (Rs 1,29,000)

[2] The distinction between imperial and provincial services arises out of the decentralization system introduced in 1870, under which the Government of India assigns every year out of the imperial revenues a fixed sum for provincial services, any excess over the allotted amount having to be met by the provincial government, either by a reduction in charges or by the imposition of fresh taxes.

to £34,178 (Rs. 3,41,780). This apparent increase in the cost of collecting the land-tax is due to an increase in the number, and an enhancement of the salaries of officers employed in collecting the revenues.

Chapter X. Revenue and Finance.

Balance sheet, 1828-1875.

The following statement[1] contrasts the land revenue for the years from 1830-31 to 1874-75 :—

Statement showing the yearly Land Revenue of the Surat District, 1830-1875

Year.	Land revenue	Year	Land revenue	Year	Land revenue	Year	Land revenue
	£		£		£		£
1830-31	141,897	1842-43	159,320	1853 54	170,000	1864 65	239,393
1831 32	117,730	1843 44	161,667	1854-55	171,671	1865 66	252,211
1832-33	107,789	1844 45	159,585	1855 56	169,391	1866 67	257,063
1833 34	143,918	1845 46	150,349	1856 57	202,019	1867 68	258,253
1834-35	150,845	1846 47	162,462	1857-58	207,377	1868 69	231,217
1835-36	150,940	1847 48	162,500	1858-59	211,426	1869 70	238,247
1836 37	151,580	1848 49	141,502	1859 60	215,798	1870 71	236,754
1837 38	151,882	1849 50	151,500	1860 61	215,248	1871 72	233,697
1838 39	147,888	1850 51	165,644	1861 62	224,537	1872 73	235,114
1839 40	151,407	1851 52	165,644	1862 63	236,443	1873 74	229,741
1840 41	153,545	1852 53	169,350	1863-64	240,938	1874-75	224,173
1841-42	156,252						

Tributes from Native States.—The receipts under this head represent the amount of the tribute paid by the Bansda state, which in 1827-28 was not shown separately. Tributes.

Stamps.—Receipts have increased from £5,790 (Rs. 57,900) to £18,103 (Rs 1,81,030) ; charges have fallen from £188 (Rs 4,880) to £460 (Rs. 4,600). Stamps.

Excise on Spirits and Drugs.—Receipts have risen from £14,226 (Rs 1,42,260) to £37,371 (Rs 3,73,710), or 162 69 per cent ; charges have increased from £383 (Rs. 3,830) to £565 (Rs. 5,650) The causes of the rise in the revenue are. i, the enhancement of the rate of duty ; ii, the levy of a fresh tax in the shape of a shop licence ; and iii, the introduction of more active competition at the auction sales of the right to manufacture and sell spirits and toddy. The use of country spirits[2] by the people of the district is made to yield a revenue to the state by limiting the number of persons who are allowed to sell them. The licensed vendors are of two classes : (1) those who, living within a radius of six miles from Surat and Balsár, are bound at their own cost to prepare all their spirits at the government distilleries ; and (2) the rural vendors, who are allowed to Excise.

[1] Figures for the years between 1830-31 and 1867-68 are taken from statement No 11 in Mr Bell's excise report, dated 1st October 1869 Figures for subsequent years are taken from the statements published with Government Resolutions No. 6092, dated 27th October 1875, and No 6109, dated 26th October 1876.

[2] The local drinks are of two kinds—spirits and fermented liquor The native spirits drunk in the district are all distilled from the flower of the *mahura* tree (Bassia latifolia). The common fermented liquor is from the juice of the wild date tree (*khajuri*).

Chapter X.

Revenue and Finance.

Balance sheet, 1828-1875.

Excise.

manufacture their spirits as they please. From the vendor of the first class a revenue is derived in two ways. He is compelled to take from the public distillery a certain quantity of liquor every day, and as it passes out of the distillery (*a*) a fee of from 2*s.* to 2*s.* 6*d.* (Re 1 to Rs. 1¼) is levied on each gallon, (*b*) a tax is levied varying from £5 to £20 (Rs 50 to 200) according to the estimated consumption of spirits at the vendor's tavern. The revenue obtained from the rural vendor consists of the amount bid by him at a public auction for the right to manufacture and sell spirits and toddy within the area of a certain number of villages. The state revenue from the consumption of European liquors is obtained by the levy of a tax, varying in amount from £2 10*s.* to £5 (Rs. 25 to Rs. 50) on all shops licensed to sell European liquors. The intoxicating drugs, from the use of which an excise revenue is obtained, are the different preparations of Indian hemp (Cannabis indica) known as *bhán̐g* and *gánja*.

The following statement shows the variations in the state revenue derived from the use of the different forms of intoxicating substances at intervals during the past forty-five years :—

Statement showing the yearly Excise Revenue of the Surat District, 1830-1875.

Year	Country distilled Liquor					Fermented Liquor (*Tádi*)	
	Town Vendors			Rural Vendors			
	Number of shops.	Receipts from distillery and licence fees	Rate of duty per gallon	Number of shops	Receipts from auction sales.	Number of taverns	Receipts from auction sales.
		£ *s.*	*s. d*		£ *s*		£ *s*
1830-31 ..	64	6,314 8	1 3	285	999 18	137	7,507 14
1840-41	66	4,113 14	1 1½	270	1,839 14	116	4,211 14
1850-51	74	5,822 18		361	3,436 4	161	4,255 4
1860-61 .	72	7,418 10	2 0	295	6,348 10	142	5,156 10
1870-71	60	12,099 10	} 2 6 (*a*)	219	15,679 12	112	6,053 8
1874-75 .	79	16,374 4		212	12,055 10	133	7,439 18

Year.	European Liquors		Intoxicating Drugs		Opium (*b*)			
	Number of licences	Receipts from licence fees.	Number of shops	Receipts from licence fees.	Number of shops.	Receipts from licence fees	Quantity sold (Bengal *man* of 80 lbs)	Value of the quantity sold.
		£ *s.*		£ *s*		£ *s*	M *s* t	£ *s*
1830-31 .	.	..	.	210 8	11	581 18	..	..
1840-41	.	.	2	99 12	23	287 6	....	
1850-51 .	.	.	16	37 10	21	167 4	....	731 0
1860-61 ..	12	17 8	27	62 6	26	656 6	....	
1870-71 .	12	67 10	26	162 10	28	47 2	4 15 39	407 8
1874-75 .	12	65 0	26	176 17	19	251 9	8 12 0	735 16

(*a*) Besides fees varying from £5 to £20 for shop licences

(*b*) The revenue from opium comes under the head of customs and not of excise.

Shops for the sale of spirits and intoxicating drugs are distributed over the district as follows :—

Statement showing the distribution of Liquor-shops over the Surat District, 1876.

Description of Shops	Surat City	Olpád	Mandvi	Chorási	Bárdoli	Jaláloor	Chikhli	Balsár	Párdi	Total
European liquors	11							1		12
Country liquor.	62	14	53		33	24	34	41	30	291
Toddy shops[1]	74	14		23			...	22		133
Intoxicating drugs	17	1	1	1	4			1	1	26
Opium	6	1	5	1	4			1	1	19
Total	170	30	59	25	41	24	34	66	32	481

Transit duties.

Transit Duties, which in 1827-28 yielded £1,548 (Rs. 15,480) and cost to collect £50 (Rs. 500), have since been abolished.

Law and justice.

Law and Justice.—Receipts have fallen from £2,233 (Rs. 22,330) to £804 (Rs. 8,040). The amount is made up of fines levied from offenders. During the same time the charges have decreased from £38,276 (Rs. 3,82,760) to £16,245 (Rs. 1,62,450). This falling off is chiefly due to the removal to Bombay of the chief civil and criminal courts of appeal.

Forests.

Forests.—This is a new item since 1827-28. The receipts in 1874-75 amounted to £11,364 (Rs. 1,13,640), and the charges to £5,978 (Rs. 59,780).

Assessed taxes.

Assessed Taxes.—The entry under this head represents the recovery of arrears of income-tax. The following table[2] shows the amount realized from taxes levied since 1860. Owing to the variety of their rates and incidence, it is difficult to make any satisfactory comparison of the results of the different taxes in force between 1860-61 and 1872-73 :—

Year	Assessable incomes, exclusive of official salaries				Amount realized, exclusive of official salaries	
	Below £50		Above £50			
	£	Rs	£	Rs	£	Rs
Income-tax—						
1860-61	173,411	17,34,110	235,574	23,55,740	12,899	1,28,990
1861-62	170,469	17,04,690	221,632	22,16,320	12,294	1,22,940
1862-63			208,145	20,81,450	2,846	28,460
1863-64			201,330	20,13,300	6,585	65,850
1864-65			202,801	20,28,010	6,593	65,930
Licence-tax—						
1867-68	100,388	10,03,880	224,328	22,43,280	5,140	51,400
Certificate-tax—						
1868-69			216,621	21,66,210	2,914	29,140
Income-tax—						
1869			424,143	42,41,430	5,367	53,670
1869-70			424,143	42,41,430	2,674	26,740
1870-71		..	364,106	36,41,060	9,106	91,060
1871-72					2,969	29,690
1872-73					2,274	22,740

[1] Country spirits and toddy are in many cases sold by the same shop-keeper.

[2] This table is prepared from the collector's return No. 663, dated 29th March 1871, and from the annual returns for 1871-72 and 1872-73.

Chapter X.

Revenue and Finance.

Allowances and Assignments.—The decrease in charges is chiefly due to the settlement of cash alienations.

Customs—The revenue under this head consists of the sale proceeds of opium and the amount of the bid for the right to sell the drug.

Balance sheet, 1828-1875.

Salt.

Salt.—Collections on account both of sea customs and of salt are credited under this head The entry, £28,700 (Rs. 2,87,000), includes; £27,760 (Rs 2,77,600) on account of sea customs for 1827-28. In spite of the falling off in the revenue from sea customs, the returns for 1874-75 show a large increase under this head. This increase is due to the revenue derived from salt.[1] The additional charges are likewise due to the increased establishment of the salt department. Under the existing arrangements part of the salt consumed in the district is brought from the central salt work at Khárághora (sixty-five miles west of Ahmedábád) by rail to Surat.

Military

Military.—The decrease in charges is due to the small number of troops now stationed at Surat.

Registration and Education are new heads. The increase in police charges is due to the re-organization of the department.

Transfers.

Transfers.—Receipts have risen from £24,181 (Rs 2,41,810) in 1827-28 to £96,365 (Rs. 9,63,650) in 1874-75, and charges from £11,994 (Rs 1,19,940) in 1827-28 to £300,751 (Rs. 30,07,510) in 1874-75 The increased receipts under this head of account are due chiefly—(1) to the receipts on account of local funds, and (2) to the remittances received from other treasuries, and the amount held as deposits on account of savings banks The increased charges are due chiefly—(1) to a large surplus balance remitted to other treasuries, and (2) to the expenditure on account of local funds.[2]

The following statement shows, in tabular form, the contrasted details of the balance sheets of the years 1827-28 and 1874-75. The figures shown in black type on both sides of the balance sheet for 1874-75 are book adjustments. On the receipt side the total, £41,696 10*s* 6*d* (Rs 4,16,965-4), represents the additional revenue the district would yield had none of its lands been granted away by the state On the debit side the figures, £8,806 19*s* 6*d* (Rs 88,068-12), entered under the head of 'Land Revenue,' represent the rental of the lands granted to *patels* (except such as are engaged solely on police duties) and to village watchmen; the entry, £32,497 2*s* 7*d* (Rs. 3,24,971-4-8) under the head 'Allowances and Assignments,' represents the rental of the lands granted to district hereditary officers, *garásiás*, and other non-service claimants; the entry, £392 8*s* 5*d*. (Rs 3,924-3-4) under the head 'Police,' represents the rental of the lands granted to *patels* employed solely on

[1] As the salt imported from Surat into other districts is paid for at Surat, the sum realized is no guide to the value of the salt consumed in the district

[2] The item of local funds which appear in the balance sheet under the head of 'Transfer' is made up of the proceeds of the additional cess of one-sixteenth on the land assessment, together with certain miscellaneous receipts levied for objects of public improvement and education under the provisions of Act III of 1869 The receipts and charges of the different municipalities do not appear in the district balance sheet.

police duties. Cash allowances are, on the other hand, treated as actual charges and debited to the different heads of account according to the nature of the grant. Thus, grants of cash to *patels* (except such as are engaged solely on police duties) and village watchmen are included in £34,178 4*s.* 6*d.* (Rs 3,41,782-4), the total of land revenue charges; grants of cash to non-service claimants are included in £27,770 5*s.* 1*d.* (Rs. 2,77,702-8-8), the total of allowance and assignment charges; and grants of cash to *patels* employed solely on police duties are included in £8,323 1*s.* 3*d.* (Rs. 83,230-10), the total of police charges:—

Comparative Statement in Pounds Sterling of the Balance

Class of Service	No.	Receipts — Head of Account.	1827-28 £ s d	1874-75 £ s d.
Imperial Services				
(A) Superviced by the Collector	1	Land Revenue	197,506 16 9	217,932 16 1 41,696 10 6
	2	Tributes and Contributions from Native States		735 3 0
	3	Stamps	5,790 11 0	18,103 13 11
	4	Excise on Spirits and Drugs	14,226 3 8	37,371 12 11
	5	Transit Duties and Miscellaneous Cesses	1,548 10 7	
	6	Law and Justice	2,253 4 8	804 11 7
	7	Forest		11,364 14 10
	8	Assessed Taxes		8 16 10
	9	Miscellaneous	364 13 8	381 15 6
	10	Interest on Advances and Loans and Instalments on arrears of Revenue,	71 3 7	361 9 7
		Total	221,711 3 11	317,084 14 3 41,696 10 6
(B) Administered by Departmental Heads	11	Customs	411 8 6	1,051 9 9
	12	Salt	28,700 5 0	51,376 16 5
	13	Public Works	4,852 16 7	579 7 10
	14	Military	1,190 0 0	1,484 3 6
	15	Mint		58 13 2
	16	Post	620 12 10	4,279 16 4
	17	Telegraph		399 12 0
		Total	36,765 2 11	59,229 19 0
Provincial Services	18	Cemetries		3 18 0
	19	Registration		1,079 1 10
	20	Education	27 3 0	877 0 10
	21	Police		204 3 9
	22	Medical Services		8 18 10
	23	Jails		971 12 2
	24	Sale of Books		8 11 10
	25	Miscellaneous		68 9 3
		Total	27 3 0	3,219 16 6
		Total of Imperial and Provincial Services	258,533 9 10	379,514 9 9 41,696 10 6
Transfers and Items of Account	26	Deposits and Repayments of Advances and Loans	2,070 0 0	29,238 10 9
	27	Remittance of Cash Balance	19,981 1 11	43,456 2 9
	28	Receipts in aid of Pension Funds	2,107 12 2	253 13 10
	29	Local Funds	422 1 8	23,516 16 9
			24,181 9 9	96,365 4 1
			282,714 19 7	475,879 13 10 41,696 10 6
		Grand Total	282,714 19 7	517,576 4 4

Sheet of the District of Surat in the years 1827-28 *and* 1874-75.

No	Charges. Head of Account.	1827-28. £ s. d.	1874-75. £ s. d.
1	Land Revenue	31,279 16 2	34,178 4 6
			8,806 19 6
2	Stamps	488 17 7	680 9 2
3	Excise on Spirits and Drugs	381 12 0	565 17 4
4	Transit Duties and Miscellaneous Cesses	50 12 0	
5	Law and Justice { Civil / Criminal	37,990 0 10 / 286 6 6	8,185 10 6 / 5,850 8 9
6	Forest	.	5,978 11 6
7	Political Agency	1,193 14 0	135 16 9
8	Allowances and Assignments	51,684 16 9	27,770 5 1
			32,497 2 7
9	Pension to Government Servants	561 7 9	4,840 19 5
10	Ecclesiastical	1,123 4 7	700 5 2
11	Profit and Loss	111 5 0	..
12	Administration (Revenue Commissioner, N D, and his Establishment)	.	682 9 4
13	Minor Departments (Inspector of Cotton and Agriculture)		820 8 1
14	Miscellaneous	2,721 9 6	113 16 0
		128,104 2 8	90,510 10 7
			41,304 2 1
15	Customs	352 2 6	115 19 7
16	Salt	511 8 1	5,100 9 3
17	Public Works	4,644 3 6	11,650 7 6
18	Military	70,850 15 6	16,524 19 6
19	Mint	775 5 0	170 0 0
20	Marine	3,142 10 5	5 10 0
21	Post	305 8 0	3,141 3 1
22	Telegraph	. .	1,052 12 6
	Total	80,700 13 0	40,751 2 5
23	Registration		911 13 10
24	Education		5,221 17 4
25	Police	3,018 6 8	8,523 1 3
			392 8 5
26	Medical Services	2,075 9 8	4,538 16 0
27	Jails	937 10 9	2,398 19 3
28	Public Works Provincial	. .	59 11 5
29	Contributions to Local Fund	.	963 14 0
30	Cemeteries, Office Rents, &c	. .	173 9 2
31	Printing	240 0 0	13 19 7
32	Miscellaneous	1,466 18 5	527 13 2
	Total	7,738 5 1	23,172 15 0
			392 8 5
	Total of Imperial and Provincial Services.	216,543 0 9	154,400 8 0
33	Deposits Returned, and Advances and Loans made	2,835 0 0	31,822 6 6
34	Remittance of Cash Balance	7,756 4 2	238,908 16 8
35	Interest on Government Securities	143 15 6	7,045 3 3
36	Local Funds	1,260 0 0	22,985 7 5
		11,994 19 8	300,751 13 10
		228,538 0 5	455,152 1 10
			41,696 10 6
		....	496,848 12 4

Chapter X.

Revenue and Finance.

REVENUE OTHER THAN IMPERIAL.

Local funds.

Local Funds.—The district local funds, which since 1863 have been collected 'for the promotion of rural education and for the supply of roads, water, drains, rest-houses, dispensaries, and other useful objects affecting the everyday comfort and convenience of the rate-payers,'[1] amounted in the year 1874-75 to a total sum of £22,161 (Rs. 2,24,610), and the expenditure to £20,251 (Rs. 2,02,510). This revenue is drawn from three sources, a special cess of $\frac{1}{16}$ in addition to the ordinary land-tax, the proceeds of certain subordinate local funds and some miscellaneous items of revenue. The special land cess, of which two-thirds are set apart as a road fund and the remainder applied to the promotion of education, yielded in 1874-75 a revenue of £16,484 (Rs. 1,64,840). Subordinate local funds, including a ferry fund, a toll fund, a cattle-pound fund, and a school fee fund, yielded £1,844 (Rs. 18,440). Government and private subscriptions amounted to £1,956 (Rs. 19,560), and miscellaneous receipts, including certain items of land revenue, to £2,177 (Rs. 21,770), or a total sum of £22,461 (Rs. 2,24,610). This revenue is administered by committees composed partly of official and partly of private members. These boards are of two classes, sub-divisional and district. The former, of which there is one for each fiscal sub-division, is, under the presidency of the assistant or deputy collector, composed of the chief local revenue officer of the sub-division *mámlatdár*, an officer of the public works department, or, in educational matters, the deputy educational inspector, as official members. The non-official members are one proprietor of an alienated village and three holders of land. The district board, under the presidency of the collector, consists of the assistant and deputy collectors and the executive engineer or educational inspector as official members, and as private members one proprietor of an alienated village and six holders of land. The sub-divisional committee ascertains the requirements of the sub-division in the matters of local works and education, and brings them to the notice of the district committee. At a meeting held about the first of September in each year, the president lays before the district committee a statement of the estimated available receipts on account of local funds, together with the estimates and proposals of the different sub-divisional committees. The requirements of the district are discussed, questions being settled according to the vote of the majority of the members, the president in all cases having a casting vote. A general budget for the district is then framed, the portion relating to public works being despatched to the revenue commissioner, and that connected with education to the director of public instruction.

Financial details.

For administrative purposes the local funds of the district are divided into two main sections—those set apart for public works, and those set apart for education. The receipts and disbursements during the year 1874-75 under these two heads were as follows :—

[1] Government Resolution No. 655, dated 26th February 1874.

Local funds, 1875.

Local Funds Balance Sheet in Pounds Sterling, 1874-75

PUBLIC WORKS SECTION

Receipts. Head of Account	Amount	Expenditure Head of Account	Amount.
	£ s.		£ s.
Balance, April 1st, 1874	3,509 12	Establishment	2,712 10
Two-thirds of the land cess ...	10,989 10	New works	4,579 0
Tolls	145 0	Repairs	4,611 16
Ferries	668 6	Medical charges ..	721 2
Cattle pounds	465 18	Miscellaneous	66 12
Travellers' rest houses	27 4	Balance, March 31st, 1875	5,421 12
Contributions	762 12		
Miscellaneous	1544 10		
	18,112 12		18,112 12

EDUCATIONAL SECTION

Balance, April 1st, 1874	6458 14	School charges ...	6,756 14
One third of the land cess	5,494 14	Scholarships	241 12
School fee fund	536 14	School houses, new	960 4
Contribution (Government)	963 14	Ditto repairs	125 16
Ditto (Private)	230 18	Miscellaneous	205 12
Miscellaneous	632 2	Balance on March 31st, 1875 ..	6,026 18
	14,316 16		14,316 16

Works carried out, 1863-75.

According to the statement received from the collector of the district, the following works have, since the introduction of the system in 1863, been executed and repaired out of the local funds. To open up communications, 314 miles of road have been made and furnished with three iron bridges, thirteen masonry bridges, forty-six timber bridges, and 359 culverts, and along a majority of the lines trees have been planted. To improve the water-supply, 668 wells and 520 tanks have either been made or repaired. To help village education sixty-three schools, and for the comfort of travellers eleven rest-houses, have been built. Besides these works, seventy-six cattle-pounds and four dispensaries have been constructed.

Municipalities.

Municipal Revenues.—In the year 1874-75 there were, as shown in the margin, four municipalities in the district. In that year the revenues raised by these municipalities amounted altogether to £23,233 (Rs. 2,32,330). Of this sum, £12,250 (Rs. 1,22,500) were recovered from octroi dues; £5,675 (Rs. 56,750) from a toll-tax and wheel-tax; £3,111 (Rs. 31,110) from assessed taxes; and £2,197 (Rs. 21,970) from miscellaneous sources. Under the provisions of the Bombay District Municipal Act (VI.

Name of Municipality	Date of establishment
Surat	15th May 1872
Balsár	24th October 1855
Ránder ..	14th April 1868
Mándvi	26th February 1868

Chapter X. Revenue and Finance.

Municipalities.

of 1873), Surat forms a city municipality; its funds, under the presidency of the collector, being administered by a body of commissioners, some official and others private, in the proportion of at least two of the latter to one of the former. Under the same Act Balsár, Ránder, and Mándvi form town municipalities administered by a body of commissioners, with the collector as president, and the assistant or deputy collector in charge of the sub-division as vice-president, the commissioners being chosen in the proportion of at least two non-official to each official member.

The following statement gives for each municipality the receipts, charges, and the incidence of taxation in the year ending 31st March 1875 :—

Municipal Balance Sheet in Pounds Sterling, 1874-75.

Name of Municipality	Receipts.					Expenditure								
	Octroi.	Toll and wheel tax	Assessed taxes.	Miscellaneous	Total.	Establishment	Safety	Health.	Instruction	Works		Miscellaneous.	Total.	Incidence of taxation.
										Original	Repairs.			
	£	£	£	£	£	£	£	£	£	£	£	£	£	s. d.
Surat	11,156	3,822	2,963	1,534	19,475	1,473	2,485	6,698	350	755	2,108	1,599	15,468	3 6¾
Balsár	520	1,230		182	1 932	213	214	569	75	20	148	89	1,358	3 5
Ránder	291	504	148	437	1,380	182	123	476	36	76	74	101	1,068	2 8¼
Mándvi	283	119		44	446	89	246	226					561	2 0
Total .	12,250	5,675	3,111	2,197	23,233	1,987	3,068	7,969	461	851	2,330	1,789	18,455	.

Cotton.

Cotton.—At present (1875) an establishment in connection with the Cotton Frauds Act (Bombay Act IX of 1863) for preventing the adulteration of cotton is, under the control of the collector of Surat, maintained at a total yearly cost of £190 (Rs. 1,900). This charge is met from the cotton improvement fund framed under the provisions of that Act. The establishment consists of a sub-inspector drawing a monthly salary of £12 (Rs. 120), and a peon on 18*s.* (Rs. 9) a month.

CHAPTER XI.

INSTRUCTION.

In the year 1873-74 there were two hundred and fifty-three government schools, or, on an average, one school for every three inhabited villages, alienated as well as state, with an average attendance of 8,374 pupils (out of 12,414 on the rolls), or 2·66 per cent of 313,781, the entire population not exceeding twenty years of age. Government schools 1874.

Excluding charges for superintendence, the total expenditure on education, on account of aided as well as of state and other schools, amounted in 1873-74 to £14,544 (Rs 1,45,440), of which £3,033 (Rs. 30,330) were debited to government and £11,511 (Rs. 1,15,110) to local and other funds. Cost of education.

Under the director of public instruction, and the educational inspector, northern division (Gujarát), the education of the district was in 1873-74 conducted by a local staff two hundred and forty strong. Of these, two were deputy educational inspectors, with general charge over all the schools of the district, drawing a total yearly pay of £360 (Rs. 3,600); the rest were masters of vernacular schools, with yearly salaries ranging from £72 to £9 12*s*. (Rs. 720 to Rs. 96). Besides this local staff there were seven masters and thirty-five assistants of high and anglo-vernacular schools, drawing an annual salary of from £540 to £24 (Rs. 5,400 to Rs. 240). Local staff.

Of two hundred and fifty-three, the total number of government schools, in two hundred and thirty-nine Gujaráti only was (1875) taught, and in seven Urdu only. In four of the rest instruction was given both in English and in Gujaráti; and one was a high school, teaching English and three classical languages (Sanskrit, Persian, and Latin) up to the standard required to pass the university entrance test examination. Two were branch schools not attached to the high school, teaching up to the third standard. Instruction.

In addition to the state schools there were in the year 1873-74 twenty-one other schools. Of these sixteen were government aided schools, of which fifteen received, in addition to contributions from private individuals and fees, grants-in-aid from government amounting to £315 (Rs. 3,150), while one was an indigenous school, receiving £5 (Rs. 50) from the local cess fund. The remaining five were private inspected schools, supported solely by private contributions and fees and inspected by educational officers. Private schools.

Chapter XI. Instruction.

State education, 1850-1875.

The following figures[1] show the increased means for learning to read and write offered by Government to the people during the last five and twenty years. The first two government vernacular schools were opened in the city of Surat in 1826, and a third in 1827. Three years later (1830) two more government vernacular schools were opened—one at Balsár and the other at Mota. The first government English school was opened in the city of Surat in 1842. But no detailed information is available for the years before 1850. In 1850-51 there were seventeen government schools with a total number of 1,225 names on the rolls, or, as shown by the census of 1851, 0·48 per cent of 254,650, the total population not exceeding twenty years of age.[2] In 1855-56 the number of government schools had risen to nineteen, with an average attendance of 1,232 pupils (out of 1,570 on the rolls). In 1865-66 the number of schools had risen to ninety-three, of which sixty-seven were government and twenty-six government aided and government inspected private schools, with an average attendance of 4,143 pupils (out of 6,387 names on the roll), or, as shown by the census of 1851, 1·62 per cent of 254,650, the total population not exceeding twenty years of age. The figures for 1873-74 were, as shown above, 253 government and twenty-one government aided and private inspected schools, with an average attendance of 9,661 pupils (out of a total number of 14,186 names on the rolls), or, on the basis of the census of 1872, 3·07 per cent of 313,781, the total population not exceeding twenty years of age. In the year 1875-76 the total number of all schools[3] in the district was reported to be 309, with 15,833 names on the rolls. A comparison with the returns for 1850 gives, therefore, for 1875 an increase in the number of schools from 17 to 309; while, of 313,781, the entire population of the district not exceeding twenty years of age, 5·04 per cent were under instruction in 1875-76, as compared with 0·48 per cent in 1850-51.

Girls' schools.

In 1855 there were no girls' schools, but in 1865 there were in the Surat district fifteen girls' schools, with an average attendance of 452 (out of 837 enrolled) pupils. Eight years later, in 1873-74, the number of schools had risen to twenty-five, and the average attendance increased to 777 out of 1,270 on the rolls.

Population able to read and write, 1872

The census returns for 1872 give for each of the chief races of the district the following information as to the proportion of persons able to read and write:—

Hindus.

Of 106,250, the total Hindu male population not exceeding twelve years, 9,626, or 9·05 per cent; of 39,415 above twelve, and not exceeding twenty years, 8,344, or 21·16 per cent; and of 126,533 exceeding twenty years, 26,637, or 21·04 per cent,—were able to read and write, or were under instruction. Of 98,140, the total Hindu

[1] Of private indigenous schools no statistics are available. Some account of the character of the instruction given in private schools will be found in the Statistical Account of Broach.

[2] This number has been calculated from the total population in 1850-51 on the basis of the proportion given in the census report for 1872.

[3] Inclusive of all state, aided, and inspected schools, and exclusive of indigenous schools.

female population not exceeding twelve years, 241, or 0·24 per cent; of 38,377 above twelve, and not exceeding twenty years, 157, or 0·40 per cent; and of 133,003 exceeding twenty years, 274, or 0·20 per cent,—were able to read and write, or were under instruction.

Muhammadans.

Of 8,956, the total Muhammadan male population not exceeding twelve years, 1,091, or 12·18 per cent; of 3,989 above twelve, and not exceeding twenty years, 868, or 21·75 per cent, and of 12,909 exceeding twenty years, 2,878, or 22·29 per cent,—were able to read and write, or were under instruction. Of 8,398, the total Muhammadan female population not exceeding twelve years, 121, or 1·44 per cent; of 4,168 above twelve, and not exceeding twenty years, 57, or 1·36 per cent; and of 13,737 exceeding twenty years, 101, or 0·73 per cent,—were able to read and write, or were under instruction.

Pársis.

Of 2,164, the total Pársi male population not exceeding twelve years, 1,070, or 49 44 per cent; of 798 above twelve, and not exceeding twenty years, 666, or 83·45 per cent; and of 3,010 exceeding twenty years, 2,165, or 71·92 per cent,—were able to read and write, or were under instruction. Of 2,005, the total Pársi female population not exceeding twelve years, 477, or 23·79 per cent; of 958 above twelve and not exceeding twenty years, 217, or 22 65 per cent; and of 3,906 exceeding twenty years, 283, or 7·24 per cent,—were able to read and write, or were under instruction.[1]

Pupils by race, 1865-1874.

Before the year 1865-66 no returns, arranging the pupils according to race and religion would seem to have been drawn up. The statement given in the margin shows that of the three chief races of the district, the Pársis have the largest proportion of their boys and girls under instruction. Since 1865 a considerable advance has, it will be seen, been made by the Musalmáns. The increase under this head is, according to the educational inspector, partly due to the establishment of six new Urdu schools, and partly to the development of the desire for government education among the Musalmáns.

Statement showing the numbers of the different races at school, 1865 and 1874.

Race.	1865-66.	Percentage of the total population of the respective class	1873-74	Percentage of the total population of the respective class	Increased percentage of population.
Hindus	4,195	0 96	10,380	1·91	0 95
Musalmáns.	332	0 71	1,089	2 08	1 37
Pársis	1,860	14·68	2,717	21 15	6 47
Total	6,387	1 29	14,186	2 33	1·04

Of 1,270, the total number of girls enrolled in 1873-74 in the twenty-five girls' schools, 746, or 58·74 per cent, were Pársis; 489, or 38·51 per cent, Hindus; and 35, or 2·75 per cent, Musalmáns.

[1] As under the head 'others' seventeen persons who were not Pársis were (1872) included, these details are not quite accurate.

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Pupils by race, 1874.

Of 13,974, the total number of pupils in government (12,638) and aided private (1,336) schools in the Surat district, there were in 1874-75 3,427, or 24·52 per cent, Bráhmans; 287, or 2·05 per cent, Rajputs; 153, or 1·09 per cent, Káyasths and Parbhus; 1,486, or 10 63 per cent, of trading castes (Wániás and Bhátiás); 1,939, or 13·87 per cent, of cultivators (Kanbis); 919, or 6·57 per cent, of artizans (goldsmiths, blacksmiths, carpenters, tailors, and others); 349, or 2 49 per cent, of shop-keepers (such as oilmen, dealers in vegetables and betel-leaves); 856, or 6·12 per cent. of labourers (washermen, water-carriers, fishermen); 498, or 3 56 per cent, of low-castes (shoemakers, sweepers, scavengers, and others); 272, or 1·94 per cent, miscellaneous (genealogists, grain-carriers, and others); 1,374, or 9·83 per cent, Musalmáns, of whom 447 were Bohorás; 2,030, or 14·52 per cent, Pársis; and 323, or 2·31 per cent, of aboriginal and hill tribes. Besides, there were 61, or 0·43 per cent, Christians, of whom two were Europeans, one Indo-European or Eurasian, and fifty-eight Native converts.

In addition to these there were in the same year, as shown below, 367 pupils attending the inspected private schools in the district:—

Pupils in Inspected Private Schools, 1875.

Bráhmans.	Rajputs.	Káyasths and Parbhus.	Trading castes (Waniás, Bhátiás).	Cultivators (Kanbis).	Artizans (goldsmiths, blacksmiths, carpenters, tailors)	Shop-keepers (oilmen, dealers in vegetables, and betel-leaves)	Labourers (washermen, water-carriers, fishermen).	Low-castes (shoemakers, Dhers, Bhangiás).	Miscellaneous, (Bhats, Wanjárás).	Musalmáns	Pársis.	Total.
27	11	17	23	20	4	2	1	5	2	5	250	367

Statement of schools, 1855-1874.

The following tabular statement, prepared from the returns furnished by the educational department, shows in detail the number of schools and pupils with their cost to government:—

Return of Government, Government Aided, and Private Inspected Schools in the Surat District in the years 1855-66, 1865-66, *and* 1873-74.

Classification of Schools.	Number of Schools			Number of Pupils.												Average daily attendance.		
				Hindus.			Musalmáns.			Pársis.			Total					
	1855-56	1865-66.	1873-74	1855-56.	1865-66.	1873-74.	1855-56	1865-66.	1873 74.	1855-56.	1865-66.	1873-74.	1855-56.	1865-66.	1873-74	1855-56.	1865-66.	1873-74.
Government.																		
High School	..	1	1	..	169	161	..	2	3	..	47	60	..	218	224	..	194	188
Branch School	..	3	2	..	297	256	..	21	22	..	27	21	..	345	299	..	304	240
Anglo-Vernacular School	1	7	4	..	665	99	..	48	37	..	40	109	418	753	245	296	519	210
Vernacular School for Boys	16	52	227	..	2,558	8,766	..	248	930	..	235	1,168	1,129	3,041	10,864	913	1,650	7,296
Vernacular School for Girls	..	3	19	..	93	285	..	9	34	..	5	463	..	110	782	..	45	440
Training School	2	1	..	23	38	..	..	..	..	..	..	..	23	38	..	23	29	..
Government Aided																		
High School	..	..	1	..	..	74	..	..	6	..	..	43	..	..	123	..	..	86
Anglo-Vernacular School	..	4	3	..	86	147	..	1	24	..	211	90	..	298	261	..	230	191
Vernacular School for Boys	..	7	6	..	..	250	..	..	24	..	447	240	..	447	514	..	425	406
Vernacular School for Girls	..	8	5	..	..	204	..	..	1	..	387	168	..	387	373	..	217	271
Indigenous School	..	..	1	..	..	81	..	..	8	..	..	7	..	..	96	..	..	56
Private Inspected.																		
Anglo-Vernacular School	..	2	2	..	5	42	..	1	..	..	355	104	..	361	146	..	307	96
Vernacular School for Boys	..	..	2	..	..	15	..	..	..	..	.	129	..	..	144	..	..	115
Vernacular School for Girls	..	4	1	..	265	..	..	..	..	..	75	115	..	340	115	..	190	66
School of Art and Industry	..	1	..	..	16	..	..	2	..	..	31	..	..	49	..	..	33	..
Total	19	93	274	23	4,195	10,380	..	332	1,089	..	1,860	2,717	1,570	6,387	14,186	1,232	4,143	9,661

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Statement of schools, 1855-1874.

Return of Government, Government Aided, and Private Inspected Schools in the Surat District in the years 1855-56, 1865-66, *and* 1873-74—continued.

Classification of Schools.	Schooling Fee.			Cost per Pupil.			Receipts from									
							Government			Local Cess.			Municipalities.			
	1855-56.	1865-66	1873-74	1855-56	1865-66.	1873-74.	1855-56	1865-66.	1873-74.	1855-56.	1865-66	1873-74.	1855-56.	1865-66	1873-74.
				£ s. d.	£ s. d.	£ s. d.	£	£	£	£	£	£	£	£	£
Government															
High School	..	Varying from 4d. to 1s	Varying from 1 to 2s.	....	8 11 2¼	8 13 2¾	..	750	1,174	..	646	89	..	75	..
Branch School	..	Varying from ¼d. to 3½d.	Varying from 1 to 1½	....	1 16 3½	2 18 1½	..	114	388	..	328	30	..	..	126
Anglo-Vernacular School ..	1s	Ditto	Varying from 6d. to 1s 3d	2 13 11¾	1 6 7¾	3 11 6⅝	793	262	192	.	431	37	..	..	101
Vernacular School for {Boys	1½d.	Varying from ¼d. to 3d.	Varying from ¾d to 3d.,	1 6 ⅜	3 9 9¾	1 4 7½	401	726	964	..	651	7,284	..	..	..
Vernacular School for {Girls	..	....	....	....	17 1 10	1 1 7½	174	38	..	.	486	255	..	..	..
Training School	..	6d.	....	....		....						..			
Government Aided.															
High School	..	....	Varying from 3d. to 1s	....	....	6 2 2¾	..	..	120	.	..	..	..	..	..
Anglo-Vernacular School ..	..	....	Varying from ¾d to 1s	....		2 0 4¾	..	..	87	..	..	..	..	..	..
Vernacular School for {Boys	..	....	. ..	....	1 5 3	0 6 10⅝	..	266	43	..	..	..	..	..	..
Vernacular School for {Girls	..	....	....	....		0 12 ⅛	..	..	65	..	..	5	..	..	..
Indigenous School ..	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..
Private Inspected.															
Anglo-Vernacular School ..	..	....	Varying from 6d to 1s	....	2 7 4¾	7 3 6	..	..	..	..	..	..	..	..	..
Vernacular School for {Boys	..	....	Varying from 1½ to 3d.,	....	....	0 13 6¼	..	..	..	..	..	..	..	..	..
Vernacular School for {Girls	..	....	....	....	0 16 9¼	0 10 11⅜	..	100	..	..	..	..	..	..	..
School of Art and Industry	..	....	....	....	17 1 8½	....	..			..			..		
Total..	..	....	....	....	....	....	1,368	1,256	3,033	.	2,542	7,700	..	75	227

Return of Government, Government Aided, and Private Inspected Schools in the Surat District in the years 1855-56, 1865-66, *and* 1873-74—continued.

Classification of Schools.	Receipts from									Expenditure on								
	Private Individuals			School Fees, &c			Total			Inspection and Instruction			Buildings.			Libraries.		
	1855-56.	1865-66.	1873-74.	1855-56.	1865-66.	1873-74.	1855-56.	1865-66.	1873-74.	1855-56.	1865-66.	1873-74.	1855-56.	1865-66.	1873-74.	1855-56.	1865-66.	1873-74.
Government	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
High School	..	35	..	..	177	367	..	1,683	1,630	..	1,577	1,470	..	..	..	..	..	11
Branch School	..	..	..	..	125	154	..	574	698	..	551	663	..	..	..	..	..	5
Anglo-Vernacular School	62	1	362	199	81	57	1,054	775	749	798	692	707	..	..	..	..	..	7
Vernacular School for Boys	13	36	312	68	178	505	482	1,591	9 065	462	1,171	6,146	..	6,325	2,685	..	159	190
Vernacular School for Girls	..		222	..		1			478			475	..		..	..		..
Training School	..	..	..	..	1	..	174	525	..	174	525	.	..	..	..	..	..	..
Government Aided.																		
High School	..	..	246	..	..	160	..	..	526	..	..	526	..	..	..	..	..	..
Anglo-Vernacular School	..	862	140	..	..	108	..	1,128	335	..	1,101	325	..	..	..	..	..	..
Vernacular School for Boys	..		77	..	..	26	..		146	..		140	..	..	..	..	..	..
Vernacular School for Girls	..		133	..	..	9	..		207	..		171	..	..	..	..	..	..
Indigenous School	..	..	..	..	..	..	..	..	5	.	..	5	..	..	..	..	..	..
Private Inspected.																		
Anglo-Vernacular School	..	728	688	..	..	121	..	728	809	..	728	688	..	..	..	..	..	..
Vernacular School for Boys	..	..	78	..	..	61	..	.	139	..	..	78	..	..	..	..	.	..
Vernacular School for Girls	..	171	36	..	..	..	..	171	36	..	159	36	..	..	..	..	..	..
School of Art and Industry	..	526	..	..	..	..	..	626	..	..	563	.	.	..	..	..	..	..
Total	75	2,366	2,294	267	562	1,569	1,710	7,801	14,823	1,434	7,067	11,430	..	6,325	2,685	..	159	213

Return of Government, Government Aided, and Private Inspected Schools in the Surat District in the years 1855-56, 1865-66, *and* 1873-74—concluded.

Classification of Schools.	Expenditure on						Cost to											
	Scholarships.			Total.			Government.			Local Cess.			Other Funds.			Total		
	1855-56	1865-66.	1873-74.	1855-56	1865 66	1873-74	1855-56	1865-66	1873-74	1855-56	1865-66	1873-74	1855-56.	1865-66.	1873-74	1855-56	1865-66.	1873-74.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Government.																		
High School	..	84	149	..	1,661	1,630	..	750	1,174	..	646	89	..	265	367	..	1,661	1,630
Branch School	..	..	30	..	551	698	.	144	388	.	328	30	..	79	280	..	551	698
Anglo-Vernacular School	..	..	37	798	692	751	793	262	192		430	37	5	..	522	798	692	751
Vernacular School for Boys	..	..	..	462	7,655	9,021	401	726	964	..	6,929	7,240	61	..	817	462	7,655	9,021
Vernacular School for Girls	..	..	..	..		475	..		..	..		255	..	..	220	..		475
Training School	..	..	..	174	525	..	174	38	..	..	486	..	..	1	..	174	525	..
Government Aided.																		
High School	..	.	.	..	..	526	..	..	120	..	..	..	.	..	406	..	..	526
Anglo-Vernacular School	.	.	..	..		325	..		87	..	..	..	..		238	..		325
Vernacular School for Boys	..	..	..	..	1,101	140	..	266	43	..	..	..	..	835	97	..	1,101	140
Vernacular School for Girls	..	..	..	..		171	..		65	..	..	..	..		106	..		171
Indigenous School	..	..	..	..	..	5	..	..	..	..	..	5	..	..	..	..	..	5
Private Inspected.																		
Anglo-Vernacular School	..	..	..	..	728	688	..	..	..	..	..	..	..	728	688	..	728	688
Vernacular School for Boys	.	..	..	..	.	78	..	..	..	..	..	..	..	..	78	..	..	78
Vernacular School for Girls	..	..	..	..	159	36	..	..	..	..	..	..	..	159	36	..	159	36
School of Art and Industry	..	..	..	..	563	..	..	100	..	..	..	..	..	463	..	..	563	..
Total	..	84	216	1,434	13,635	14,544	1,368	2,286	3,033	..	8,819	7,656	66	2,530	3,855	1,434	13,635	14,544

In conclusion, it may be useful to compare the present (1873-74) provision for teaching the town and the country population of the district.

Town education, 1873-74.

In the city of Surat there were in 1873-74 eighteen government schools, with an average attendance of 1,510 pupils (out of 2,087 enrolled), or 1·40 per cent of the total population of the city. Of these schools, one was a high school; two were branch schools; one an anglo-vernacular school; nine were vernacular schools for boys; three were vernacular schools for girls; and two were evening vernacular schools. The average yearly cost per pupil in the high school, which was established as an English school in 1842, was £8 13*s.* 2¾*d.* (Rs. 86-9-10), and in the rest it varied from 10*s.* to £3 (Rs. 5 to 30). The following table shows the number of pupils who since 1863 have passed their university entrance test examination from the Surat high school:—

Surat.

	1863.	1864.	1865	1866.	1867	1868.	1869	1870.	1871	1872	1873.
Pupils	6	10	7	6	10	19	7	10	10	17	12

In addition to the above, there were in the same year (1873-74) fourteen private schools, of which two were styled English schools; two second grade anglo-vernacular schools (one for boys and the other for girls); and ten vernacular schools, of which six were for boys and four for girls. The average attendance in twelve of these schools was 875 out of 1,171 on the rolls. The average yearly cost per pupil was about £6 (Rs. 60) in one of the English schools, and £2 (Rs 20) in the other; while in the rest it varied from 6*s.* to £1 6*s.* (Rs. 3 to 13). The number of pupils that passed their university entrance test examination, with the aid of this provision for education, was two in 1868, one in 1871, two in 1872, and three in 1873.

Balsár.

The town of Balsár was (1873-74) provided with seven government schools, with an average attendance of 320 pupils (out of 458 on the rolls), or 2·82 per cent of the total population. Of these schools, one was an English school; one a Musalmán Urdu school; one an evening school; and four (two for boys and two for girls) vernacular, or Gujaráti schools. The average yearly cost per pupil was about £4 6*s.* (Rs. 43) in the English school, and in the rest it varied from 6*s.* to £1 8*s.* (Rs. 3 to 14).

Ránder.

In the year 1873-74 there were five government schools in Ránder, with an average attendance of 158 pupils (out of 237 on the rolls), or 1·53 per cent of the total population of the town. Of these, one was an English school; two (one for boys and one for girls) were vernacular schools; one was an evening school; and one a Musalmán Urdu school. The average cost per pupil in the English school was a little over £5 (Rs. 50), and in the rest it varied from 10*s* in the evening school to £1 14*s.* (Rs. 5 to Rs. 17) in the girls' school. There was, besides, one private indigenous school receiving an annual contribution from the local funds amounting to £5 (Rs. 50). The average

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attendance in this school was 56 pupils out of 96 on the roll; and the average share of the state subsidy per pupil amounted in 1873-74 to 6½*d.* (4⅓ as.) Besides the government provision of schools in Ránder, four schools are maintained at the expense of private individuals where Arabic and Urdu are taught.

Village education.

Exclusive of the towns of Surat, Balsár, and Ránder, the district of Surat was in 1873-74 provided with 215 schools, or, on an average, five schools for each eighteen inhabited villages. The following statement shows the distribution of these schools by sub-divisions:—

Statement of Village Schools, 1873-74.

Sub divisions	Number of inhabited villages	Population as per Census returns for 1872.	Number of Schools								
			1855-56.			1865-66.			1873-74.		
			English	Vernacular		English	Vernacular		English	Vernacular	
				Boys	Girls		Boys	Girls		Boys.	Girls.
Olpád	119	66,256		1		2	10	..		57	1
Mándvi	138	48,367		1		..	2	..		13	1
Chorási	63	38,155		..		.	2	.	1	19	2
Bárdoli	123	77,500		3		1	7	..		33	2
Jalálpor	91	70,112		1		..	..	6		30	1
Chikhli	63	59,412		..		1	4	1		20	1
Balsár	95	66,894	}	2	}	2	11	2	{	19	
Párdi	81	51,749	}		}				{	14	1
Total	773	478,345		8		6	36	9	1	205	9

In Surat there are two libraries and three local newspapers.

Libraries.

The library known as the 'Andrew's Library' was established in 1850. Donations as shown in the margin, amounting in all to £1,377 8*s.* (Rs. 13,774), gave the institution a good start. The total number of books in the library is 4,246. There are sixty-six subscribers arranged in five classes, the rates of subscription being as shown in the margin. The library subscribes to two Bombay English daily and to ten English and vernacular weekly newspapers. Some monthly papers and magazines are also taken in.

Donors.	Amount	
	£ *s*	Rs
H H the Gáekwár of Baroda	87 8	874
The Bombay Government	50 0	500
Private individuals	240 0	2,400
Amount raised by subscription from the Native public	1,000 0	10,000
Total	1,377 8	13,774

Period.	1st Class.	2nd Class	3rd Class	4th Class.	5th Class
	£ *s.*	£ *s*	£ *s*	£ *s*	£ *s*
One year	3 12	2 8	1 4	0 12	0 6
Six months	2 0	1 10	0 14	0 8	0 4
Three months	1 4	0 8	0 8	0 4	0 2

The other library is known as the 'Náhánpura Native Reading Room and Library, Surat.' It was established in April 1868. It has at present no building of its own. Of a total number of three hundred books, one hundred are in English and the rest in vernacular. Some of these books were presented by the educational department,

and some by Pársi and Hindu gentlemen of Bombay and Surat. There are thirty-five subscribers, of whom five are first class, paying a yearly subscription at the rate of £1 4*s.* (Rs. 12) ; and thirty are second class, paying at the rate of 12*s.* (Rs. 6). The average annual revenue amounts to £32 8*s.* (Rs 324). The reading-room subscribes to one English and one Gujaráti daily of Bombay and to twelve English and vernacular weekly newspapers. Some monthly magazines are also taken in.

Newspapers.

Of the three local newspapers, the Gujarát Mitra has been in circulation for twelve years, the Surya Prakásh for five years, and the Deshimitra for two years. They are all printed and published weekly at Surat.

Associations.

In October 1871 some of the principal inhabitants of Surat formed themselves into an association called the ' Surat Praja Samáj.' The object of this association was ' to watch the interests and, if necessary, to represent to government the views of the people of the district.' A managing committee was appointed ; but before the association did any actual work, its meetings were discontinued, and the ' Surat Praja Samáj ' is now said to be ' in a dormant state.'

POST.

Post Offices, 1875.

For postal purposes the Surat district forms a part of the Gujarát postal division, and, exclusive of the receiving house at Surat, contains (1875) eighteen post offices. These offices are located at the following stations : 1, Surat; 2, Ránder; 3, Bhagwádándi ; 4, Olpád; 5, Mándvi; 6, Karod ; 7, Bárdoli ; 8, Wálod ; 9, Sachin ; 10, Navsári ; 11, Jalálpor ; 12, Gandevi ; 13, Bilimora ; 14, Chikhli ; 15, Balsár ; 16, Párdi; 17, Udwára; and 18, Daman. As an experimental measure an additional post office has (1876) been opened at Bánsda.

Staff.

These stations are supervised by the inspector of post offices in the Gujarát division, assisted by the sub-inspector of the Surat and Broach districts. The yearly salary of the inspector is £480 (Rs. 4,800), rising to £600 (Rs. 6,000), and of the sub-inspector £90 (Rs. 900). Except at Surat, Karod, Sachin, and Udwára, the officials in charge of post offices are styled deputy post-masters, and are paid yearly salaries varying from £24 (Rs. 240) to £60 (Rs. 600). The officials at Karod and Sachin are styled sub-deputy post-masters, the annual salary of the former being £12 (Rs. 120), and of the latter £16 16*s.* (Rs. 168). The post office at Udwára is in charge of a government schoolmaster on a yearly allowance of £12 (Rs. 120) from the postal department. As the Surat city station is the disbursing office of the district, the officer in charge of that station is styled post-master, and draws a yearly salary of £180 (Rs. 1,800), rising to £240 (Rs. 2,400).

Distribution.

At the stations mentioned above, letters are distributed by delivery messengers or by post-runners. For this additional work, the latter are paid a trifling gratuity. The correspondence for surrounding villages is delivered by rural messengers, who, also, bring into the station letters posted in letter-boxes placed at most of the villages. The rural messengers carry with them a stock of postage stamps for sale at the villages they visit.

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In the Surat district there are in all thirty-three delivery messengers on yearly salaries ranging from £9 12*s.* (Rs. 96) to £12 (Rs. 120), and averaging £9 18*s.* 11½*d.* (Rs. 99-7-8). The pay of the rural messengers, of whom there are thirty-seven, varies from £10 16*s.* (Rs. 108) to £13 4*s.* (Rs. 132) a year, and averages £11 5*s.* 9*d.* (Rs. 112-14). This staff of men is distributed according to requirements; letters being delivered in some places daily, and in others only once a week.

In the Surat district there are three post boats for the conveyance of the mails between Bhagwádándi, in the Olpád sub-division, and Gogo. In these boats are also admitted passengers at a charge of 1*s.* (as. 8) per head in the fair season, and 2*s.* (Rs. 1) in the monsoon. The corresponding first class charges are 3*s.* (Rs. 1-8) and 6*s.* (Rs. 3) respectively. The passage generally takes from seventeen to twenty hours.

Correspondence, 1870-1871.

According to a statement furnished by the post-master general, Bombay, in 1870-71, the latest year for which information is available, 415,513 paid, 205,854 unpaid, 71,533 service, and 8,745 registered, or in all 701,645 covers were received; 423,657 paid, 249,149 unpaid, 103,322 service, and 7,624 registered, or in all 783,752 covers were despatched. Under the new post office manual similar details are not now registered.

Receipts and charges.

In 1870-71 the receipts, exclusive of the sale proceeds of postage stamps, amounted to £1,730 4*s.* 5¼*d.* (Rs. 17,302-3-6), and the expenditure to £3,450 10*s.* 5⅝*d.* (Rs. 34,505-3-11). The corresponding figures for 1873-74 are—receipts £1,481 3*s.* 2¼*d.* (Rs. 14,811-9-6), and expenditure £3,768 14*s.* 3⅜*d.* (Rs. 37,687-2-3).

TELEGRAPH.

Telegraph.

Besides the railway telegraph offices at the different railway stations in the district, there is one government telegraph office situated in the city of Surat. The amount of work[1] that has of late years passed through this office will be seen from the following statement:—

Statement showing the working of the Surat Telegraph Office, 1861-1874.

Year.	State Messages.		Private Messages.		Receipts.		Expenditure.	
	No.	Value	No.	Value.				
		£ s.		£ s.	£ s.			
1861-62	318	72 16	5,242	790 15	863	11	Information	
1864-65	185	35 19	4,037	790 15	826	14	not available.	
							£	s.
1870-71	57	15 13	1,930	278 7	294	0	1,111	5
1873-74	88	18 6	2,010	272 4	290	10	519	13

[1] The figures for 1861 and for 1864 include sums of £56 11*s.* (Rs. 565-8) and £87 16*s.* (Rs. 878), respectively, receipts from an office then kept open in Balsár.

CHAPTER XII.

PUBLIC HEALTH

Chief diseases.

As regards the medical aspects of the district, the civil surgeon of Surat, Dr. Adey, wrote in 1875: "The diseases most commonly met with among the civil population of the town and district of Surat are fever, ague, dysentery, diarrhœa, cutaneous affections, ophthalmia, syphilis, and scrofula. Of these, even among the people inhabiting the towns, who are less exposed to malarious influences than many of the inhabitants of the rural parts, intermittent fever and ague are the most frequent. The type ordinarily met with among towns-people is mild, occasionally complicated with liver and spleen enlargement, but almost invariably amenable to the influence of quinine. Among the country-people, notably among the inhabitants of Mándvi and the Dángs, fever is far more severe in character, and frequently productive of permanent injury to the constitution, which becomes, as it were, saturated with latent malaria, ready to spring up on the occurrence of chill, or of any trifling ailment that may disturb the usual balance of health. In these cases enlargement of the spleen and, more or less, leucocythæmia is the rule. Disease of the liver is less frequent than disease of the spleen. Remittent malarious fever is comparatively rare in Surat itself, but is rather more common in the rural parts of the district. In the Dáng forests, by far the most unhealthy locality, remittent fever of a very severe and fatal type prevails up to the month of March or April. The symptoms appear to be intense pyrexia, with great swelling of the glands in the neighbourhood of the jaws and throat; swelling of the fauces, tongue, and soft palate; congestion of the stomach, spleen, and liver, with bilious vomiting, delirium, and rapid collapse. The only treatment in such cases that offers the least chance of success is immediate removal from the forest into a more healthy locality, and the administration of large doses of quinine and stimulants.

"In Surat itself syphilis is rife, for the most part untreated or maltreated, and, occurring in constitutions often more or less tainted by scrofula, and, perhaps, also, by obscure hereditary forms of the disease itself, it presents, not unfrequently, its most severe and repulsive features, destructive alike to the health and appearance of the sufferers. The disease appears to be equally common among all classes of the native community, and, as might be expected, its hereditary form is by no means rarely met with, and no doubt a large amount of infant mortality is due to it.

"Next in order of frequency are cutaneous diseases, prevailing, perhaps, more among the fishermen and boatmen than among other

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classes; though, as in all Indian towns, the usual consequences of dirt, neglect, and crowding, show themselves among almost the whole population.

Chief diseases.

"The records of epidemics are so meagre that I am unable to do more than mention a few of the most important. So far as I have been able to ascertain, there are no means of arriving at any reliable data as to the mortality they caused, or even as to the number of inhabitants affected by them. The first mention of epidemic cholera is in 1818. The epidemic was extremely virulent and long continued, lasting about four months, and nearly one-fourth of those attacked are said to have died. If we take into consideration the probability that a great many of those said to have been attacked by cholera were suffering from diarrhœa, or fright, or colic, or from all three combined, and that these were also probably all among the recoveries from the disease, then one-quarter per cent is a very large mortality. There is no evidence to show that the disease appeared to have selected one caste more than another; but its ravages are said to have been greatest in the most crowded parts of the city, such as Gopipura and Kelápith. A great deal of country-liquor has always been manufactured and consumed in Surat, and among those addicted to drunkenness, of whom there is a very large class, cholera, as might be expected, found many victims. Since the year 1818 cholera has occurred every three or four years, but no epidemic has been so serious as the first. Of typhoid fever, as an epidemic, there is no record, but no doubt occasional sporadic cases do occur. About twenty years ago it is stated that there were one or two epidemics of small-pox, but since that time, owing to the increased attention that has been paid to vaccination, there has been no severe outbreak of that disease. In the year 1867, 360 deaths from small-pox were recorded; but that includes the whole district, not the town or its immediate neighbourhood alone. In the spring of this year too, 1875, there was a small outbreak of the disease at Ránder, but it did not continue for long, and did not spread beyond the locality in which it originated.

"The method of the native practitioners of the district, Waids and Hakims alike, seems to be purely empirical; they use emetics, bleeding and purging a good deal, and the actual cautery is very commonly applied in cases of chronic disease. Each native practitioner has some one or more nostrums to which he attributes special efficacy, and which he regards as a secret and valuable part of his stock-in-trade, not to be divulged except to his successor in his practice."

Medical institutions.

In the year 1874-75 there were, in the district of Surat, besides the civil hospital, nine dispensaries,[1] all of which have been established since 1862.

During the year 1874-75, 55,300 persons in all were treated in these hospitals, of whom 938 were in-door and 54,362 out-door patients.

[1] Four more dispensaries have since been opened. Of these, three, maintained solely by private individuals, are entirely free from the control of government officers. The fourth, at Bánsda, is supported by the chief of that state.

With the exception of the dispensaries at Ránder and Olpád, all of these institutions are provided with special buildings. The total amount expended in checking disease in 1874-75 was £5,359 (Rs. 53,590). Of this £4,539 (Rs. 45,390) were paid from provincial revenues, £721 (Rs. 7,210) from local funds, and £99 (Rs. 990) from municipal revenues.

The following details of the working of these different institutions are taken from their annual administration reports for 1874-75 :—

Surat Civil hospital.

The Surat civil hospital was established in 1823. It has a building of its own, built in 1864 at a cost of £7,190 (Rs. 71,900), paid by Sir Káwasji Jahángir, K.C.S.I. The patients are mostly police servants and beggars; the last bearing a proportion of more than twenty-five per cent to those of settled homes. Anæmia is very prevalent in the largest proportion of the patients. It is also very common among the police, probably from their having to serve in malarious districts. The most prevalent forms of sickness were fever, dysentery, and lung disease. Intermittent fever has, from the cause above mentioned, been more frequent among the police than among the civil population. The cases of dysentery are ascribed to malaria. In the hospital thirty-seven cases remained from the previous year, 637 fresh cases were admitted, and thirty-four re-admitted, making a total of 708 Of these, 637 were discharged, twenty-seven remained, and forty-four died. Out-patients numbered 7,714. There were twenty-three major and 358 minor surgical operations. The civil surgeon in 1874-75 reports that, in his opinion, the syphilitic taint has taken so deep a hold on all classes of the community that it will never be eradicated but by stringent legislation on the subject of contagious diseases.

Párakh dispensary.

The Párakh dispensary, situated in a public thoroughfare in the most densely populated part of the city of Surat, was opened in 1865. It has a building of its own, built at the expense of Kharsedji Fardunji Párakh, of Bombay. The majority of the patients belong to the poor and indigent classes, and are mostly residents of Surat. In the year 1874-75 twenty-five in-patients were treated, of whom twenty-three were discharged and two remained. Of 9,938 out-patients, 9,469 were discharged, 375 absented themselves, two died, and ninety-two remained under treatment at the close of the year. The greatest number of admissions was for fever, in the treatment of which cinchonidine was found equally efficacious with quinine. There were one major and 539 minor surgical operations. Besides malarious fever, the chief diseases treated in 1873-74 were affections of the respiratory system, of the stomach and bowels, and syphilis.

Ránder dispensary.

The Ránder dispensary was opened in 1862. There is no room for in-patients, and but very poor accommodation for out-patients. Of out-patients, at the close of 1873-74 there remained sixty-five, and in the following year 5,179 were admitted and 199 re-admitted, making a total in 1874-75 of 5,443. Of the total treated in 1874-75, 4,287 were discharged, 1,079 absented themselves, one died, and seventy-six were still under treatment. There were 146 minor surgical operations. Besides malarious fevers, the chief forms of sick-

ness were diseases of the eyes, lungs, stomach, and bowels, rheumatic affections, and cutaneous diseases.

Olpád dispensary.

The Olpád dispensary was opened in 1874. There were no in-patients in 1874-75. Out-patients numbered 3,790, including 212 re-admissions. Of these, 3,030 were discharged, 697 absented themselves, and sixty-three remained under treatment. There were sixty-five minor surgical operations.

Mándvi dispensary.

The Mándvi dispensary was opened in 1869. At the close of 1873-74 there remained two in-patients, thirty-seven were admitted, and seventeen re-admitted, making a total of fifty-six in 1874-75; of these, fifty-one were discharged, one died, and four absented themselves. Of out-patients, twenty-nine remained from the previous year, 1,659 were admitted, and 225 were re-admitted, making a total of 1,913. Of the total number of out-patients treated in 1874-75, 1,406 were discharged, 478 absented themselves, one died, and twenty-eight remained at the close of the year. There were fifty-six minor surgical operations. Besides malarious fevers and skin complaints, the chief forms of sickness were affections of the eyes, lungs, stomach, and intestines.

Bárdoli dispensary.

The Bárdoli dispensary was opened in 1869. At the close of 1873-74 there remained five in-patients, and in the following year twenty-six were admitted and four re-admitted, making a total of thirty-five. Of these, thirty-four were discharged and one remained. Of out-patients nineteen remained from the previous year, 1,784 were admitted, and forty-seven re-admitted, making a total in 1874-75 of 1,850. Of these 1,732 were discharged, ninety-eight absented themselves, one died, and nineteen remained. Sixty minor surgical operations were performed in 1874-75. Amongst the cases treated in 1873-74, were ague, syphilis, dropsy, injuries, and carbuncle. The water of the river Mindhola, used by the people for all purposes, is complained of as one of the chief causes of sickness.

Victoria dispensary.

The Victoria dispensary, situated in the town of Káliáwári near Navsári, in the Jalálpor sub-division, was opened in 1863. In 1874-75 thirty-two in-patients were treated. Of these, twenty-nine were discharged, one absented himself, and two remained. Of the out-patients, 121 were kept on from the previous year, 6,729 were admitted, and 146 were re-admitted, making a total of 6,996. Of these, 6,484 were discharged, 357 absented themselves, and 155 remained. The chief disease was fever. Intestinal parasites are also said to be very common. There were 235 minor surgical operations.

Chikhli dispensary.

The Chikhli dispensary was opened in 1870. There is accommodation for in-patients of both sexes in the dispensary. In 1874-75 the number of in-patients was eleven, including one re-admission. Of these, nine were discharged and two died. Of out-patients, forty-two were kept on from the previous year, 3,354 were admitted, and 405 were re-admitted, making a total of 3,801. Of these, 2,747 were discharged, 1,007 absented themselves, one died, and forty-six remained. There were 110 minor surgical operations. Of the cases treated, the chief disease was ague.

The Balsár dispensary was opened in 1863. In 1874-75 the in-patients numbered forty-five. Of these, forty-two were discharged and three died. Out-patients numbered 9,196. The chief diseases were malarious fever, syphilis, dysentery, and skin diseases. There were two major and 395 minor surgical operations. Balsár dispensary.

The Párdi dispensary was opened in 1870. Of in-patients three were kept on from the previous year and twenty-three were admitted in 1874-75. Of these, twenty-four were discharged, one died, and one remained. Of out-patients, 134 remained from the previous year, 3,155 were admitted, and 432 were re-admitted, making a total of 3,721. Of these, 2,985 were discharged, 654 absented themselves, and eighty-two remained. There were 170 minor surgical operations. The chief diseases were fever and affections of the stomach and bowels. Párdi dispensary.

In the year 1874-75 the work of vaccination was, under the supervision of the superintendent of vaccination for the eastern Gujarát circle, carried on by nine vaccinators, with yearly salaries varying from £15 12*s.* (Rs. 156) to £28 16*s.* (Rs. 288). Of the operators eight were distributed over the rural parts of the district—one for each sub-division. The duties of the ninth vaccinator were confined to the city of Surat. The total number of operations performed in the same year amounted to 16,474, exclusive of 687 revaccinations, as compared with 17,976 primary vaccinations in 1869-70, when no revaccination was carried on. Vaccination.

The following abstract shows the chief points of interest connected with the age and the race of the persons vaccinated :— Operations, 1869 and 1875.

Comparative Summary of Vaccination Operations in the District of Surat during the years 1869-70 *and* 1874-75.

Year	Number vaccinated arranged by									
	Sex		Religion					Age		Total.
	Males.	Females	Hindus	Muhammadans	Pársis	Christians	Others	Under one year	Above one year	
1869-70	9,309	8,667	15,941	927	130	19	959	6,794	11,182	17,976
1874-75	8,716	7,758	14,104	1,172	194	14	990	8,516	7,958	16,474

The total cost of these operations was in 1874-75 £532 10*s.* (Rs. 5,325), or about 7¾*d.* (5¼ as.) for each successful case. The entire charge was made up of the following items : supervision and inspection £276 14*s.* (Rs. 2,767), establishment £246 (Rs. 2,460), and contingencies £9 16*s.* (Rs. 98). Of these, the supervising and inspecting charges were wholly met from government provincial funds. Of the remainder, the expense of £230 12*s.* (Rs. 2,306) on account of rural vaccinators was borne by the local funds of the different sub-divisions, while in Surat the municipality paid the sum of £25 4*s.* (Rs. 252) for the services of the town vaccinator. Cost.

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Cattle diseases.

The more common forms of cattle diseases are: *sitla*, rinderpest; *mowáso*, foot-and-mouth disease; *glasandi*, inflammation of the throat and chest. Some details of the symptoms of these different forms of disease will be found in the Broach Statistical Account.

Vital statistics, 1871-1875.

The total number of deaths in the five years ending 1875, as shown in the sanitary commissioner's annual reports, is 78,777, or an average yearly mortality of 15,755, or, assuming the figures of the census of 1872 as a basis, of 2·59 per cent of the total population. Of the average number of deaths 10,557, or 67·01 per cent, were returned as due to fever; 1,579, or 10·02 per cent, to bowel complaints; 289, or 1·83 per cent, to cholera 261, or 1·66 per cent, to small-pox; and 2,818, or 17·89 per cent, to miscellaneous diseases. Deaths from violence or accidents averaged 251, or 1·59 per cent of the average mortality of the district. During the same period the number of births is returned at 66,086 souls, of whom 34,748 are entered as male and 31,338 as female children, or an average yearly birth-rate of 13,217 souls; or, on the basis of the census figures, a birth-rate of 2·17 per cent of the entire population of the district.

These figures seem to be incorrect; for, while the population of the district is increasing, the returns show a birth-rate less by 2,538 than the death-rate: that is, a difference of 0·42 per cent of the entire population of the district. The explanation probably is, that while the mortality is pretty accurately known, not nearly all of the births are recorded.

CHAPTER XIII.

SUB-DIVISIONAL ACCOUNTS.

Olpad Sub-division.—The Olpád sub-division of the Surat district is bounded on the north by the river Kim, on the east by the Wasrávi division of Baroda territory, on the south by the river Tápti, and on the west by the Gulf of Cambay. The total area is 326 square miles, and the population, according to the census of 1872, consisted of 66,256 souls, that is, an average density of 203·23 to the square mile. The realizable land revenue in 1874-75 amounted to £58,825 (Rs. 5,88,250).

Area.

Of the total area of 326 square miles, seven are occupied by the lands of alienated villages. The remainder, according to the revenue survey returns, contains 124,635 acres, or 61·08 per cent, of occupied land; 8,420 acres, or 4·21 per cent, of culturable waste; 59,952 acres, or 29·38 per cent, of unculturable waste; and 11,016 acres, or 5·39 per cent, occupied by reservoirs, river beds, and the sites of villages. From 133,055 acres, 26,877 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 106,178 acres, the actual area of culturable state land, 100,444 acres, or 94·59 per cent, were in the year 1873-74 under cultivation.

Aspect.

Except for a ridge of sand hills along the coast, the Olpád sub-division forms an unbroken plain. In the neighbourhood of the sand hills, and in a few villages on the Tápti, the fields are generally enclosed; but, with these exceptions, the country is open and unfenced. So very slightly is its surface raised above high-water mark, that the sea flows into the very heart of the sub-division, and so many are the inlets for the tidal waters along the coast line that, over nearly one-half of its whole area, the salt water, soaking through, injures cultivation to such an extent that well irrigation is possible only in a few of the eastern villages. Formerly, it is said, the wells at Ránder were sweet, and their water was used in cultivation; but now it is brackish and unsuited for garden crops. Babul trees grow freely in the pasture lands and on the borders of ponds. But, with this exception, the land is somewhat bare of trees.

Climate.

The climate is generally healthy. Cool breezes prevail during the hot season. The rain-fall averages thirty inches.

With the exception of the boundary rivers—the Kim on the north, and the Tápti on the south—there is no stream of any importance. The ponds and reservoirs are not much used for irrigation, and are

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said to be silting up rapidly. Wells are few and brackish, so that the contemplated Tápti canal will be a great boon.

Soil.

The prevalent soils, the black and the medium, or *besar*, varieties, include more than three-fourths of the whole area of the sub-division. The soil known in Olpád as *besar*, unlike the Jalálpor *besar*, is merely an inferior sort of black, known by its dingy appearance and coarseness of texture. Good black soil produces Indian millet, cotton, and wheat; while the inferior sorts of *besar* only produce wheat, and not even wheat, except under favourable conditions of rain-fall. The better class of *besar* land is to be found chiefly to the west of Olpád. Black soil is also suitable for rice cultivation. But, from want of water, rice is grown only to a small extent. Red soil varies from the light soil, known as *morpana*, of the sandy ridges on the coast to the village site soil, or *gabhán*, which, even without manure, year after year yields abundant crops. Soil of much the same character as village site soil is, under the name of *khámbla-bhátha*, to be met with in a few villages on the Tápti. The reclaimable salt lands of the Olpád sub-division, comprising 27,814 acres, form three main divisions: i, a northern group, including the salt marsh lands situated between the Kim and Sena rivers; ii, a central group, between the Sena river and the Tena creek; and iii, a southern group, including the portion of the sub-division south of the Tena creek. Of the total reclaimable land 20,312 acres, or more than two-thirds of the whole, are at present under reclamation.

Assessment, 1870.

The following statement shows the area occupied in the state villages, and the assessment imposed under rates guaranteed by government in the year 1869-70:—

Statement showing the Area occupied and the Assessment imposed, 1869-1870.

Tenure.	Description of land.	Occupied			Unoccupied arable waste			Total		
		Acres	Assessment.	Average rate per acre	Acres.	Assessment.	Average rate per acre	Acres	Assessment.	Average rate per acre.
			Rs.	Rs a. p		Rs	Rs a p		Rs.	Rs a p.
Government	Dry-crop	93,893	4,77,525	5 1 5	8,294	32,776	3 15 2	102,187	5,10,301	4 15 10
	Garden	233	3,640	12 13 9	84	851	10 2 1	367	4,491	12 3 9
	Rice	3,582	34,965	9 12 2	42	285	6 12 2	3,624	35,250	9 11 7
	Total	97,758	5,16,130	5 4 5	8,420	33,912	4 0 5	106,178	5,50,042	5 2 10
Alienated.	Dry-crop	26,090	1,40,031	5 5 10	.	...	.	26,090	1,40,031	5 5 10
	Garden	137	1,631	11 14 5	..	..	.	137	1,631	11 14 5
	Rice	650	6,196	9 8 6			..	650	6,196	9 8 6
	Total	26,877	1,47,858	5 8 0		.		26,877	1,47,858	5 8 0
Total.	Dry-crop	119,983	6,17,556	5 2 4	8,294	32,776	3 15 2	128,277	6,50,332	5 1 1
	Garden	420	5,271	12 8 9	84	851	10 2 1	504	6,122	12 2 8
	Rice	4,232	41,161	9 11 7	42	285	6 12 2	4,274	41,446	9 11 2
	Grand Total..	134,635	6,63,988	5 5 3	8,420	33,911	4 0 5	1,33,055	6,97,900	5 3 11

	Rs. a. p.	£ s. d.
Total assessment on government and alienated land.	6,97,900 12 0	69,790 1 6
Deduct—Valuations of alienations ...	1,47,858 5 0	14,785 16 7½
Remains realizable	5,50,042 7 0	55,004 4 10½
Add—Realizable quit-rents, &c.	49,003 2 0	4,900 6 3
Add—Sale of grazing farms, beds of rivers, &c.	22,888 10 0	2,288 17 3
Total realizable revenue	6,21,934 3 0	62,193 8 4½

The rates of assessment introduced in 1869-70 remain in force until 1898-99.

Resources, 1873-74.

The population, as given in the census of 1872, of 66,256 souls lodged in 15,746 houses, appears from the returns of 1873-74 to be supplied with 1,201 wells and 547 tanks, and to be the owners of the following stock: 5,690 ploughs, 6,100 carts, 15,937 oxen, 8,501 cows, 15,318 buffaloes, 377 horses, 15,669 sheep and goats, and 76 asses.

Occupancy.

In 1869-70, the year of settlement, 13,832 distinct holdings, or *kháta*, were recorded, with an average area of nine acres, and a rental of £4 1*s.* 8$\frac{5}{8}$*d.* (Rs. 40-13-9). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of 3$\frac{24}{40}$ acres, at a yearly rent of £1 1*s.* 11$\frac{3}{8}$*d.* (Rs. 17-7-7). If distributed among the whole population of the sub-division, the share per head would amount to 2$\frac{11}{40}$ acres, and the incidence of the land-tax to £1 8$\frac{3}{4}$*d.* (Rs. 10-5-10).

Value of land.

From statistics furnished by the registration department, it would seem that in the year 1867, 315$\frac{8}{40}$ acres of land were purchased at a total cost of £2,650 3*s.* (Rs. 26,501-8), or £8 7*s.* 9$\frac{1}{2}$*d.* (Rs. 83-14-2) per acre. In the year 1874 the corresponding figures show 1,723$\frac{24}{40}$ acres transferred at a cost of £3,977 10*s.* (Rs. 39,775), or an average value per acre of £2 6*s.* 1$\frac{3}{4}$*d.* (Rs. 23-1-2).

Produce, 1873-74.

Of 100,444 acres, the total area of cultivated land, 17,740 acres, or 17·66 per cent, were in the year 1873-74 fallow or under grass. Of the 82,704 acres under actual cultivation, grain crops occupied 48,837 acres, or 59·05 per cent, of which 15,557 were under *juwár* (Sorghum vulgare); 6,416 under *bájri* (Holcus spicatus); 23,424 under wheat, *ghau* (Triticum æstivum); 3,439 under rice, *dángar* (Oryza sativa); and one acre under *banti* (Panicum sativum). Pulses occupied 7,776 acres, or 9·40 per cent, of which 3,089 were under *tuver* (Cajanus indicus), and 4,687 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); peas, *watána* (Pisum sativum); and *guwár* (Dolichos fabœformis). Oil seeds occupied 3,014 acres, or 3·64 per cent, of which 1,315 were under castor-oil seeds, *divela* or *eranda* (Ricinus communis); and 1,699 under *tal* (Sesamum indicum). Fibres occupied 22,326 acres, or 26·99 per cent, of which 22,321 were under cotton, *kapás* (Gossypium indicum), and five under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 1,943 acres, or 2·34 per cent, of which 393 were under tobacco, *tambáku* (Nicotiana tabacum); four under sugar-cane, *serdi* (Saccharum officinarum); three under

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plantain trees, *kel* (Musa paradisiaca); and 1,543 under miscellaneous vegetables and fruits.

Population, 1872.

The census returns for 1872 show that of a total population of 66,256 souls, 60,569, or 91·41 per cent, were Hindus; 4,117, or 6·21 per cent, were Musalmáns; 1,564, or 2·36 per cent, Pársis; and six others. From statistics specially prepared from the enumerators' forms, the total Hindu population would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Brahmans, 6,009; Brahma-kshatris, 14; Parbhus, 4; Wániás, 656; Shrávaks, 464; Bhátiás and Luwánás, 72; Kanbis, 8,658; Rajputs, 2,900; Káchhiás, 580; Mális, 40; Khatris (weavers of silk and cotton), 165; Ghánchis (oil-pressers), 466; Chhipás (calenders), 2; Sonis (gold and silversmiths), 361; Suthárs (carpenters), 367; Luhárs (blacksmiths), 257; Darjis (tailors), 448; Kumbhárs (potters), 435; Hajáms (barbers), 673; Dhobhis (washermen), 66; Bharwáds and Rabáris (herdsmen and shepherds), and Bhandáris (toddy-drawers), 957; Khárwás (seamen), 3,422; Máchhis (fishermen), 582; Golás (rice-pounders), 80; Purabiás and Maráthás, 189; Wághris (fowlers and hunters) and Ráwaliás (cotton tape-makers), 164; Kolis, 19,412; aboriginal tribes, such as Dublás, Dhondiás, Bhils, and others, 7,754; Mochis, (shoe-makers), 211; Khálpás, (tanners), 307; despised low castes, Dhers and Bhangiás, 4,619; and religious beggars, 235. According to the same return the occupation of the total population of the sub-division is as follows: i. Persons employed under government or municipal or other local authorities, numbering in all 1,510 souls. ii. Professional persons, 2,317. iii. Persons in service, or performing personal offices, 793. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 15,446; (*b*) labourers, 6,469—total 21,915. v. Persons engaged in commerce and trade, 533. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 3,897. vii. Miscellaneous persons not classed otherwise—(*a*) women, 12,373, and children, 21,725—in all 34,098; and (*b*) miscellaneous persons, 1,193—total, 35,291.

Public health.

The total number of deaths in the five years ending with 1874-75 was 9,659, or an average yearly mortality of 1,932, or, assuming the figures of the census of 1872 as a basis, of 2·91 per cent of 66,256, the total population of the sub-division. Of the average number of deaths 1,073, or 55·53 per cent, were returned as due to fever; 357, or 18·47 per cent, to diarrhœa and dysentery; 45, or 2·32 per cent, to small-pox; 32, or 1·65 per cent, to cholera; and 405, or 20·96 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 20, or 1·03 per cent of the average mortality of the sub-division. During the same period the number of births is returned at 9,035 souls, of whom 4,585 are entered as male and 4,450 as female children, or an average yearly birth-rate of 1,807, or 2·72 per cent, of the total population of the sub-division.[1]

[1] These figures are incorrect; for, while the population is increasing, the returns show a birth-rate less by 125 than the death rate. The explanation probably is, that while the mortality is pretty accurately known, not nearly all of the births are recorded.

Ma'ndvi Sub-division.—The Mándvi sub-division, situated in the north-east of the Surat district, is bounded on the north and east by the Baroda and Rájpipla territories, on the south-east by the Bárdoli sub-division of Surat, and on the south and west by Baroda territory. The total area is 280 square miles, and the population was in 1872 returned at 48,367 souls, or an average density of 172·73 to the square mile. The realizable land revenue amounted in 1874-75 to £12,900 (Rs. 1,29,000).

Area.

Of the total area of 280 square miles, twenty-two are occupied by the lands of alienated villages. The remainder contains 88,905 acres, or 53·80 per cent, of occupied land; 34,142 acres, or 20·66 per cent, of culturable waste; 1,595 acres, or 0·96 per cent, of unculturable waste; 31,159 acres, or 18·85 per cent, occupied by forests; and 9,421 acres, or 5·70 per cent, occupied by village sites, roads, tanks, and rivers. From the total of 123,047 acres, 6,863 acres have to be subtracted on account of alienated lands in government villages. Of the balance of 116,184 acres, the actual area of culturable state land, 70,167 acres, or 60·39 per cent, were in the year 1873-74 under cultivation.

Aspect.

To the west Mándvi is an open, well-cultivated, black soil plain, dotted with rich villages; eastwards, beyond Tadkesar, the level is broken by occasional rises and hollows; further on the coating of rich loam becomes shallower, stones begin to crop up, and the level plots of cultivated land are separated from each other by lines of low hills, their sides covered with a scanty crop of timber. Beyond this, in the extreme east and north-east, the land changes into a district of hill and forest, the population becomes scanty and unsettled, and, except in patches, cultivation disappears.

Climate.

The climate of Mándvi—feverish in the cold season, and oppressive during the hot weather months—is the worst in Surat. The rain-fall is partial towards the west. But in the east, in the neighbourhood of the hills, it is abundant. At the town of Mándvi the average rain-fall is 47·66 inches.

Water-supply.

Besides the Tápti, which forms its southern boundary, several small streams flow through the sub-division on their way to join the Tápti. These tributaries are of little importance, as, before the close of the hot season, they all more or less dry up and stagnate. Both as regards ponds and wells, the supply of water is defective, and its quality bad.

Soil.

Towards the centre of the sub-division the black soil of the western villages gradually passes into coarse red and becomes gritty and poor. In the eastern forest tracts, except a few patches of rich low-lying land, the surface soil, although rich in appearance, is in reality poor, and, after one year of cropping, requires for several years to lie fallow. The staple crops are rice, cotton, *juwár* (Sorghum vulgare), and *kodra* (Paspalum scrobiculatum). The ridges of timber-clad hills are of no great height, none of them being more than three hundred feet high.

Chapter XIII.

Sub-divisional Accounts.

MA'NDVI.

Assessment, 1872.

The following statement shows the area occupied in the state villages, and the assessment imposed under rates guaranteed by government in the year 1871-72 :—

Statement showing the Area occupied and the Assessment imposed, 1871-1872.

Tenure	Description of land.	Occupied.			Unoccupied arable waste			Total.		
		Acres.	Assessment.	Average rate per acre	Acres.	Assessment	Average rate per acre	Acres	Assessment	Average rate per acre.
			Rs.	Rs a. p.		Rs.	Rs. a. p		Rs	Rs. a p.
Government.	Dry-crop ..	76,967	1,18,996	1 8 9	33,934	33,031	0 15 7	110,901	1,52,027	1 6 0
	Garden .	141	574	4 1 0	40	59	1 8 0	181	633	3 7 11
	Rice	4,934	16,949	3 7 0	168	443	2 10 2	5,102	17,392	3 6 6
	Total	82,042	1,36,519	1 10 7	34,142	33,533	0 15 9	116,184	1,70,052	1 7 5
Alienated.	Dry-crop	5,821	10,623	1 13 2	.	.	. . .	5,821	10,623	1 13 2
	Garden	74	323	4 5 5	.		. .	74	323	4 5 5
	Rice . .	968	3,381	3 7 10				968	3,381	3 7 10
	Total	6,863	14,327	2 1 5		.	.	6,863	14,327	2 1 5
Total.	Dry-crop	82,788	1,29,619	1 9 1	33,934	33,031	0 15 7	116,722	1,62,650	1 6 4
	Garden	215	897	4 2 6	40	59	1 8 0	255	956	3 12 0
	Rice .	5,902	20,330	3 7 1	168	443	2 10 2	6,070	20,773	3 6 9
	Grand Total	88,905	1,50,846	1 11 2	34,142	33,533	0 15 9	123,047	184,379	1 8 0

	Rs.	a.	p.	£.	s.	d.
Total assessment on government and alienated land	1,84,379	6	0	18,437	18	9
Deduct—Valuations of alienations	14,327	7	0	1,432	14	10½
Remains realizable	1,70,051	15	0	17,005	3	10½
Add—Realizable quit-rents, &c	2,355	0	0	235	10	0
Add—Sale of grazing farms, beds of rivers, &c.	20,483	6	3	2,048	6	9⅜
Total realizable revenue	1,92,890	5	3	19,289	0	7½

The rates of assessment introduced in 1871-72 remain in force until 1900-1901.

Resources, 1873-74.

The returns for 1873-74 show that the population, as given in the census of 1872, of 48,367 souls lodged in 9,867 houses, was provided with 355 wells and 49 tanks, and owned the following stock : 5,477 ploughs, 631 carts, 16,204 oxen, 14,227 cows, 5,748 buffaloes, 125 horses, 6,743 sheep and goats, and 17 asses.

Occupancy.

In 1871-72, the year of settlement, 9,560 distinct holdings, *kháta*, were recorded, with an average area of $8\frac{38}{40}$ acres, and a rental of £1 9*s.* $\frac{5}{8}$*d.* (Rs. 14-8-5). These holdings would represent, if divided in equal parts among the agricultural population, for each person an allotment of $3\frac{34}{40}$ acres at a yearly rent of 11*s.* $8\frac{1}{8}$*d.* (Rs. 5-13-5). If distributed among the whole population, the share per head would amount to $2\frac{18}{40}$ acres, and the incidence of the land-tax to 7*s.* $7\frac{7}{8}$*d.* (Rs. 3-13-3).

From statistics furnished by the registration department, it would seem that in the year 1866, $3\frac{21}{40}$ acres of land were purchased at a total cost of £43 12*s.* (Rs. 436), or £12 7*s.* 4½*d.* (Rs. 123-11) per acre; while in 1867 no land seems to have been transferred. Three years later $18\frac{2}{40}$ acres of land were in 1870 transferred at a total cost of £82 12*s.* (Rs. 826), or £4 9*s.* 2½*d.* (Rs. 44-9-5). In 1874, $446\frac{5}{40}$ acres were purchased at a total cost of £119 10*s.* (Rs. 1,195), or 5*s.* 4¼*d.* (Rs. 2-10-10) per acre.

Produce, 1873-74.

Of 70,167 acres, the total area of cultivated land, 14,917 acres, or 21·25 per cent, were in the year 1873-74 fallow or under grass. Of the 55,250 acres under actual cultivation, grain crops occupied 36,229 acres, or 65·57 per cent, of which 10,900 acres were under *juwár* (Sorghum vulgare); 262 under *bájri* (Holcus spicatus); 764 under wheat, *ghau* (Triticum æstivum); 12,092 under rice, *dángar* (Oryza sativa); and 12,211 under miscellaneous grains, such as *nágli* (Eleusine coracana); *kodra* (Paspalum scrobiculatum); *banti* (Panicum sativum). Pulses occupied 6,692 acres, or 12·11 per cent, of which 2,020 acres were under *tuver* (Cajanus indicus), and 4,672 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); peas, *watána* (Pisum sativum); and *guwár* (Dolichos fabœformis). Oil-seeds occupied 5,615 acres, or 10·16 per cent, of which 5,581 acres were under castor-oil seeds, *divelu* (Ricinus communis), and 34 under *tal* (Sesamum indicum). Fibres occupied 8,978 acres, or 16·24 per cent, of which 8,236 acres were under cotton, *kapás* (Gossypium indicum), and 742 under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 409 acres, or 0·74 per cent, of which 37 acres were under sugar-cane, *serdi* (Saccharum officinarum); 44 under tobacco, *tambáku* (Nicotiana tabacum); and 328 under miscellaneous vegetables and fruits.

Population, 1872.

The census returns for 1872 show that of a total population of 48,367 souls, 44,526, or 92·05 per cent, were Hindus; 3,488, or 7·19 per cent, were Musalmáns; and 353 Pársis. From statistics specially prepared from the enumerators' forms, the total Hindu population would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 784; Wániás, 633; Shrávaks, 290; Bhátiás and Luwánás, 27; Kanbis, 898; Rajputs, 677, Káchhiás, 222; Mális, 87; Khatris (weavers of silk and cotton), 150; Ghánchis (oil-pressers), 164; Chhipás (calenders), 43; Sonis (gold and silversmiths), 193; Kansárás (brass and coppersmiths), 6; Suthárs (carpenters), 302; Luhárs (blacksmiths), 268; Darjis (tailors), 220; Kumbhárs (potters), 133; Hajáms (barbers), 138; Dhobhis (washermen), 41; Bhisti (water-drawer), 1; Bharwáds and Rabáris (herdsmen and shepherds), 259; Khárwás (seamen), 41; Máchhis (fishermen), 42; Golás (rice-pounders), 43; Bhádbhujás (grain-parchers), 4; Purabiás and Maráthás, 150; Wághris (fowlers and hunters), Rávaliás (cotton-tape-makers), 25; Kolis, 3,610; aboriginal tribes, such as Dublás, Dhondiás, Bhils, and Chodhrás, 33,572; Mochis (shoe-makers), 319; Khálpás (tanners), 265; despised low castes, Dhers and Bhangiás, 828; and religious beggars, 91. According to the same return the occupation of the whole population of the sub-division is as follows: i. Persons employed under govern-

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ment, or municipal, or other local authorities, numbering in all 530 souls. ii. Professional persons, 62. iii. Persons in service, or performing personal offices, 441. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 17,377; (*b*) labourers, 6,894—total 24,271. v. Persons engaged in commerce and trade, 63. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 2,717. vii. Miscellaneous persons not classed otherwise—(*a*) women 3,163, and children 16,767, in all 19,930; and (*b*) miscellaneous persons, 353—total 20,283.

Public health.

The total number of deaths in the five years ending with 1874-75 was 3,972, or an average yearly mortality of 794, or, assuming the figures of the census of 1872 as a basis, of 1·64 per cent of 48,367, the total population of the sub-division. Of the average number of deaths, 611, or 76·95 per cent, were returned as due to fever; 68, or 8·56 per cent, to diarrhœa and dysentery; 6, to small-pox; 43, or 5·41 per cent, to cholera; and 43, or 5·41 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 23, or 2·89 per cent of the average mortality of the sub-division. During the same period the number of births is returned at 3,038 souls, of whom 1,622 are entered as male and 1,416 as female children; or an average yearly birth-rate of 608, or 1·25 per cent, of the total population of the sub-division.

CHORA'SI.

Chora'si Sub-Division.—The Chorási sub-division, containing the city of Surat, is, with the exception of the town of Ránder and seven villages on the right bank, bounded on the north by the river Tápti and the Gáekwári territory of Wariáv; on the east by territory belonging to His Highness the Gáekwár; on the south by Gáekwári territory and the estate of His Highness the Nawáb of Sachin; and on the west by the territory of the Sachin state. The total area is 104 square miles, and the population, exclusive of the city of Surat, was in 1872 returned at 48,435 souls, or an average density of 465·72 to the square mile. The realizable land revenue in 1874-75 amounted to £21,866 (Rs. 2,18,660).

Area.

Of the total area of 104 square miles, fifteen are occupied by the lands of alienated villages. The remainder, according to the returns of the revenue survey, contains 40,295 acres, or 70·25 per cent, of occupied land; 1,269 acres, or 2·21 per cent, of culturable waste; 5,374 acres, or 9·36 per cent, of unculturable waste; and 10,421 acres, or 18·17 per cent, occupied by reservoirs, river beds, and the sites of villages. From 41,564 acres, 13,527 acres have to be subtracted on account of alienated lands in government villages. Of the balance of 28,037 acres, the actual area of culturable government land, 25,412 acres, or 90·63 per cent, were in the year 1873-74 under cultivation.

Aspect.

The sub-division forms a richly wooded plain; the fields, in parts where the light soil prevails, being highly cultivated and enclosed with hedges.

From November to June the climate is agreeable. But during the rainy months, from June to November, when, according to the

average of the past ten years, there is a fall of 35½ inches of rain, the air is relaxing, and the climate, to Europeans at least, unhealthy.

Water-supply.

With the exception of the Tápti, along whose southern bank the lands of this sub-division extend for upwards of eighteen miles, there is no river of importance. The Mindhola just touches one or two of the southern villages, and the remaining streams, with a very scanty flow of fresh water, are valuable chiefly as affording an outlet for the rain waters in times of flood. For purposes of irrigation, the water-supply of the Chorási sub-division is at present defective. There are no village reservoirs large enough to irrigate the lands in their neighbourhood, while its brackishness prevents the supply contained in many of the wells from being used for purposes of cultivation.

Soil.

The soil is of two kinds, the black, *káli*, and the light, *gorát*. The black is, as a general rule, of superior quality, and comes under the denomination of *regar*. There are four sub-divisions of the brown soil,—the ordinary light, sandy soil, locally known as *khambla* and *pana;* a light soil generally close to villages, and so known as *gabhán*, the village site soil ; a mixed alluvial soil, varying in shade from light brown to chocolate colour, full of humus and organic matter ; alluvial deposit, *bhátha*, in the beds of rivers. The reclaimable salt lands of the Chorási sub-division, comprising about 4,113 acres, form two groups. Of these, the more northerly, containing 3,307 acres, lies about six miles from the mouth of the Mindhola river, and includes parts of the village lands of Khajod and Budia. The second group, comprising 806 acres of the village lands of Uber Talangpor and Páli, is situated about two miles to the south-east of the Khajod lands. These tracts are at present under reclamation. From a small area of about thirty acres of salt waste in the village of Rund on the left bank of the Tápti, the tidal waters were excluded in 1874. The bankment then made has stood well,and already (March 1876) the land is said to be sweetening rapidly, grass and other vegetation is spreading, and the highest portions are ready for the cultivation of rice and other light crops. On this land an attempt was in 1874 made to grow trees and aloes with the view of sweetening the soil. But, in spite of watering during the hot season, only a very few of the trees have grown.

Assessment, 1866.

The following statement, which has been adjusted so as to include the seven villages added to Chorási in the year 1870, shows the area of occupied land in the state villages in the year 1865-66 and the rates of assessment then introduced :—

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Sub-divisional Accounts.

CHORA SI.

Assessment, 1866.

Statement showing the Area occupied and the Assessment imposed, 1865-1866.

Tenure	Description of Land	Occupied			Occupied arable waste.			Total.		
		Acres.	Assessment	Average rate per acre	Acres	Assessment	Average rate per acre.	Acres.	Assessment.	Average rate per acre.
			Rs	Rs. a p		Rs	Rs a p		Rs	Rs a. p.
Government.	Dry crop	24,551	1,40,817	5 11 9	1,023	4,742	4 10 2	25,574	1,45,559	5 11 0
	Garden	1,664	22,240	13 5 11	245	2,818	11 9 9	1,909	25,058	13 2 1
	Rice	553	5,481	9 14 7	1	16	11 2 3	554	5,497	9 14 7
	Total	26,768	1,68,538	6 5 0	1,269	7,576	5 15 6	28,037	1,76,114	6 4 6
Alienated.	Dry crop	10,05.	58,084	5 13 6				10,051	58,084	5 12 6
	Garden	3,14	38,760	12 5 4			..	3,143	38,763	12 5 4
	Rice	3.	3,112	9 5 6				333	3,112	9 5 6
	Total	13,52.	99,959	7 6 3				13,527	99,959	7 6 3
Total.	Dry crop	34,60	1,98,901	5 12 0	1,023	4,742	4 10 2	35,625	2,03,643	5 11 6
	Garden	4 80	61 000	12 11 0	245	2,818	11 9 0	5,052	63,821	12 10 1
	Rice	88	8 596	9 11 2	1	16	11 2 3	887	8,609	9 11 2
	Grand Total	40,2(	2,68 197	6 10 7	1,269	7,576	5 15 6	41 564	2,76,073	6 10 3

	Rs	a.	p.	£	s.	d.
Total assessment on government and alienated lands	2,76,072	11	0	27,607	5	4½
Deduct —Valuations of alienations (including *Sarakati* villages)	1,02,317	4	4	10,231	14	6½
Remains realizable	1,73,755	6	8	17,375	10	10
Add—Realizable quit rents, &c. ...	27,781	9	0	2,778	3	1½
Add—Sale of grazing farms, beds of rivers, &c.	20,345	11	6	2,034	11	5½
Total realizable revenue	2,21,882	11	2	22,188	5	4½

The rates of assessment introduced in 1865-66 remain in force up to the year 1893-94.

Resources, 1873-74.

The returns for 1873-74 show that the population, as given in the census of 1872, of 48,435 souls lodged in 12,223 houses, was provided with 1,491 wells and 98 tanks, and owned the following stock: 3,010 ploughs, 2,388 carts, 8,414 oxen, 8,687 cows, 8,531 buffaloes, 134 horses, 4,024 sheep and goats, and 14 asses.

Occupancy.

In 1865-66, the year of settlement, 5,880 distinct holdings, or *kháta*, were recorded, with an average area of $6\frac{34}{40}$ acres, and a rental of £4 11*s* (Rs. 45-8) These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of $2\frac{29}{40}$ acres, at a yearly rent of £1 16*s*. 3*d*. (Rs. 18-2). If distributed among the whole population of the sub-division, the share per head would amount to $1\frac{2}{40}$ acres, and the incidence of the land-tax to 13*s*. $10\frac{1}{2}$*d*. (Rs. 6-15).

Value of land.

From statistics furnished by the registration department, it would seem that in the year 1867, $597\frac{6}{40}$ acres of land were purchased at a

total cost of £8,018 12*s.* (Rs. 80,186), or £13 8*s.* 6¾*d.* (Rs. 134-4-6) per acre. In the year 1874, 572$\frac{17}{40}$ acres were transferred at a cost of £5,062 10*s.* (Rs. 50,625), or an average value per acre of £8 16*s.* 9½*d.* (Rs. 88-6-4).

Produce, 1873-74.

Of 25,412 acres, the total area of cultivated land, 5,811 acres, or 22·86 per cent, were in the year 1874 fallow or under grass. Of the 19,601 acres under actual cultivation, grain crops occupied 10,314 acres, or 52·61 per cent, of which 7,478 acres were under *juwár* (Sorghum vulgare); 1,592 under *bájri* (Holcus spicatus); 653 under wheat, *ghau* (Triticum æstivum); and 591 under rice, *dángar* (Oryza sativa). Pulses occupied 2,810 acres, or 14·33 per cent, of which 1,032 acres were under *tuver* (Cajanus indicus); and 1,778 acres under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); peas, *walána* (Pisum sativum); and *guwár* (Dolichos fabæformis). Oil-seeds occupied 463 acres, or 2·36 per cent, of which 419 acres were under castor-oil seeds, *divela* or *eranda* (Ricinus communis), and 44 acres under *tal* (Sesamum indicum). Fibres occupied 5,141 acres, or 26·22 per cent, of which 5,123 acres were under cotton, *kapás* (Gossypium indicum), and 18 acres under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 1,245 acres, or 6·35 per cent, of which 182 acres were under tobacco, *tambáku* (Nicotiana tabacum); 76 acres under sugar-cane, *serdi* (Saccharum officinarum); 54 acres under ground-nut, *bhoyasing* (Arachis hypogæa); 47 acres under plantain trees, *kel* (Musa paradisiaca); and 886 acres under miscellaneous vegetables and fruits.

Population, 1872.

The census returns for 1872 show that of a total population of 48,435, exclusive of the city of Surat, 40,392, or 82·7 per cent, were Hindus; 6,454, or 13·3 per cent, were Musalmáns; 1,575, or 3·2 per cent, Pársis; and fourteen others. From statistics specially prepared from the enumerators' forms, the total Hindu population would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 5,050; Brahma-Kshatris, 17; Káyasths, 16; Parbhus, 4; Wánás, 452; Shrávaks, 943; Bhátiás and Luwánás, 81; Kanbis, 6,374; Rajputs, 1,098; Káchhiás, 52; Mális, 50; Khatris (weavers of silk and cotton), 59; Ghánchis (oil-pressers), 684; Chhipás (calenders) and Bhávsárs (calico-printers), 162; Sonis (gold and silversmiths), 361; Kansárás (brass and coppersmith), 1; Suthárs (carpenters), 382; Luhárs (blacksmiths), 130; Darjis (tailors), 419; Kumbhárs (potters), 795; Hajáms (barbers), 407; Dhobhis (washermen), 107; Bhistis (water-drawers), 12; Bharwáds and Rabáris (herdsmen and shepherds); Bhandáris (toddy-drawers), 852; Khárwás (seamen), 829; Máchhis (fishermen), 1,211; Golás (rice-pounders), 99; Purabiás and Maráthás, 205; Wághris (fowlers and hunters,) and Rávaliás (cotton-tape-makers), 177; Kolis, 9,116; aboriginal tribes, such as Dublás, Bhils, and others, 6,160; Mochis (shoe-makers), 286; Khálpás (tanners), 182; despised low castes, Dhers and Bhangiás, 3,430; and religious beggars, 189. According to the same return the occupation of the whole population of the sub-division was as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all

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606. ii. Professional persons, 257. iii. Persons in service, or performing personal offices, 1,044. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 6,067; (*b*) labourers, 6,093. total 12,160. v. Persons engaged in commerce and trade, 734. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured, or otherwise, prepared for consumption, 6,495. vii. Miscellaneous persons not classed otherwise—(*a*) women 10,420, and children 15,248, in all 25,668; and (*b*) miscellaneous persons 1,471—total 27,139.

Public health.

The total number of deaths in the four years ending July 1874 was 3,754, or an average yearly mortality of 939, or, assuming the figures of the census of 1872 as a basis, of 1·93 per cent of the total population. Of the average number of deaths, 543, or 57·88 per cent, were returned as due to fever; 118, or 12·58 per cent, to diarrhœa and dysentery; 17, or 1·81 per cent, to small-pox; 3, or 0·31 per cent, to cholera; and 242, or 25·79 per cent, to miscellaneous diseases. Deaths from accidents or violence averaged 16, or 1·70 per cent, of the average mortality of the sub-division. During the same period the number of births is returned at 2,866 souls, of whom 1,606 are entered as male and 1,260 as female children; or an average yearly birth-rate of 716 souls, or 1·47 per cent of the total population of the sub-division.

BA'RDOLI.

Ba'rdoli Sub-division—The Bárdoli sub-division of the Surat district is bounded on the north by the river Tápti; on the east and south-east by the territory of His Highness the Gáekwár; on the south by the Jaláipor sub-division; and on the south-west and west by the Gáekwár's territory. The total area is 221 square miles, and the population, according to the census returns of 1872, 77,500 souls, or on an average 350·67 to the square mile. The realizable land revenue amounted in 1874-75 to £39,027 (Rs. 3,90,270).

Area.

According to the revenue survey details prepared in 1864-65, the sub-division contains a total area of 141,229 acres, which are all occupied by government villages, there being no alienated village in the sub-division. Of these, 113,553 acres, or 80·40 per cent, are occupied land; 15,394 acres, or 10·90 per cent, are culturable waste; 2,105 acres, or 1·49 per cent, are unculturable waste; and 10,177 acres, or 7·20 per cent, are occupied by rivers, village sites, reservoirs, and roads. From 128,947 acres, 7,688 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 121,259 acres, the actual area of culturable state land, 104,020 acres, or 85·78 per cent, were in 1873-74 under cultivation.

Aspect.

The sub-division forms a richly wooded plain, with stretches of grass land covered with date, palm, and babul trees.

Climate.

Towards the west the sub-division has the benefit of the sea-breeze, and is well supplied with water. The climate of the eastern parts is hotter and somewhat feverish.

Water-supply.

The Tápti, which forms the northern boundary of the sub-division, is, except during high floods, not deep enough to allow of the passage of boats. During high floods timber is floated down as far as Karod,

whence it is taken to Surat in carts. Besides the Tápti, the Purna and the Mindhola flow through the sub-division. But they are too shallow for purposes of navigation. The soil is so well supplied with water that, even without irrigation, second crops can generally be raised. Except in the case of some rice ground watered early in the season from village tanks, lands are irrigated chiefly by means of wells and springs.

Soil.

This sub-division contains four varieties of soil,—black soil, of a very superior quality; brown loam, in the villages of Supa, Pera, and Bárdoli, which produces sugar-cane abundantly; rice soil, which yields a large crop of rice, and also produces *wál*, castor-oil seed, and sugar-cane; and rich alluvial loam, or *bhátha*, in the villages of Supa, Pera, and Bárdoli, which, without irrigation, produces every variety of agricultural produce.

Assessment, 1865.

The following statement shows the area occupied in the state villages and the assessment imposed under rates guaranteed by government in the year 1864-65 :—

Statement showing the Area occupied and the Assessment imposed, 1864-1865.

Tenure.	Description of land.	Occupied			Unoccupied arable waste			Total		
		Acres	Assessment.	Average rate per acre	Acres.	Assessment	Average rate per acre	Acres.	Assessment	Average rate per acre.
			Rs	Rs a p		Rs	Rs a p		Rs	Rs. a. p
Government.	Dry-crop ..	90,881	2,63 038	2 14 4	15,228	35,444	2 5 3	106,109	2,98 482	2 13 1
	Garden . .	1,994	27 353	13 11 5	14	168	12 4 3	2,008	27,521	13 11 3
	Rice ..	12,990	1,09,780	8 7 2	152	1,133	7 7 3	13,142	1,10 913	8 7 0
	Total..	105,865	4,00,171	3 12 6	15,394	36,745	2 6 2	121,259	4,36,916	3 9 8
Alienated.	Dry-crop ..	4,072	14,665	3 9 7	..	.		4,072	14,665	3 9 7
	Garden . .	223	3,648	16 5 0	..	..	.	223	3,648	16 5 0
	Rice . ..	3,393	30,082	8 13 10	..	..	..	3,393	30,082	8 13 10
	Total	7,688	48,385	6 4 8	..	.	..	7,688	48,385	6 4 8
Total.	Dry-crop ..	94,953	2,77,703	2 14 10	15,228	35,444	2 5 3	110,181	313 147	2 13 5
	Garden . .	2,217	30,991	13 15 7	14	168	12 4 3	2,231	31,159	13 15 5
	Rice	16,383	1,39,862	8 8 7	152	1,133	7 7 3	16 535	1,40,995	8 8 5
	Grand Total..	113,553	4,48,556	3 15 2	15,394	36,745	2 6 2	128,947	4,85,301	3 12 2

	Rs. a. p.	£ s. d.
Total assessment on government and alienated lands	4,85,301 8 0	48,530 3 0
Deduct—Valuations of alienations (incuding *Sarakati* villages)	49,952 0 7	4,995 4 0¾
Remains realizable	4,35,349 7 5	43,534 18 11½
Add—Realizable quit-rents, &c. . .	6,332 9 0	633 5 1¼
Add—Sale of grazing farms, beds of rivers, &c.	19,865 5 5	1,986 10 8¼
Total realizable revenue	4,61,547 5 10	46,154 14 8¾

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BA'RDOLI.

The rates of assessment introduced in 1864-65 remain in force until 1893-94.

Resources, 1873-74.

The returns for 1873-74 show that the population, as given in the census of 1872, of 77,500 souls lodged in 16,291 houses, was provided with 1,885 wells and 98 tanks, and owned the following stock: 7,733 ploughs, 6,177 carts, 21,531 oxen, 16,383 cows, 12,681 buffaloes, 142 horses, 16,330 sheep and goats, and 19 asses.

Occupancy.

In 1864-65, the year of settlement, 22,648 distinct holdings, or *khátu*, were recorded, with an average area of $5\frac{1}{10}$ acres, and a rentar of £1 15*s.* $10\frac{3}{4}$*d.* (Rs. 17-15-2). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of $3\frac{11}{10}$ acres, at a yearly rent of £1 6*s.* $11\frac{1}{2}$*d.* (Rs. 13-7-8). If distributed among the whole population of the sub-division, the share per head would amount to $1\frac{16}{10}$ acres, and the incidence of the land-tax to 13*s.* $7\frac{3}{4}$*d.* (Rs. 6-13-2).

Value of land.

From statistics furnished by the registration department, it would seem that in 1867, $72\frac{2}{10}$ acres of land were purchased at a total cost of £118 9*s.* 6*d* (Rs. 1,184-12-0), or £1 12*s.* $10\frac{5}{8}$*d.* (Rs 16-7-1) per acre. In 1874, $407\frac{9}{10}$ acres were transferred at a cost of £1,015 11*s.* $5\frac{5}{8}$*d.* (Rs 10,155-11-9), or an average value per acre of £2 9*s.* $10\frac{1}{2}$*d.* (Rs. 24-15-0)

Produce, 1873-74.

Of 104,020 acres, the total area of cultivated land, 29,600 acres, or 28·45 per cent, were in 1873-74 fallow or under grass. Of the 74,420 acres under actual cultivation, grain crops occupied 48,344 acres, or 64·96 per cent, of which 22,554 acres were under *juwár* (Sorghum vulgare); 156 under *bájri* (Holcus spicatus); 2,900 under wheat, *ghau* (Triticum æstivum); 16,996 under rice, *dángar* (Oryza sativa); and 5,738 under miscellaneous grains, comprising *nágli* (Eleusine coracana), *Kodra* (Paspalum scrobiculatum), and *banti* (Panicum sativum). Pulses occupied 14,793 acres, or 19·87 per cent, of which 4,809 were under *tuver* (Cajanus indicus), and 9,984 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum), *mug* (Phaseolus radiatus); peas, *watána* (Pisum sativum), and *guwár* (Dolichos fabœformis). Oil-seeds occupied 6,450 acres, or 8·66 per cent, of which 6,324 were under castor-oil seeds, *divela* or *eranda* (Ricinus communis), and 126 under *tal* (Sesamum indicum). Fibres occupied 12,989 acres, or 17·45 per cent, of which 12,675 were under cotton, *kapás* (Gossypium indicum), and 314 under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 1,315 acres, or 1·73 per cent, of which 69 were under tobacco, *tambáku* (Nicotiana tabacum); 721 under sugar-cane, *serdi* (Saccharum officinarum); 41 under ground-nut, *bhoyasing* (Arachis hypogæa); 8 under plantain trees, *kel* (Musa paradisiaca); and 506 under miscellaneous vegetables and fruits.

Population, 1872.

The census returns for 1872 show that of a total population of 77,500 souls, 74,053, or 95·54 per cent, were Hindus; 3,090, or 3·98 per cent, were Musalmáns; and 357, or 0·46 per cent, were Pársis. From statistics specially prepared from the enumerators' forms, the total Hindu population of 74,053 souls would seem to consist of the

following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 6,574; Brahma-Kshatris, 9; Káyasths, 11; Parbhus, 3; Wániás, 635; Shrávaks, 1,234; Bhátiás and Luwánás, 8; Kanbis, 12,706; Rajputs, 1,115; Káchhiás, 155; Mális, 75; Khatris (weavers of silk and cotton), 209; Ghánchis (oil-pressers), 358; Chhipás and Bhávsars (calenders and calico-printers), 141; Sonis (gold and silversmiths), 560; Kansárás (brass and coppersmiths), 9; Suthárs (carpenters), 619; Luhárs (blacksmiths), 295; Darjis (tailors), 522; Saláts (masons), 18; Kumbhárs (potters), 907; Hajáms (barbers), 504; Dhobhis (washermen), 105; Bharwáds, Rabáris, and Bhandáris (shepherds and toddy-drawers), 1,335; Khárwás (seamen), 30; Máchhis (fishermen), 244; Golás (rice-pounders), 64; Purabiás and Maráthás, 265; Wághris (fowlers and hunters) and Rávalhás (cotton-tape-makers), 97; Kolis, 4,651; aboriginal tribes, such as Dublás, Dhondias, Bhils, and others, 36,289; Mochis (shoe-makers), 520; Khálpás (tanners), 486; despised low castes, Dhers and Bhangiás, 3,058; and religious beggars, 242. According to the same return the occupation of the whole population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 1,549. ii. Professional persons, 573. iii. Persons in service, or performing personal offices, 532. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 9,251; (*b*) labourers, 13,560; and (*c*) dealers in animals, 296—total 23,107. v. Persons engaged in commerce and trade, 154. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 3,353. vii. Miscellaneous persons not classed otherwise—(*a*) women 9,706, and children 29,413—in all 39,119; and (*b*) miscellaneous persons, 9,113—total 48,232.

Public health.

The total number of deaths in the four years ending with 1873-74 was 8,094, or an average yearly mortality of 2,023, or, assuming the figures of the census of 1872 as a basis, of 2·61 per cent of 77,500, the total population of the sub-division. Of the average number of deaths, 1,499, or 74·09 per cent, were returned as due to fever; 270, or 13·34 per cent, to diarrhœa and dysentery; 21, or 1·03 per cent, to small-pox; 2, or 0·09 per cent, to cholera; and 209, or 10·33 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 22, or 1·08 per cent of the average mortality of the sub-division. During the five years ending with 1873-74 the number of births is returned at 7,322 souls, of whom 3,794 are returned as male and 3,528 as female children; or an average yearly birth-rate of 1,464, or 1·88 per cent of the total population of the sub-division.

JALA'LPOR.

Jalálpor Sub-division.—The Jalálpor sub-division is a compact tract of land, twenty miles long by sixteen broad. On the north it is separated by the Purna river from Baroda territories; on the east it is bounded by the Baroda sub-division of Mahuwa; on the south by the river Ambika, separating it from the Chikhli and Balsár sub-divisions; and on the west by the sea. The total area is 200 square miles, and the population was in 1872 returned at 70,112 souls, or an average density of 350·56 to the square mile. The realizable land revenue in 1874-75 amounted to £34,088 (Rs. 3,40,880).

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JALA'LPOR.

Area.

Of the total area of 200 square miles, seven are occupied by the lands of alienated villages. The remainder contains 68,924 acres, or 56·01 per cent, of occupied land; 1,748, or 1·42 per cent, of culturable waste; 34,670, or 28·17 per cent, of unculturable waste; and 17,714, or 14·39 per cent, occupied by village sites, roads, tanks, and rivers. From the total of 70,672 acres, 7,785 acres have to be substracted on account of alienated lands in government villages. Of the balance of 62,887 acres, the actual area of culturable state land, 59,611 acres, or 94·79 per cent, were in the year 1873-74 under cultivation.

Aspect.

Except near the banks of rivers, where the land is seamed by water-courses, Jalálpor is a level plain of deep alluvial soil, sloping gently westwards till, near the sea, it ends in a salt marsh. Along the line of coast it is in some parts fringed by low ridges of sand-hills. With the exception of the salt lands near the coast, the district is rich, highly cultivated, and well supplied with water, groves of fruit and other valuable trees, and large and prosperous villages.

Throughout the year the climate is mild and healthy. The average rain-fall is about 54 inches, though as much as 72 inches occasionally fall.

Water-supply.

With the exception of a small stream that crosses the sub-division on its way to the Kanái creek, the only rivers are the Purna in the north and the Ambika in the south.

Soil.

Except the tract of salt land in the west, the soil is a deep and stoneless bed of alluvium, varying from ten to thirty feet in depth. Four-fifths of the soil is composed of the medium, or *besar*, the remaining fifth being brown, *gorát*, and fresh alluvial loam, *bhátha*. The fresh alluvial soil is found in two places,—in villages bordering on the Purna down to Jalálpor, and in a strip on the northern bank of the Ambika. The Jalálpor sub-division contains large stretches of salt marsh land not only along the sea front, but on the banks of the Purna and the Ambika rivers. The salt marsh lands form naturally four distinct tracts: the first bounded by the Purna river on the north, and on the south by the Kantári creek; the second between the Kantári creek and the northern branch of the Kanái; the third between the two branches of the Kanái creek; and in the south of the sub-division; the fourth stretching along the northern bank of the Ambika river. Of the total area of salt marsh lands, 16,794 acres, or more than one-half of the whole (31,360 acres), are under process of reclamation. Of the efforts at reclamation the most successful is one of about one hundred and fifty acres in the village of Jalálpor. Strong and satisfactory embankments and sluices have (March 1876) been completed, and though a large portion of the reclamation is still salt, a beginning of cultivation has been made. About twenty acres under rice yielded in 1875 very satisfactory results.[1]

[1] Report of the Superintendent of Agriculture (Mr. Milnes), No. 142, dated 31st May 1876.

The following statement shows the area occupied in the state villages and the assessment imposed under rates guaranteed by government in the year 1868-69 :—

Statement showing the Area occupied and the Assessment imposed, 1868-69.

Tenure.	Description of land	Occupied			Unoccupied arable waste.			Total.		
		Acres	Assessment	Average rate per acre	Acres.	Assessment.	Average rate per acre	Acres.	Assessment	Average rate per acre.
			Rs	Rs a. p		Rs.	Rs a. p		Rs.	Rs a. p.
Government.	Dry-crop	47,704	1,79,121	3 12 1	1,688	4,739	2 12 11	49,392	1,83,860	3 11 6
	Garden	5,295	60,604	11 7 1	37	304	8 3 9	5,332	60,908	11 6 9
	Rice	8,140	1,05,185	12 14 9	23	193	8 8 7	8,163	1,05,378	12 14 6
	Total	61,139	3,44,910	5 10 3	1,748	5,236	2 15 11	62,887	3,50,146	5 9 1
Alienated	Dry-crop	4,198	16,551	3 15 1		.		4,198	16,551	3 15 1
	Garden	1,013	10,110	9 15 8		.		1,013	10,110	9 15 8
	Rice	2,574	35,006	13 9 7		...		2,574	35,006	13 9 7
	Total	7,785	61,667	7 14 9				7,785	61,667	7 14 9
Total	Dry-crop	51,902	1,95,672	3 12 3	1,688	4,739	2 12 11	53,590	2,00,411	3 11 0
	Garden	6,308	70,714	11 3 4	37	304	8 3 9	6,345	71,018	11 3 1
	Rice	10,714	1,40,191	13 1 4	23	193	8 8 7	10,737	1,40,384	13 1 2
	Grand Total	68,924	4,06,577	5 14 1	1,748	5,236	2 15 11	70,672	4,11,813	5 13 3

	Rs. a. p.	£. s. d.
Total assessment on government and alienated lands	4,11,813 3 0	41,181 6 4½
Deduct—Valuations of alienations (including *Sarakati* villages)	62,324 10 0	6,232 9 3
Remains realizable	3,49,488 9 0	34,948 17 1½
Add—Realizable quit-rents, &c.	10,259 15 0	1,025 19 10½
Add—Sale of grazing farms, beds of rivers, &c	18,647 14 0	1,864 15 9
Total realizable revenue	3,78,396 6 0	37,839 12 9

The rates of assessment introduced in 1868-69 remain in force until 1897-98.

Resources, 1873-74.

The returns for 1873-74 show that the population, as given in the census of 1872, of 70,112 souls lodged in 16,316 houses, was provided with 1,975 wells and 322 tanks, and owned the following stock: 4,744 ploughs, 4,370 carts, 13,885 oxen, 10,497 cows, 11,860 buffaloes, 44 horses, 12,948 sheep and goats, and 20 asses.

Occupancy.

In 1868-69, the year of settlement, 8,424 distinct holdings, or *kháta*, were recorded, with an average area of $8\frac{7}{4\,0}$ acres, and a rental of £4 4*s.* 3½*d.* (Rs. 42-2-7). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of $2\frac{1}{4\,0}$ acres, at a yearly rent of £1 10*d.* (Rs. 10-6-8). If distributed among the whole population of the sub-division, the

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share per head would amount to $1\frac{5}{40}$ acres, and the incidence of the land-tax to 11*s.* $6\frac{3}{4}$*d.* (Rs. 5-12-6).

From statistics furnished by the registration department, it would seem that in the year 1867, $34\frac{24}{40}$ acres of land were purchased at a total cost of £491 4*s.* 6*d.* (Rs. 4,912-4-0), or £14 3*s.* $11\frac{1}{8}$*d.* (Rs 141-15-5) per acre. In the year 1874, $176\frac{3}{40}$ acres were transferred at a cost of £491 16*s.* (Rs. 4,918), or an average value per acre of £2 15*s.* $7\frac{1}{8}$*d.* (Rs. 27-12-9).

Produce, 1873-74.

Of 59,611 acres, the total area of cultivated land, 25,221 acres, or 42·30 per cent, were in the year 1873-74 fallow or under grass. Of the 34,390 acres under actual cultivation, grain crops occupied 21,650 acres, or 62 95 per cent, of which 10,311 acres were under *juwár* (Sorghum vulgare); 72 under *bájri* (Holcus spicatus); 115 under wheat, *ghau* (Triticum æstivum); 9,619 under rice, *dángar* (Oryza sativa); and 1,533 under miscellaneous cereals, comprising *kodra* (Paspalum scrobiculatum), *nágli* (Eleusine coracana), and *banti* (Panicum sativum. Pulses occupied 7,178 acres, or 20 87 per cent, of which 1,697 were under *turer* (Cajanus indicus), and 5,481 under miscellaneous pulses, comprising *guwár* (Dolichos fabœformis); *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); and peas, *watána* (Pisum sativum). Oil-seeds occupied 3,261 acres, or 9 48 per cent, of which 239 were under *tal* (Sesamum indicum), and 3,022 under castor-oil seeds, *divela* (Ricinus communis). Fibres occupied 6,160 acres, or 17·91 per cent, of which 5,881 were under cotton, *kapás* (Gossypium indicum), and 279 under hemp, *san* (Crotalaria juncea.) Miscellaneous crops occupied 2,569 acres, or 7·47 per cent, of which 1,629 were under sugar-cane, *serdi* (Saccharum officinarum); 75 under plantain trees, *kel* (Musa paradisiaca); 32 under tobacco, *tambáku* (Nicotiana tabacum); and 833 under miscellaneous vegetables and fruits.

Population, 1872.

The census returns for 1872 show that of a total population of 70,112, 66,403, or 94 71 per cent, were Hindus; 3,449, or 4·92 per cent, were Musalmáns; 260, or 0·37 per cent, were Pársis. From statistics specially prepared from the enumerators' forms, the total Hindu population of 66,403 souls would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 10,369; Káyasths, 8; Wániás, 2,466; Shrávaks, 1,772; Bhátiás and Luwánás, 106; Kanbis, 5,974; Rajputs, 927; Káchhiás, 200; Mális, 105; Khatris (weavers of silk and cotton), 680; Ghánchis (oil-pressers), 801; Chhipás (calenders), 170; Sonis (silver and goldsmiths), 399; Kansárás (brass and coppersmiths), 119; Suthárs (carpenters), 1,439, Luhárs (blacksmiths), 410; Darjis (tailors), 1,010; Kumbhárs (potters), 892; Hajáms (barbers), 289; Dhobhis (washermen), 57; Bharwáds, Rabáris, Bhandáris (shepherds and toddy-drawers), 2,091; Khárwás (seamen), 318; Máchhis (fishermen), 2,521; Golás (rice-pounders), 300; Bhádbhujás (grain-parchers), 13; Purabiás and Maráthás, 213; Kolis 17,861; aboriginal tribes, such as Dublás, Dhondiás, Bhils, and others, 10,317; Mochis (shoe-makers), 904; Khálpás (tanners), 471; despised low castes, Dhers and Bhangiás, 2,925; and religious beg-

gars, 276. According to the same return the occupation of the whole population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 700 souls. ii. Professional persons, 225. iii. Persons in service, or performing personal offices, 526. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 11,133; (*b*) labourers, 8,987—total 20,120. v. Persons engaged in commerce and trade, 386. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 8,079. vii. Miscellaneous persons not classed otherwise—(*a*) women 12,166, and children 26,681 —in all 38,847; and (*b*) miscellaneous persons, 1,229—total 40,076.

Public health.

The total number of deaths in the four years ending with 1873-74 was 7,969, or an average yearly mortality of 1,992, or, assuming the figures of the census of 1872 as a basis of 2·84 per cent of 70,112, the total population of the sub-division. Of the average number of deaths 1,314, or 65 96 per cent, were returned as due to fever; 399, or 20·03 per cent, to diarrhœa and dysentery; 19, or 0·95 per cent, to small-pox; 2, or 0 1 per cent, to cholera; and 233, or 11·69 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 25, or 1 25 per cent of the average mortality of the sub-division. During the same period the number of births is returned at 7,304, of whom 3,795 are entered as male and 3,509 as female children; or an average yearly birth-rate of 1,826, or 2·6 per cent of the total population of the sub-division.

CHIKHLI.

Chikhli Sub-division.—The Chikhli sub-division of the Surat district is bounded on the north by a portion of the Jalálpor sub-division and the territory of His Highness the Gáekwár of Baroda; on the east by the estates of the Rájás of Bánsda and Dharampor; on the south by the Auranga river; and on the west by Balsár, by Gandevi which belongs to the Gáekwár of Baroda, and by a portion of the Jalálpor sub-division. The total area is 165 square miles. The population, according to the census returns of 1872, consists of 59,312 souls, or shows an average density of 359·46 to the square mile. The realizable land revenue in 1874-75 amounted to £20,969 (Rs. 2,09,690).

Area.

Of the total area of 165 square miles, four are occupied by the lands of alienated villages. The remainder, according to revenue survey returns, contains 83,847 acres, or 81·40 per cent, of occupied land; 11,529 acres, or 11 19 per cent, of culturable waste; 1,016 acres, or 0·98 per cent, of unculturable waste; and 6,605 acres, or 6·41 per cent, occupied by reservoirs, river beds, and the sites of villages. From 95,376 acres, 3,070 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 92,306 acres, the actual area of culturable state land, 74,292 acres, or 80·48 per cent, were in the year 1873-74 under cultivation.

Aspect.

The district consists of two parts, raised plateaux and belts of low-lying land. The tracts of elevated ground are seamed by rocky water-courses; the soil, poor and shallow, is cultivated only in patches, and yields little but grass and brushwood. Between these raised tracts, near the borders of rivers, are low-lying lands of very

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CHIKHLI.

fertile soil, yielding heavy crops of sugar-cane, ornamented with groves of tamarind, mango, jack, and other valuable trees.

As it lies so near the sea, the Chikhli sub-division, even in the hot weather months, enjoys a very temperate climate.

There are four chief rivers,—the Ambika Káveri, Kharera, and Auranga. These run through the sub-division from east to west, and for a distance of from eight to ten miles from their mouths, are all of them more or less influenced by the tide. Always percolating the soil, and thus keeping it cool and moist, these rivers, and the smaller streams which intersect the entire surface of the sub-division, increase the fertility of the district and sensibly affect its climate. The most valuable sources of irrigation are the smaller streams, the feeders of the four chief rivers. Though there are no large reservoirs, the supply of stored water is in most villages enough to raise a small quantity of very superior rice.

Soil.

In this sub-division there are two distinct varieties of soil,—the ordinary black soil, coarse in texture, and abounding with small nodules of limestone; and the rich alluvial loam, known as sugar-cane growing soil, and varying in colour from reddish-brown to deep chocolate. Once in four years this soil may be cropped with sugar-cane. In other seasons it gives two harvests—an excellent yield of rice, followed by a crop of pulse. There is, besides, the ordinary rice soil of a very superior character, varying in colour from jet-black to dark-brown, mixed with a fair proportion of clay, deep and retentive of moisture.

Assessment, 1865.

The following statement shows the area occupied in the state villages and the assessment imposed under rates guaranteed by government in the year 1864-65 :—

Statement showing the Area occupied and the Assessment imposed, 1864-1865.

Tenure	Description of land	Occupied.			Unoccupied arable waste			Total		
		Acres	Assessment.	Average rate per acre.	Acres	Assessment.	Average rate per acre	Acres	Assessment.	Average rate per acre.
			Rs.	Rs. a. p		Rs	Rs. a. p		Rs	Rs a. p.
Government	Dry-crop	66,486	1,54,752	2 5 3	11,294	20,468	1 13 0	77,780	1,75,220	2 4 1
	Garden	6,412	57,082	8 14 5	120	757	6 4 9	6,532	57,839	8 13 8
	Rice	7 879	59,344	7 8 6	115	575	5 0 4	7,994	59,919	7 7 11
	Total	80,777	2,71,178	3 5 9	11,529	21,800	1 14 3	92,306	2,92,978	3 2 9
Alienated	Dry-crop	1,467	3,944	2 11 1	..	...	...	1,467	3,944	2 11 1
	Garden	362	4,183	11 8 9	..	...	...	362	4,183	11 8 9
	Rice ..	1,241	9,497	7 10 5	...	...	...	1,241	9,497	7 10 5
	Total	3,070	17,624	5 11 10	...	..	...	3,070	17,624	5 11 10
Total	Dry-crop	67,953	1,58,696	2 5 4	11,294	20,468	1 13 0	79,247	1,79,164	2 4 2
	Garden	6,774	61,265	9 0 8	120	757	6 4 9	6,894	62,022	8 15 11
	Rice	9,120	68,841	7 8 9	115	575	5 0 4	9,235	69,416	7 8 3
	Grand Total	83,847	2,88,802	3 7 1	11,529	21,800	1 14 3	95,376	3,10,602	3 4 1

	Rs. a. p.	£. s. d.
Total assessment on government and alienated lands	3,10,601 13 0	31,060 3 7½
Deduct—Valuations of alienations (including *Sarákati* villages)	22,709 6 4	2,270 18 9½
Remains realizable	2,87,892 6 8	28,789 4 10
Add—Realizable quit-rents, &c.,	1,930 11 0	193 1 4½
Add—Sale of grazing farms, beds of rivers, &c.	5,255 4 4	525 10 6½
Total realizable revenue	2,95,078 6 0	29,507 16 9

The rates of assessment introduced in 1864-65 remain in force until 1893-94.

Resources, 1873-74.

The returns for 1873-74 show that the population, as given in the census of 1872, of 59,312 souls lodged in 12,311 houses, was provided with 1,132 wells and 133 tanks, and owned the following stock: 6,994 ploughs, 4,159 carts, 19,059 oxen, 15,652 cows, 9,567 buffaloes, 62 horses, 17,237 sheep and goats, and 27 asses.

Occupancy.

In 1864-65, the year of settlement, 5,994 distinct holdings, or *kháta*, were recorded, with an average area of $16\frac{18}{40}$ acres, and a rental of £5 7*s.* $2\frac{3}{4}$*d.* (Rs. 53-9-10). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of $3\frac{21}{40}$ acres, at a yearly rent of £1 3*s.* 5½*d.* (Rs. 11-11-8). If distributed among the whole population of the sub-division, the share per head would amount to $2\frac{1}{40}$ acres, and the incidence of the land-tax to 13*s.* $3\frac{1}{8}$*d.* (Rs. 6-10-1).

Value of land.

From statistics furnished by the registration department, it would seem that in the year 1866 no land was transferred; but in the year following $51\frac{1}{40}$ acres of land were purchased at a total cost of £115 2*s.* 6*d.* (Rs. 1,151-4-0), or £2 4*s.* 11½*d.* (Rs. 22-7-5) per acre. In 1874, $101\frac{34}{40}$ acres were transferred at a cost of £179 8*s.* (Rs. 1,794), or an average value per acre of £1 15*s.* $2\frac{3}{4}$*d.* (Rs. 17-9-10).

Produce, 1873-74.

Of 74,292 acres, the total area of cultivated land, 38,497 acres, or 51·81 per cent, were in the year 1873-74 fallow or under grass. Of the 35,795 acres under actual cultivation, grain crops occupied 26,845 acres, or 74·99 per cent, of which 2,188 acres were under *juwár* (Sorghum vulgare); 2 under *bájri* (Holcus spicatus); 4 under wheat, *ghau* (Triticum æstivum); 14,599 under rice, *dángar* (Oryza sativa); and 10,052 acres under miscellaneous grains, comprising *nágli* (Eleusine coracana), and *kodra* (Paspalum scrobiculatum). Pulses occupied 8,413 acres, or 23·50 per cent, of which 1,958 acres were under *tuver* (Cajanus indicus), and 6,455 acres under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); peas, *watána* (Pisum sativum); and *guwár* (Dolichos fabœformis). Oil-seeds occupied 5,692 acres, or 15·90 per cent, of which 5,680 acres were under castor-oil seeds, *divela* or *eranda* (Ricinus communis), and 12 under *tal* (Sesamum indicum). Fibres occupied 236 acres, or 0·65 per cent, of which one acre was under cotton, *kapás* (Gossypium indicum), and 235 acres were under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 1,179 acres, or 3·29 per cent,

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of which 10 acres were under tobacco, *tambáku* (Nicotiana tabacum); 1,030 under sugar-cane, *serdi* (Saccharum officinarum); 3 under plantain trees, *kel* (Musa paradisiaca); and 136 under miscellaneous vegetables and fruits.

Population, 1872.

The census returns for 1872 show that of a total population of 59,312, 53,787, or 90·68 per cent, were Hindus; 5,285, or 8·91 per cent, were Musalmáns; and 240, or 0·40 per cent, were Pársis. From statistics specially prepared from the enumerators' forms, the total Hindu population of 53,787 souls would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 3,481; Brahma-Kshatris, 4; Káyasths, 1; Wániás, 988, Shrávaks, 304; Bhátiás and Luwánás, 17; Kanbis, 1,333; Rajputs, 229; Káchhiás, 117; Mális, 110; Khatris (weavers of silk and cotton), 284; Ghánchis (oil-pressers), 344; Chhipás (calenders), 63; Sonis (silver and goldsmiths), 529; Kansárás (brass and coppersmiths, 120; Suthárs (carpenters), 1,365; Luhárs (blacksmiths), 243, Darjis (tailors), 542; Kadiás (bricklayers), 22; Saláts (masons), 3; Kumbhárs (potters), 750; Hajáms (barbers), 351; Dhobhis (washermen), 61; Bharwáds and Bhandáris (shepherds and toddy-drawers), 1,830; Máchhis (fishermen), 171; Golás (rice-pounders), 13; Bhádbhujás (grain-parchers), 11; Purabiás and Maráthás, 445; Wághris (fowlers and hunters), 538; Kolis, 5,649; aboriginal tribes, such as Dublás, Dhondiás, Bhils, and others, 29,525, Mochis (shoe-makers), 575; Khálpás (tanners), 559; despised low castes, Dhers and Bhangiás, 3,112; and religious beggars, 98. According to the same return the occupation of the whole population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 207 souls. ii. Professional persons, 233. iii. Persons in service, or performing personal offices, 344. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 15,430; (*b*) labourers, 10,170—total 25,600. v. Persons engaged in commerce and trade, 322. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 3,576. vii. Miscellaneous persons not classed otherwise—(*a*) women 5,645, and children 22,702, in all 28,347; and (*b*) miscellaneous persons, 683—total 29,030.

Public health.

The total number of deaths in the three years ending with 1873-74 was 4,901, or an average yearly mortality of 1,634, or, assuming the figures of the census of 1872 as a basis, of 2·75 per cent of 59,312, the total population of the sub-division. Of the average number of deaths, 1,100, or 67·31 per cent, were returned as due to fever; 140, or 8·56 per cent, to diarrhœa and dysentery; 12, or 0·73 per cent, to cholera; and 363, or 22·21 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 19, or 1·16 per cent of the average mortality of the sub-division. During the same period the number of births is returned at 4,460 souls, of whom 2,355 were entered as male and 2,105 as female children; or an average yearly birth-rate of 1,487, or 2·50 per cent, of the total population of the sub-division.

Balsa'r Sub-division.—The Balsár sub-division of the Surat district is situated on the sea-coast. It is bounded on the north by the Káveri river, which separates it from the Jalálpor sub-division of the Surat district; on the north-east by the Chikhli sub-division of the Surat district; on the east by the Dharampor state; on the south by the river Pár, which separates it from the Párdi sub-division of the Surat district; and on the west by the sea. The total area is 210 square miles, and the population was in 1872 returned at 78,207 souls; or an average density of 372·41 to the square mile. The realizable land revenue in 1874-75 amounted to £24,346 (Rs. 2,43,460).

Area.

There are no alienated villages in this sub-division. The total area shown above, of government villages, contains 94,675 acres, or 70·52 per cent, of occupied land; 10,220 acres, or 7·61 per cent, of culturable waste; 3,301 acres, or 2·45 per cent, of unculturable waste; and 26,055, acres, or 19·40 per cent, occupied by village sites, roads, tanks, and rivers. From 104,895 acres, 3,032 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 101,863 acres, the actual area of culturable state land, 92,161 acres, or 90·47 per cent, were in the year 1873-74 under cultivation.

Aspect.

There is considerable variety in the aspect of this sub-division. In the north, near the Káveri, is a narrow strip of rich garden land, south of this, for a time, the country becomes poorer and more scantily wooded until, near the banks of the Auranga, is another belt of land of great fertility. South of the Auranga the signs of fertility become fewer, gradually approaching the rough and barren character of the Párdi sub-division. Throughout the whole length of the sub-division, especially in the Párnera or south-east corner, the surface is irregular, seamed with river beds and rising into rocky uplands. Almost every village has a fine grove of trees, one or two good ponds, and well-built houses; but, beyond a certain distance from the town of Balsár, the general appearance of the country is open and poorly cultivated, abounding in wild-date and babul trees. The Párnera sub-division, with its large population of aboriginal tribes, is, especially in the matter of its houses and villages, greatly inferior to the rest of Balsár.

Climate.

The climate of the Balsár, or western portion, is considered healthy at all times of the year. The eastern tracts of Párnera and Bhutsar are, from their neighbourhood to the Dáng forests, feverish during the rains and cold season. During the other parts of the year Párnera is remarkably healthy. The sea-breeze sets in about March, and until the middle of June continues to blow so strong and steady that the hot weather is scarcely felt. Tithal, a village on the coast, has a dry sandy soil, good water, and a fine stretch of six miles of level sand. The place presents many advantages as a sanitarium, being within easy distance of Bombay by rail. Detachments of troops brought down every year from the northern cantonments, and a large number of visitors testify to its value. The mean average rain-fall during the ten years ending 1874 is 71 inches.

The district is abundantly watered by rivers and streams. Of these, the principal, flowing throughout the year, are the Káveri, Auranga, and Pár. The Wánki and Bám streams, next in importance, take

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their rise a little beyond the limits of the sub-division; but it is only after a heavy monsoon that they continue to run all the year. With the exception of the Pálan reservoir, there are few good places for the storage of water in Balsár, and the amount of irrigation from built and unbuilt wells and from masonry weirs is insignificant.

Soil.

The soil is of a reddish colour, sandy at the base of the hills, and loamy in the plain, except where the large rivers have stored beds of the finest alluvium, or *bhátha*. The salt marsh lands of the Balsár sub-division, extending over about 12,355 acres, are divided by the Auranga river into separate groups. About 10,664 acres are under process of reclamation. Of the reclamations, one of 750 acres has been protected by an embankment, described, (March 1876) as a most creditable piece of workmanship. A few acres of the sweetest land put under rice in 1875 yielded a satisfactory and encouraging out-turn.[1]

Hills.

Of the seven small hills at Dungri and the larger hill and fort of Párnera some account has been given in the general description of the district.

Assessment, 1870.

The following statement shows the area occupied in the state villages and the assessment imposed under rates guaranteed by government in the year 1869-70 :—

Statement showing the Area occupied and the Assessment imposed, 1869-1870.

Tenure	Description of land	Occupied			Unoccupied arable waste			Total.		
		Acres.	Assessment	Average rate per acre	Acres	Assessment	Average rate per acre.	Acres	Assessment	Average rate per acre.
			Rs	Rs. a p		Rs.	Rs a p		Rs	Rs. a p
Government	Dry-crop	72,274	84,320	1 2 8	9,793	7,615	0 12 5	82,067	91,944	1 1 11
	Garden	9,811	91,127	9 4 11	123	410	3 5 7	9,934	91,737	9 3 9
	Rice	9,558	73,854	7 11 8	304	1,197	3 14 11	9,862	75,081	7 9 1
	Total	91,643	2,49,540	2 11 7	10,220	9,222	0 14 5	101,863	2,58,762	2 8 8
Alienated	Dry-crop	1,744	2,046	1 2 9				1,744	2,046	1 2 9
	Garden	322	4,324	13 7 0				322	4,324	13 7 0
	Rice	966	7,917	8 3 2				966	7,917	8 3 2
	Total	3,032	14,287	4 11 5				3,032	14,287	4 11 5
Total.	Dry-crop	74,018	86,375	1 2 8	9,793	7,615	0 12 5	83,811	93,990	1 1 11
	Garden	10,133	95,451	9 7 0	123	410	3 5 7	10,256	96,061	9 5 10
	Rice	10,524	81,801	7 12 4	304	1,197	3 14 11	10,828	82,998	7 10 8
	Grand Total	94,675	2,63,827	2 12 7	10,220	9,222	0 14 5	104,895	2,73,049	2 9 8

	Rs. a. p.	£. s. d.
Total assessment on government and alienated lands	2,73,048 13 0	27,304 17 7½
Deduct—Valuations of alienations ...	14,286 11 0	1,428 13 4½
Remains realizable	2,58,762 2 0	25,876 4 3
Add—Realizable quit-rents, &c. ...	1,481 8 0	148 3 0
Add—Sale of grasing farms, beds of rivers, &c, ...	4,628 8 8	462 17 1
Total realizable revenue.	2,64,873 2 8	26,487 4 4

[1] Report of the Superintendent of Agriculture (Mr. Milnes), No. 142, dated 31st May 1876.

The rates of assessment introduced in 1869-70 remain in force until 1898-99.

Resources, 1873-74.

The returns for 1873-74 show that the population, as given in the census of 1872, of 78,207 souls lodged in 17,228 houses, was provided with 1,707 wells and 288 tanks, and owned the following stock: 7,429 ploughs, 4,334 carts, 18,049 oxen, 13,945 cows, 9,163 buffaloes, 58 horses, 13,130 sheep and goats, and 54 asses.

Occupancy.

In 1869-70, the year of settlement, 7,216 distinct holdings, or *kháta*, were recorded, with an average area of $13\frac{5}{40}$ acres, and a rental of £3 9*s.* 6$\frac{7}{8}$*d.* (Rs. 34-12-7). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of $2\frac{30}{40}$ acres, at a yearly rent of 14*s.* 6$\frac{1}{8}$*d.* (Rs. 7-4-7). If distributed among the whole population of the sub-division, the share per head would amount to $1\frac{9}{40}$ acres, and the incidence of the land-tax to 6*s.* 5$\frac{3}{4}$*d.* (Rs. 3-3-10).

Value of land.

From statistics furnished by the registration department, it would seem that in the year 1867, $147\frac{3}{40}$ acres of land were purchased at a total cost of £648 3*s.* (Rs. 6,481-8), or £4 7*s.* 11$\frac{3}{4}$*d.* (Rs. 43-15-10) per acre. In 1874, $391\frac{1}{40}$ acres were transferred at a cost of £1,014 15*s.* (Rs. 10,147-8), or an average value per acre of £2 11*s.* 10$\frac{1}{4}$*d.* (Rs. 25-14-10).

Produce, 1873-74.

Of 92,161 acres, the total area of cultivated land, 50,829 acres, or 55·15 per cent, were in the year 1873-74 fallow or under grass. Of the 41,332 acres under actual cultivation, grain crops occupied 29,189 acres, or 70·62 per cent, of which 349 acres were under *juwár* (Sorghum vulgare); 3 under wheat, *ghau* (Triticum æstivum); 14,245 under rice, *dángar* (Oryza sativa); and 14,592 under miscellaneous crops, comprising *nágli* (Eleusine coracana) and *kodra* (Paspalum scrobiculatum). Pulses occupied 9,069 acres, or 21·94 per cent, of which 1,315 acres were under *tuver* (Cajanus indicus); and 7,754 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); peas, *watána* (Pisum sativum); and *guwár* (Dolichos fabæformis.) Oil-seeds occupied 7,693, or 18·61 per cent; all of which were under castor-oil seeds *divela* (Ricinus communis). Fibres occupied 383 acres, or 0·92 per cent, of which 381 acres were under hemp, *san* (Crotalaria juncea), and two acres under cotton, *kapás* (Gossypium indicum). Miscellaneous crops occupied 2,218 acres, or 5·36 per cent, of which 1,890 acres were under sugar-cane, *serdi* (Saccharum officinarum); 45 acres under plantain trees, *kel* (Musa paradisiaca); 2 acres under tobacco, *tambáku* (Nicotiana tabacum); and 281 acres under miscellaneous vegetables and fruits.

Population, 1872.

The census returns for 1872 show that of a total population of 78,207, 73,625, or 94·13 per cent, were Hindus; 3,592, or 4·59 per cent, were Musalmáns; 974, or 1·24 per cent, were Pársis; and 16 came under the head of 'others.' From statistics specially prepared from the enumerators' forms, the total Hindu population of 73,625 souls would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 4,755; Par-

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bhus, 5; Káyasths, 40; Wániás, 671; Shrávaks, 452; Bhátiás and Luwánás, 93; Kanbis, 2,097; Rajputs, 960; Káchhiás, 131; Mális, 30; Khátris (weavers of silk and cotton), 885; Ghánchis (oil-pressers), 326; Chhipás, and Bhávsárs (calenders and calico-printers), 285; Sonis (silver and goldsmiths), 682; Kansárás (brass and coppersmiths), 58; Suthárs (carpenters), 960; Luhárs (blacksmiths), 278; Saláts (masons), 2; Darjis (tailors), 796; Kumbhárs (potters), 666; Hajáms (barbers), 364; Dhobhis (washermen), 107; Bharwáds and Rabáris (shepherds), 1,130; Khárwás (seamen), 534; Máchhis (fishermen), 6,348; Golás (rice-pounders), 94; Bhádbhujás (grain-parchers), 19; Purabiás and Maráthás, 273; Wághris (fowlers and hunters), 24; Kolis, 15,099; aboriginal tribes, such as Dublás, Dhondiás, Bhils, and others, 27,047; Mochis (shoe-makers), 722; Khálpás (tanners), 340; despised low castes, Dhers and Bhangiás, 7,267; and religious beggars, 85. According to the same return, the occupation of the total population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 910 souls. ii. Professional persons, 711 iii Persons in service, or performing personal offices, 605. iv Persons engaged in agriculture and with animals—(*a*) cultivators, 16,877; (*b*) labourers, 12,743—in all 29,620. v Persons engaged in commerce and trade, 1,187 vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 8,242. vii. Miscellaneous persons not classed otherwise—(*a*) women 6,757, and children 29,557—in all 36,314; and (*b*) miscellaneous persons, 618—total 36,932.

Public health.

The total number of deaths in the three years ending with 1874-75 was 5,792, or an average yearly mortality of 1,931, or, assuming the figures of the census of 1872 as a basis, of 2·46 per cent of 78,207, the total population of the sub-division. Of the average number of deaths, 1,324, or 68·56 per cent, were returned as due to fever; 229, or 11·85 per cent, to diarrhœa and dysentery; 5, or 0·25 per cent, to small-pox; 38, or 1·96 per cent, to cholera; and 307, or 15·89 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 28, or 1·45 per cent of the average mortality of the sub-division. During the same period the number of births is returned at 4,389 souls, of whom 2,264 are entered as male and 2,125 as female children, or an average yearly birth-rate of 1,463, or 1·87 per cent of the total population of the sub-division.

PA'RDI.

Pa'rdi Sub-division—The Párdi sub-division of the Surat district is bounded on the north by the river Pár, which separates it from the Balsár sub-division of the same district; on the east by the Dharampor state; on the south-east by the Portuguese territory (Daman); on the south by the Damanganga river, which separates it from the Dáhánu sub-division of the Tanna district; and on the west by a portion of the Portuguese territory of Daman and the sea. The total area is 163 square miles, and the population in 1872 was returned at 51,749 souls, or an average density of 317·47 to the square mile. The realizable land revenue in 1874-75 amounted to £11,807 (Rs.1,18,070).

Of the total area of 163 square miles, one mile is occupied by the lands of alienated villages. The remainder contains 80,917 acres, or 78·16 per cent, of occupied land; 12,178 acres, or 11·76 per cent, of culturable waste; 3,915 acres, or 3 78 per cent, of unculturable waste; and 6,514 acres, or 6 29 per cent, occupied by village sites, roads, and tanks. From 93,095 acres, 1,979 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 91,116 acres, the actual area of culturable state land, 74,096 acres, or 81·32 per cent, were in the year 1873-74 under cultivation. Area.

Párdi is an undulating plain, with a gradual slope westwards to the sea. Its surface is furrowed with water-courses, and, especially towards the south-west corner, is broken by a few low hills. Mango, tamarind, and several other varieties of valuable trees are abundant. The babul spreads freely over waste and grass land, and near the coast and rivers the wild date is plentiful. The country is almost entirely unfenced, except near village sites, where thick hedges and fine trees give a general appearance of comfort to the substantial houses of the Bháthela Bráhmans and the huts of the aboriginal tribes. There is a considerable difference noticeable in the appearance of the country north and south of the Kolak. North of this river the soil is of great depth and very productive, and the villages are populous and prosperous. South of the Kolak the bare rocks frequently crop up through the shallow soil, and lime and grit are also found in it in large quantities. Aspect.

The climate of Párdi has a bad reputation for causing fever and liver disease. The neighbourhood of the Kolak, especially where its waters pass below the town of Bagwára, has even a worse name. The unhealthiness of its water is said to be due to the presence of an oily substance found on its surface. In some parts, immediately after the monsoon, well-water has to a certain extent the same character As there is little or no forest in the sub-division, this oil is to be traced to the corruption of the rivers at their source in the densely wooded hills in the east of the district. The mean average rain-fall is close upon 70 inches. Even in season of general failure of rain, Párdi would seem to obtain a fair rain-fall. Climate.

Besides the frontier rivers,—the Pár on the north, and the Damanganga on the south,—Párdi is traversed by the Kolak. Boats of sixty tons and under can at high tide pass up the river as far as the railway bridge. Towards the north the several minor streams, uniting near Párdi, flow into the sea below Umarsári. Water-supply.

Towards the north the soil of Párdi varies in colour from light brown to red; in the central parts medium, *besar*, is more commonly met with; and towards the south are several varieties ranging from light brown to yellow, as the soil becomes more and more calcareous. The texture of these soils generally is coarser than it is either in the Balsár or Jaláipor sub-division. In fields which have received the detritus of the high lands, the soil is of a rich colour and quality, capable year after year of producing fine crops. In like manner, the soil called *owan* is very productive, and though it does not differ intrinsically from the surrounding varieties, is improved by Soil.

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the constant moisture absorbed from the underlying water stratum, which tends to decompose the constituent particles more thoroughly than would be the case had the field been on a higher level. The usual description of rich alluvial loam, or *bhátha*, is to be found in the loops formed by the Pár, eastward of Kachwál, and by the Kolak near Ambách and Pandor.

Hills.

The hill fortresses of Párdi and Bagwára, both in this sub-division, have been mentioned in the general description of the district.

Assessment, 1870.

The following statement shows the area occupied in the state villages and the assessment imposed under rates guaranteed by government in the year 1869-70 :—

Statement showing the Area occupied and the Assessment imposed, 1869-70.

Tenure	Description of land	Occupied			Unoccupied arable waste			Total.		
		Acres	Assessment.	Average rate per acre	Acres	Assessment	Average rate per acre	Acres	Assessment.	Average rate per acre.
			Rs	Rs a p		Rs	Rs. a p		Rs.	Rs. a p.
Government	Dry crop	65,055	43,974	0 10 10	11,990	6,301	0 8 5	77,045	50,275	0 10 5
	Garden	1,377	6,481	4 11 4	21	61	2 14 0	1,398	6,545	4 10 11
	Rice	12,506	73,059	5 13 6	167	703	4 3 4	12,673	73,762	5 13 2
	Total	78,938	1,23,517	1 9 0	12,178	7,065	0 9 3	91,116	1,30,582	1 6 11
Alienated	Dry-crop	1,239	921	0 11 11				1,239	921	0 11 11
	Garden	31	136	4 6 1				31	136	4 6 1
	Rice	709	4,198	5 14 9				709	4,198	5 14 9
	Total	1,979	5,255	2 10 6				1,979	5,255	2 10 6
Total.	Dry-crop	66,294	44,895	0 10 10	11,990	6,301	0 8 5	78,284	51,196	0 10 6
	Garden	1,408	6,620	4 11 4	21	61	2 14 0	1,429	6,681	4 10 10
	Rice	13,215	77,257	5 13 7	167	703	4 3 4	13,382	77,960	5 13 3
	Grand Total	80,917	1,28,772	1 9 6	12,178	7,065	0 9 3	93,095	1,35,837	1 7 4

	Rs a. p	£. s. d.
Total assessment on government and alienated lands	1,35,836 11 8	13,583 13 5½
Deduct—Valuations of alienations	5,255 0 8	525 10 1
Remains realizable	1,30,581 11 0	13,058 3 4½
Add—Realizable quit-rents, &c	568 10 0	56 17 3
Add—Sale of grazing farms, beds of rivers, &c.	20,273 13 6	2,027 7 8¼
Total realizable revenue	1,51,424 2 6	15,142 8 3¾

The rates of assessment introduced in 1869-70 remain in force until 1898-99.

Resources, 1873-74.

The returns for 1873-74 show that the population, as given in the census of 1872, of 51,749 souls lodged in 10,680 houses, was provided with 406 wells and 100 tanks, and owned the following

stock: 5,597 ploughs, 3,099 carts, 14,632 oxen, 12,323 cows, 21,953 buffaloes, 100 horses, 8,725 sheep and goats, and 9 asses.

Occupancy.

In 1869-70, the year of settlement, 5,532 distinct holdings, or *khátá*, were recorded, with an average area of $14\frac{25}{40}$ acres, and a rental of £2 4*s.* $10\frac{3}{8}$*d.* (Rs. 22-6-11). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of $3\frac{13}{40}$ acres, at a yearly rent of 10*s.* $2\frac{3}{8}$*d.* (Rs. 5-1-7.) If distributed among the whole population of the sub-division, the share per head would amount to two acres, and the incidence of the land-tax to 6*s.* $1\frac{1}{2}$*d.* (Rs. 3-1).

Value of land.

From statistics furnished by the registration department, it would seem that in the year 1867, $187\frac{38}{40}$ acres of land were purchased at a total cost of £246 4*s.* $7\frac{1}{2}$*d.* (Rs 2,462-5), or £1 6*s.* $2\frac{1}{5}$*d.* (Rs. 13-1-7) per acre. In 1874, $180\frac{15}{40}$ acres were transferred at a cost of £105 2*s.* (Rs. 1,051), or an average value per acre of 11*s.* $7\frac{3}{4}$*d.* (Rs. 5-13-2).

Produce, 1873-74.

Of 74,096 acres, the total area of cultivated land, 29,901 acres, or 40·35 per cent, were, in the year 1873-74, fallow or under grass. Of the 44,195 acres under actual cultivation, grain crops occupied 32,022 acres, or 72·45 per cent, of which 136 acres were under *juwár* (Sorghum vulgare); 9 under wheat, *ghau* (Triticum æstivum); 16,554 under rice, *dángar* (Oryza sativa); and 15,323 under miscellaneous grains, comprising *nágli* (Eleusine coracana) and *kodra*, (Paspalum scrobiculatum). Pulses occupied 7,378 acres, or 16·69 per cent, of which 1,941 acres were under *tuver* (Cajanus indicus); and 5,437 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); and peas, *watána* (Pisum sativum). Oil-seeds occupied 7,428 acres, or 16·8 per cent, of which 7,297 acres were under castor-oil seeds, *divela* or *eranda* (Ricinus communis); and 131 under *tal* (Sesamum indicum). Fibres occupied 325 acres, or 0·73 per cent, which were all under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 809 acres, or 1·83 per cent, of which 13 acres were under tobacco, *tambákn* (Nicotiana tabacum); 695 under sugar-cane, *serdi* (Saccharum officinarum); 20 under plantain trees, *kel* (Musa paradisiaca); 81 under miscellaneous vegetables and fruits.

Population, 1872.

The census returns for 1872 show that of a total population of 51,749, 49,309, or 95·27 per cent, were Hindus; 1,422, or 2·74 per cent, were Musalmáns; and 1,018, or 1·96 per cent, were Pársis. From statistics specially prepared from the enumerators' form, the total Hindu population of 49,309 souls would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 3,180; Parbhus, 95; Brahma-Kshatris, 7; Káyasths, 4; Wániás, 551; Shrávaks, 387; Bhátiás and Luwánás, 136; Kanbis, 621; Rajputs, 248; Káchhiás, 497; Mális, 28; Khatris (weavers of silk and cotton), 57; Ghánchis (oil-pressers), 159; Chhipás and Bhávsárs (calenders and calico-printers), 23; Sonis (gold and silversmiths), 326; Kansárás (brass and coppersmiths), 126; Suthárs (carpenters), 697; Luhárs (blacksmiths), 214; Darjis (tailors), 209; Saláts (masons), 7; Kumbhárs (potters), 224; Hajáms (barbers), 128;

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Sub-divisional Accounts.

PA'RDI.

Dhobhis (washermen), 47; Bharwáds and Bhandáris (shepherds and toddy-drawers), 1,874; Khárwás (seamen), 25; Máchhis (fishermen), 2,132; Golás (rice-pounders), 113; Bhádbhujás (gram-parchers), 3; Purabiás and Maráthás, 452; Wághris (fowlers and hunters) and Rávalás (cotton tape-makers), 337; Kolis, 5,205; aboriginal tribes, such as Dublás, Dhondiás, Bhils, and others, 28,255; Mochis (shoemakers), 318; Khálpás (tanners), 226, despised low castes, Dhers and Bhangiás, 2,357; and religious beggars, 41. According to the same return, the occupation of the whole population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 500 souls. ii. Professional persons, 379. iii. Persons in service, or performing personal offices, 356. iv. Persons employed in agriculture and with animals—(*a*) cultivators, 11,874; (*b*) labourers, 9,235—total 21,109. v. Persons engaged in commerce and trade, 504. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 3,020. vii. Miscellaneous persons not classed otherwise—(*a*) women 7,059, and children 18,385, in all 25,444; and (*b*) miscellaneous persons, 437—total 25,881.

Public health.

The total number of deaths in the four years ending with 1873-74 was 3,323, or an average yearly mortality of 831, or, assuming the figures of the census of 1872 as a basis of 1·60 per cent of 51,749, the total population of the sub-division Of the average number of deaths, 532, or 64·01 per cent, were returned as due to fever; 109, or 13·11 per cent, to diarrhœa and dysentery; 4, or 0·48 per cent, to small-pox; 11, or 1·32 per cent, to cholera; and 156, or 18·77 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 19, or 2·28 per cent of the average mortality of the sub-division. During the same period the number of births is returned at 2,948 souls, of whom 1,535 are entered as male and 1,413 as female children, or an average yearly birth-rate of 737, or 1·42 per cent of the total population of the sub-division.

CHAPTER XIV.

PLACES OF INTEREST.

Balsa'r (Walsa'd), north lat. 20° 38'; east long. 72° 58'. A port and municipal town, about forty miles south of Surat, and one hundred and fifteen miles north of Bombay. It is situated on the estuary of the navigable, though small river, Auranga, and is, at the same time, a station on the railway between Surat and Bombay. Of its total population of 11,313 souls, 8,349 are Hindus, 2,212 Musalmáns, 738 Pársis, and fourteen Christians. The majority of the Hindus are Anávla Bráhmans, Wánás, and Khatris. The Pársis are timber-merchants, shop-keepers, cultivators, and private servants. They have also the entire monopoly of the manufacture and sale of intoxicating drinks. Of the Musalmáns, the greater number are *Táis*, or converted Hindus. Men of this class are engaged chiefly in cloth weaving, and are as a rule well-to-do. The income of the Balsár municipality amounted in 1874-75 to £1,932 (Rs. 19,320), representing a taxation of 3*s.* 5*d.* (Rs. 1-11-4) per head of the total population Balsár is well placed for trade both by sea and by land. The total value of its sea trade in 1874-75 was £84,905 (Rs. 8,49,050), of which £78,637 (Rs. 7,86 370) represented the value of exports, and £ 6,268 (Rs. 62,680) that of imports. This, though a considerable falling off from the corresponding returns in the five years ending with 1871-72, when exports on an average were valued at £105,507 (Rs. 10,55,070), and imports at £48,061 (Rs. 4,80,610), is still much in excess of the trade of the port during the five years ending with 1849-50, when exports were, on an average, valued at £56,121 (Rs. 5,61,210), and imports at £12,713 (Rs. 1,27,130). The railway returns also show an increase in the traffic at Balsár. The total tonnage of goods taken to and from the station rose from 4,150 in 1868 to 4,288 in 1874, and the number of passengers from 91,042 to 101,014. The chief imports are piece-goods, tobacco, wheat, fish, and sugar. The exports are timber, grain, molasses, oil, firewood, and tiles. Its export of timber is the staple of Balsár trade. This, brought from the Dáng forests, is exported by sea to Dholera, Bháunagar, and the other ports of Káthiáwár. The manufactures of Balsár are cloth for wearing apparel and for sails, silk for women's robes, and bricks, tiles, and pottery. Besides the ordinary sub-divisional revenue and police offices, the town is provided with a subordinate judge's court, a post office, and a dispensary.

BALSA'R.

Ba'rdoli, north lat. 21° 8'; east long. 73° 9'. A town with 1,037 houses and a population of 4.282 souls. Besides the ordinary

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sub-divisional revenue and police offices, Bárdoli is provided with a post office and a dispensary.

BODHA'N. **Bodha'n**, north lat 21° 20′; east long. 73° 7′. In the Mándvi subdivision, a place of Hindu pilgrimage, with a population of 3,305 souls. The fair at Bodhán is held when the planet Jupiter enters the constellation of the Lion—an event which happens every twelve years. About two thousand people are estimated to attend on each occasion. The last fair was held in September 1872. The temple at Bodhán contains the image of Gautameshwar Mahádev, in whose honour the fair is held This temple holds land free of rent, measuring $15\frac{33}{40}$ acres in area, and assessed at £3 9*s*. (Rs.34-8) The minister of the temple is a Tapodhan, whose receipts, exclusive of the yearly revenue from the temple lands, amount, on the occasion of the fair, to about £30 (Rs. 300). The majority of the visitors are from the districts of Surat, Broach, Ahmedábád, and from Baroda and Rájpipla territories. On the occasion of the fair about £100 (Rs. 1,000) of goods, chiefly coarse cloth, toys, and articles of food, are estimated to change hands. The fairs at Bodhán have, as far as is known, been free from any outbreak of cholera There are no special municipal arrangements in connection with the fair.

CHIKHLI. **Chikhli**, north lat. 20° 46′; east long. 73° 9′. A town with 770 houses and a population of 3,054 souls. Besides the ordinary subdivisional revenue and police offices, the town is provided with a post office and a dispensary

JALA'LPOR. **Jala'lpor**, north lat. 20° 55′; east long 72° 55′. A village with 475 houses and a population of 2,162 souls. Besides the ordinary sub-divisional revenue and police offices, the town is provided with a post office.

MA'NDVI. **Ma'ndvi**, north lat. 21° 16′; east long. 73° 21′. A municipal town with 1,171 houses and a population of 4,430 souls. Besides the ordinary sub-divisional revenue and police offices, the town is provided with a post office and a dispensary. The income of the Mándvi municipality amounted in 1874-75 to £446 (Rs. 4,460), representing a taxation of 2*s* (Re. 1) per head of the total pupulation.

OLPA'D **Olpa'd**, north lat 21° 21′; east long 72° 48′. A town with 1,176 houses and a population of 4,001 souls. Besides the ordinary subdivisional revenue and police offices, the town is provided with a subordinate judge's court, a post office, and a dispensary.

PA'RDI. **Pa'rdi**, north lat. 20° 31′; east long. 72° 59′. A town with 1,162 houses and a population of 4,545 souls. Besides the ordinary sub-divisional revenue and police offices, the town is provided with a post office and a dispensary.

PA'RNERA. **Pa'rnera**, north lat. 20° 33′; and east long. 72° 59′. A hill four miles south-east of Balsár, and one hundred and twenty miles north of Bombay, rises to a height of about five hundred feet above the plain. From its commanding position the fortified summit of this hill has long been considered a place of consequence. Originally a Hindu fort, it remained under the Rája of Dharampor till, about the end of the fifteenth century, it was taken by Mahmud

Begara, king of Gujarát (1459-1511)[1] The fort remained for some time under the charge of Musalmán commanders, but in the disorders that marked the close of the power of the Ahmedábád kings, it fell into the hands of a chief of banditti. According to the Portuguese writers Párnera was twice, in 1558 and 1568, taken by expeditions from Daman, and on the second occasion the fortifications were destroyed.[2] After it had been allowed to remain in ruins for more than a hundred years, the fort was, in April 1676, taken and rebuilt by Moro Pandit, one of Shiváji's generals.[3] For about a century Párnera remained under the Maráthás. It was then (1780) taken by a detachment of English troops under Lieutenant Welsh.[4] At first, as a protection against the raids of Pindháris, the fort was occupied by a military party; but early in the present century the garrison was removed,[5] and during the mutinies of 1857 the fort was dismantled.

PA'RNERA.

Ra'nder, north lat. 21° 13', east long. 70° 51'. A municipal town, the seat of a considerable export trade in raw cotton, situated on the right bank of the Tápti, about two miles above Surat. Though but little is known of its history, Ránder is admitted to be one of the oldest cities in southern Gujarát. It is generally supposed to be the 'Rahanhour,' which, with Broach or 'Bahroudj,' is by Al Biruni (1030) spoken of as one of the capitals of 'Lardeesa'[6] But some writers would give Ránder a much higher antiquity, and make it a place of importance, when, about the beginning of the Christian era, Broach was the chief seat of commerce in Western India.[7] Shortly after the beginning of the thirteenth century (1225), a colony of Arab merchants and sailors is said to have settled at Ránder. These men attacked the Jains, who at that time ruled in Ránder, drove them out of the city, and converted their temples into mosques[8] Under the name of Náyatás they traded to distant countries and became famous for their wealth and hospitality. Of Ránder, or 'Ranel,' as he writes it, and its Náyatás, the traveller Barbosa (1514) gives the following details: "Ranel is a good town of the Moors, built of very pretty houses and squares. It is a rich and agreeable place, because the Moors of the town trade with Malacca, Bengal, Tawasery (Tenasserim), Pegu, Martaban, and Sumatra, in all sorts of spices, drugs, silks, musk, benzoin and porcelain. They possess very large and fine ships, and those who wish Chinese articles will find them

RA'NDER.

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[1] Briggs' Ferishta, IV., 51.

[2] Faria, in Kerr, VI. 413, 422.

[3] Orme's Historical Fragments, 55.

[4] Grant Duff, II., 416

[5] Government letter dated 3rd July 1819.

[6] Remaud's Fragments, 112.

[7] Narmadáshankar's History of Surat, who states that about B.C. 200 a king, named Sampatti, built four temples in Ránder.

[8] The date is from Narmadáshankar's History Stavorinus (1777) noticed in on of the mosques a stone with the date 150 H. But he adds "this may be no index t the date of the building, as two of the priests told me that the stone had been brough from Jedda."—Stavorinus, III., 181.

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there very completely. The Moors of this place are white, and well dressed, and very rich. They have pretty wives, and in the furniture of their houses have china-vases of many kinds, kept in glass cupboards well arranged. Their women are not secluded like those of other Moors, but go about the city in the day time attending to their business with their faces uncovered as in our parts."[1]

In 1530, after sacking Surat, the Portuguese general, Antonio de Sylvera, crossed the river to the city of Ránder (Reyner), a well-fortified town of six thousand houses. The Náyatás, though said to be 'a race of more courage and policy than the Banians,' fled at the first fire, leaving so much property that, had the Portuguese been able to carry off the plunder, they would all have been enriched.[2] With the growing importance of Surat, Ránder declined in prosperity, and by the close of the sixteenth century (1590) it is spoken of as a port dependent on Surat.[3] Still, at the beginning of the seventeenth century (1610), it was a pleasant town with good houses, the people very friendly to the English, many of whom passed much of their time in the pleasant gardens at Ránder.[4] Though in 1666 the town is said to have been falling into ruins, the Dutch still kept up a depôt at Ránder.[5] In 1774 Ránder is spoken of as a town of pretty large size,[6] and it has since continued to be a place of some trade. The total population was in 1872 returned at 10,280 souls, of whom 3,868, or 37·62 per cent, were Musalmáns. The Náyatás have long ceased to have any importance at Ránder, and are represented by only one or two families in very depressed circumstances. Their place as traders has been taken by Bohorás of the Sunni sect. These men carry on trade westwards with the Mauritius, and eastwards with Rangoon, Moolmein, Siam, and Singapor, visiting these places, and sometimes settling there for as long as ten or fifteen years. All of them able to read and write, they maintain in Ránder four schools, where Arabic and Urdu are taught. The Ránder mosque has a special interest as bearing marked traces of its former owners, the Jains. Such of the images and more ornamental stones as were not broken to pieces, serve as steps in the doorway of the mosque, or have been turned to more dishonourable uses. But the pillars in the mosque and the cistern in the court-yard are both of Jain workmanship, and the hollow places in the walls, intended for images, have been allowed to remain unaltered. The income of the Ránder municipality amounted in 1874-75 to £1,380 (Rs 13,800), representing a taxation of 2*s.* 8¼*d.* (Rs. 1-5-6) per head of the total population. By the opening of the new Tápti bridge, Ránder is (1877) now closely connected with Surat.

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[1] Stanley's Barbosa, 67.

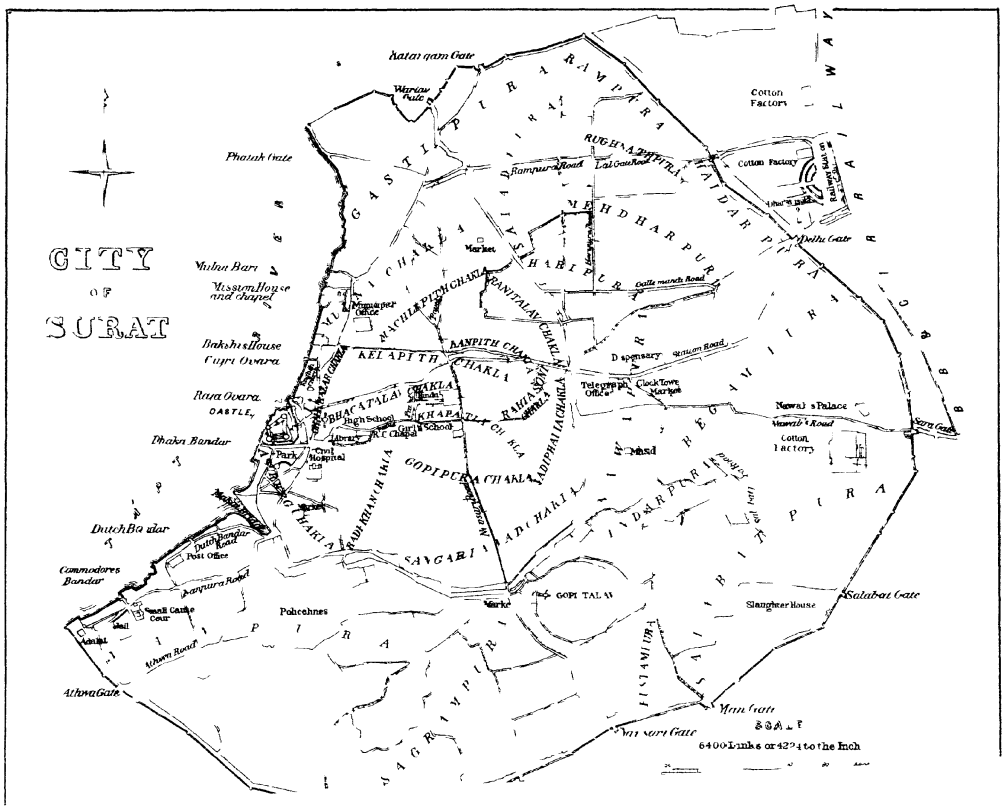
[2] Faria, in Kerr, VI., 220.

[3] Gladwin's Ain-i-Akbari, II., 65

[4] Kerr, VIII., 276 Perhaps this is the origin of Hamilton's statement (New Act, I., 166), that, when the English came first to trade at Surat, the president and council resided at Ránder

[5] Thevenot, V., 68.

[6] Stavorinus, III., 181.


CITY
OF
SURAT
Katargam Gate
Warriar Gate
Phatak Gate
Vahna Bari
Mission House and chapel
Bakshi House
Kapri Ovara
Rana Ovara
CASTLE
Dhaka Bandar
Dutch Bandar
Commodores Bandar
Athwa Gate
Pohcehnes
Cotton Factory
Cotton Factory
Railway Station
Delhi Gate
Rampura Road
Lal Gate Road
Gatte munchi Road
Dispensary
Telegraph Office
Clock Tower Market
Nawab's Palace
Nawab's Road
Cotton Factory
Sora Gate
Salabat Gate
Slaughter House
Main Gate
Nanpuri Gate
Mosque
Market
GOPI TALAV
Dutch Bandar Road
Post Office
Athwa Road
Small Cantonment Court
Hall
Library
High School
Civil Hospital
Park
Mosque
Mosque
Mosque

Surat, north latitude 21° 12′, and east longitude 72° 52′. On the southern bank of the river Tápti; is by water about fourteen, and by land about ten miles distant from the sea. Surat lies at a bend of the river, where its course swerves suddenly from south-east to south-west. With the castle as its centre, the city forms an arc of a circle, the lands enclosed by its walls stretching for about a mile and a quarter along the river bank. From the castle, looking south, the public park forms the foreground; its trees, with the exception of a row of buildings that stretch along the bank of the river, hiding the parts of the city that lie beyond. To the west the river, washing the castle walls as it passes, winds through low meadow lands, green, though somewhat bare of trees. From the right bank of the river the ground rises slightly towards the north, where, on a high bank overlooking the stream, may be seen the trees and some of the buildings of the ancient town of Ránder. Crossing from Ránder, behind a narrow strip of cultivated land, groves of rich trees stretch westwards to within a mile of the castle. Standing out among the trees the building known as the Rafiburaj, or Rafi's tower, marks the northern extremity of the outer city wall. Between the Rafi tower and the castle a row of large houses fringe the river bank, and behind them, on the low-lying land to the east and south-east, its streets and houses, in great part hidden by trees, stretches the city. From the castle as a centre, in 1664 and in 1717, two lines of fortification were drawn, the inner including 440, and the outer 1,818 acres. Though the inner wall has for many years been almost entirely removed, the hollow or natural moat that surrounds it still serves to maintain a line of demarcation, and preserves distinct the city and suburbs of Surat. In the city the roads, though metalled, clean, and well watered, are, except a few of the main thoroughfares, narrow and winding. Empty spaces there are, but, on the whole, most of the city wards are thickly peopled; the narrow streets winding between rows of large well-built houses, the dwellings of high-caste Hindus and the richer class of Pársis. In the suburbs, on the other hand, except in one or two of the eastern quarters, are large areas of open ground. These were once gardens, but now are cultivated only as fields. The unmetalled lanes, hollowed several feet below the general level, are water-courses in the rainy season, and lie deep in dust during the fair weather. Except the buildings in the Bohorás' quarter to the east of the city, the residences of Europeans in the south-west suburbs, and a few large Pársi garden houses, the dwellings are for the most part either untidy groups of huts belonging to low class Hindus, or lines of cultivators' or weavers' houses perched on the banks of the hollow road-way. Outside of the walls, to the north and east, the land is rich, well watered, and covered with trees. To the south the soil is poor, and, except for some Pársi and Muhammadan gardens, the country is bare. Westwards, along the bank of the river, the military cantonment, the tree-sheltered dwellings on either side of the Dumas road, and the open parade-ground stretching to the river, give this part of the outskirts a more cheerful appearance.

The castle.

The chief feature in Surat is its castle, planned and built between 1540 and 1546 by a Turkish soldier, who, with the title of Khudá-

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wand Khán,[1] was ennobled by Mahmud Begara, king of Gujarát, from 1459 to 1511. After the capture of Surat by the emperor Akbar (1573), the fortress remained in the charge of commandants appointed from Delhi till, in 1751, it was seized by the Sidhi admiral of the Moghal fleet. The Sidhi did not long hold the castle, for in 1759, with the rest of the city, it was captured by the English. Though from the first practically independent, the English held the castle nominally under the Moghal. In token of this divided command, two flags waved from the castle walls, the English ensign on the south-west, and the Moorish standard on the south-east bastion. This practice was continued till, in 1842, on the death of the last of the nawábs of Surat, the English fleet was removed from the Tápti, and the Moorish standard taken down from the castle walls. As far as has been ascertained, the only change since the castle was built by Khudáwand Khán was in 1760, when, on the eastern side, opposite the entrance, the English added a work and gateway on the outer bank of the moat.[2] In 1774 the castle is described as 'an irregular square, the shortest side, and one of the oblique sides facing the west and north-west, washed by the river. At each corner is a large round tower, about forty feet in height, the walls and curtains between rising nearly as high as the towers.'[3] Though, as a defence against any well-equipped enemy, they have long been useless, the castle buildings have always been kept in repair, and until the year 1862, were garrisoned by a small body of European and native troops. In that year, as no longer required, the force was withdrawn, and the vacated rooms were made over for the accommodation of the various offices connected with the revenue and police departments, in whose occupation the castle has since remained.

The City.

Of the appearance, condition, and population of the different quarters of Surat city and suburbs, and of the present state of the city walls, the following information is available.[4] The city, that is, the area enclosed by the line of the inner wall, contains fourteen divisions called *chaklás*, or wards. Starting at the castle and working from the north eastwards, the divisions come in the following order:—

Chok bazár.

1.—*Chok bazár chaklo*, or the square market ward, includes about four acres of low-lying land. This quarter contains the castle, the

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[1] Details of the building of Surat castle will be found above, p. 71, 72. According to some accounts the fort was built by the Romans, according to others by the Turks, 'who came here with many ships and conquered many places' (Ogilby's Atlas, 1660, V., 211.) These allusions are perhaps sufficiently explained by the fact that Khudáwand Khán, the builder of the fort, was a Rumi or Turk

[2] This gate bears the inscription "Built, April 1760. Under orders of William Andrew Price, Esq., Chief for affairs to the British nation, and Governor of this castle and fleet. By Lewis Felix de Glass."

[3] Stavorinus, II., 473.

[4] Besides information collected personally, these details have been compiled from the records of four surveys of Surat i. The report of the committee appointed to report on the state of the city walls, 1800. ii A city survey of Surat, 1817. iii. A city survey of Surat, 1876. iv. A contour survey of Surat, 1869.

public park, the civil hospital,[1] the high school, the English church, the old custom-house; the mint, or *tanksál*, lately converted into a market; a curious old pigeon-house supported out of the funds of the animal hospital, or *páinjrápol*; and a large building called the *daria mehel*, or sea palace, the residence of the Bakshi. Though on the whole rich and well peopled, this quarter contains a considerable area of open land. The houses are for the most part dwellings of well-to-do citizens. They are generally two stories high, with brick walls and tiled roofs. Its shops are also good, as advantage was taken of the fire of 1872 to have them rebuilt with a certain uniformity of size and style. This ward is inhabited by Muhammadans,[2] by Hindus, chiefly Shrávaks or Jains, and by a few people of low caste.

Mulla chaklo.

II.—*Mulla chaklo*, or the Mulla's ward, includes about sixty-seven acres of comparatively high land, lying along the bank of the river to the north of the Chok bazár. The name of this quarter is said to come from a certain Mulla of Bhatár, a great ship-owner and merchant. Of objects of interest this ward contains, near the river, a building called, like the Bakshi's residence, the *daria mehel*, or sea house. This palace, built by one of the nawábs of Surat as a hot-weather retreat, was afterwards used as the high school. At present (1876) it is unoccupied and in disrepair. Close by are some fine old Musalmán dwellings, two of them now used as the house and the school of the Irish presbyterian mission.[3] Beyond this, still on the bank of the river, is the old English factory.[4] It has since been used, first, as a hospital, then as a lunatic asylum, and is now a private dwelling. As it stands at present, the building can only be a portion of the original 'lodge,' which was built of stone, and contained accommodation for forty persons. From the traces of foundations in the open ground near the present building, it seems probable that the factory originally extended as far as the Moghal Serái road. In the parts of this ward, further from the river, are several old mosques, mostly in ruins. Of these the most interesting is the mosque and tomb of Mirza Sámi, the work, it is said, of Khudáwand Khán, the builder of the castle. Though of no great size, the tomb is made of stone, and has stone-carving of considerable beauty. But of Musal-

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[1] The civil hospital stands on ground once occupied by the nawab's arsenal.

[2] Chiefly convert Musalmáns, or *Memans*, known by the name of *Sindhwaro*, and the quarter inhabited by this class is called "*Sindhwaro*."

[3] It would seem to have been the mission house that Sir Nicholas Waite hired on behalf of the 'New or English Company,' when he came to Surat in 1700. The tradition of its being once the residence of an English governor still clings to it. The position also suits well, as Sir Nicholas Waite's house was near enough to the old factory to be clearly seen from it, 'the sight of their rivals at liberty adding to the bitterness of the old factors' confinement.' During the seventeenth century the Dutch would seem to have held another of these houses, as in 1664 the Dutch and English are together said to have saved one of the quarters of the city from plunder.

[4] It seems doubtful whether, during the seventeenth century, the English company did not change their factory. The factors were allowed to build in 1618, and which they defended with so much success against Shiváji in 1664 would seem to have been a different building from the great house they lived in about the close of the seventeenth century. At least in 1690 Aurangzeb is spoken of as their landlord.—Ovington, 388.

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mán remains, the chief is that now used as a municipal hall. This hall was originally intended to be a resting-place for Musalmán travellers, and is said to have been built in the year 1644 by a certain Hakikák Khán, at that time the commandant of the fort.[1] This building was in 1868 repaired by the municipality at a cost of £3,308 (Rs. 33,080). The hall was fitted up for municipal meetings, and some of the out-houses were set apart for the use of travellers. Near the municipal hall rises a high brick wall, the remains of a racket-court that, about the beginning of the present century, was for the benefit of the Europeans of Surat, built by the nawáb and a Pársi, Firosha Dhanjisha, who at that time held several places of trust under the British Government. Close to the racket-court a wooden cross, in an open plot of ground, marks the site of the altar of the chapel of the Capuchin friars, who for more than a century (1660-1770) held an honourable place in Surat. The lines of the walls of the chapel can still be traced. By the middle of the seventeenth century these Capuchins had built a very convenient monastery, 'according to the model of houses in Europe,' and a church by it.[2] In 1664 Ambrose, the head of the convent, went before Shiváji, and prayed him to spare the Christians. The convent was unassailed, and all who took refuge in it escaped without injury.[3] Ambrose held so high a position in Surat that he was (1666) invested with power to decide questions among Christians, and punish them as he pleased.[4] In 1666 he is said to have pacified the native governor, who was enraged against the French on account of the piracy of Lambert, a French captain.[5] The English also profited by his exertions, and many years after (1700, April 17th) the service was acknowledged with gratitude by the president in council In 1695 the Italian traveller, Gemelli Careri, noticed their house 'decently adorned and conveniently built in the manner of Europe.'[6] Hamilton (1700-1720) also praises them;[7] and in 1764 Niebuhr notices that, after power and wealth had abandoned the French at Surat, the nation were still held in estimation on account of certain Capuchin friars, who were generally beloved and respected in Surat. Besides their services as healers of discords among the Christians, and healers of sickness among men of all religions, these friars did a good service to the public by keeping a register of all events that had happened in Hindustán from 1676 to 1764.[8] A metal tablet fastened to the cross bears this inscription :—

Hic exstabat
Umcumaltar
Veteris Ecclesiæ
Capuccinorum
Et contemporte?

[1] Abdul Hakim's History.
[2] Tavernier (1642-1666); Harris, II., 350.
[3] Thevenot, V., 87.
[4] Thevenot, V., 91-93.
[5] Thevenot, V., 61.
[6] Churchill, IV., 188.
[7] Hamilton's New Act., I., 163.
[8] Pinkerton X., 215.

Behind the Capuchin chapel are the remains of the Portuguese factory. Except a few rooms still occupied as a dwelling house, this factory has fallen into ruins, and been removed. Behind the Portuguese factory was the French lodge.[1] The site still remains open. But, except the line of its foundations, all traces of the buildings have been removed. Further on is the Armenian church, still in repair, though it has not been used as a place of worship for about thirty years.[2] Of the fine old Musalmán houses which, as late as 1817, adorned this quarter of the city, very few are now to be seen. The ruins of some of them still remain, but of most, the busy contractors, or *kátpitiás*,[3] have removed every trace. On the other hand, especially near the river, Pársis and Hindus have of late years been raising large and well-built houses. In the seventeenth and eighteenth centuries the foreign merchants, both Europeans and Asiatics, who resorted to Surat, lived for the most part in this quarter of the city. As late as 1817 many of the houses were occupied by Armenians, Arabs, Persians, and Jews. At present the chief part of the inhabitants are Pársis and Hindus.

III.—*Máchhlipith chaklo*, or the fish-market ward, south of the Mulla ward, includes about thirty acres of slightly raised land. The market from which this part of the city is named continued to be held till, in 1869, it was transferred to the new municipal buildings. It was here that the great fire of 1837 broke out, burning down almost the whole quarter. Their ruins still show how large were some of the buildings then destroyed. Though most of them are small, the new houses are well built. The people are chiefly well-to-do Pársis, with a few Hindus of all castes. Máchhlipith.

IV.—*Ránitaláv chaklo*, or the ward of the queen's pool, east of the fish-market ward, includes about twenty-eight acres of slightly raised land. The name is said to have come from a reservoir built by the wife of Gopi (1500-1520), the patron of Surat. This part of the city seems never to have recovered the fire of 1837; much of Ránitaláv.

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[1] A Persian factory at one time stood next to the French factory. In 1670 the French are said to have saved themselves from plunder at Shiwáji's hands by allowing some of his troops to pass through their buildings, and rob the Persian factory.—Bruce's Annals, II, 285

[2] In 1843, when the English government ceased to aid the Armenian church by grants of public money, the church in Surat was closed, and has not again been opened It now forms part of a Pársi dwelling; but the owner of the house would seem to have respected the church, altering nothing since it was left by its priests. The ornaments still remain on the altar, and some pictures of apostles and saints hang on the walls. The Armenians do not seem to have risen to a position of importance in Surat much before the end of the seventeenth century. But from that time till near the close of the eighteenth century their name occurs in almost all notices of Surat trade. This chapel was finished in 1777. The priests were paid by the contributions of their congregation. But before the close of the eighteenth century the numbers of Armenians had greatly fallen off. In 1811 there were about fifty families, and in 1825 only five remained. On the recommendation of Mr. Romer, then judge of Surat, the Government of Bombay in 1825 granted a yearly sum of £72 for the maintenance of the priests. (Government letter dated November 4th, 1825.) According to the census of 1872 there were in that year only three Armenians in Surat.

[3] The buying up of materials of old mansions and selling them piecemeal has for many years been a busy trade in Surat.

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the land remains empty, and the houses since built have for the most part a mean appearance. The population consists of Hindus and Muhammadans, many of the latter in poor circumstances.

Kanpith.

V.—*Kanpith chaklo,* or the grain-market ward, south-west of the queen's pool ward, includes about eleven acres of comparatively elevated land. Though not now the only place in the city where grain is sold, the market which gave this quarter its name is still held here. Many empty spaces show how severely this quarter suffered in 1837. At the same time, the new houses are, with few exceptions, good, two or three stories high, with brick-built walls and tiled roofs. The people are well-to-do, chiefly high-caste Hindus, Wániás, Shrávaks, and Bráhmans.

Kelápith.

VI.—*Kelápith chaklo,* or the plantain-market ward, south of the grain-market division, includes about twenty-three acres of comparatively high land. Several open spaces still mark the ruin caused by the fire of 1837. But for the most part the new houses are well built. This is especially the case with the *nánávat,* or bankers' quarter, where a few bankers still carry on business in large three-storied buildings The people are for the most part Hindus of the trading and artizan classes.

Rahia soni.

VII.—*Rahia soni chaklo,* or Rahia, the goldsmith's ward, south-east of the plantain-market and grain-market quarters, includes an area of eleven acres of comparatively high land Rahia, after whom the quarter is called, lived about a century ago. He was believed to have been an alchemist, and to have known the secret of turning copper into gold. With the exception of a few dwellings of calenders, or *chhipás,* and others of the poorer classes, the buildings that have been raised since the fire are large and handsome. The population is almost entirely Hindu. In 1817 this ward is spoken of as the head-quarters of the Márwári bankers. As almost all their great houses, the lines of some of which may still be traced, were destroyed in 1837, these Márwáris left Surat and settled in Bombay.

Bhágátaláv.

VIII.—*Bhágátaláv chaklo,* or the garden pool ward, south-east of the plantain-market, includes about thirty-seven acres of low-lying land. The pool from which this quarter gets its name is a large and very old well, in use, they say, when the site of Surat was still garden land. The Roman Catholic church and burying-ground lie in the south-west of this quarter. Empty spaces still show the ruin caused by the fire of 1837. But the new houses are, with few exceptions, large and handsomely built. The inhabitants are Muhammadans and Hindus.

Gopipura.

IX.—*Gopipura chaklo,* or Gopi's division, south of the plantain-market, includes about thirty acres of elevated land. Portions of this division, called after Gopi the patron of Surat, suffered from the great fire, and the whole is not yet rebuilt. With Hindus the place where Gopi had his house is the most fashionable quarter of the city. It contains many large mansions richly ornamented with wood-carving. Except at its outskirts, where a few poor Musalmáns live, the population consists almost entirely of high-caste Hindus, Shrávaks, Káyasths, Bráhmans, and Wániás.

x.—*Wárifalia chaklo*, or the garden street ward, east of Gopi's ward, includes about twenty-two acres of raised ground. This ward is said to take its name from one of the gardens on whose site Surat city was built. In 1837 the whole of Wárifalia was burnt down, and much of it has never been rebuilt. The new houses are large and well made, but the streets are narrow. Except a few Musalmáns, the people are high-caste Hindus. Wárifalia.

xi.—*Kapátia chaklo*, west of the garden street ward, includes about twenty-five acres of raised ground. This quarter was entirely burnt down in 1837. Some plots of ground have still been allowed to remain empty, but the greater part has been rebuilt with large and handsome houses. The people are almost all Hindus. At a spot where four roads meet, men and women of the labouring classes collect from eight to nine o'clock in the morning, waiting to be hired. These labourers would seem to have gained a good name for industry, as the phrase, 'a labourer of the Kapátia chaklo' is commonly used to mean a zealous workman. Kapátia.

xii.—*Sángáriávád chaklo*, south of Gopi's ward, includes about fifty-two acres of uneven ground. Part of this division was burnt in 1837; but many good houses have since been built. Its inhabitants are Pársis, Hindus, and Muhammadans. The Pársis would seem to have settled here since 1817. They occupy the southern portion bordering on the line of the inner wall. Of the population, though some are Bráhmans and other high-caste Hindus, the chief part are weavers, calenders, and others of the lower class of artizans. One section of this ward is inhabited by Bohorás, followers of the Mulla Sáheb, who have also a place of worship here. These Bohorás are said to have been the first of their class to settle in Surat. Those who came afterwards were not allowed to build within the city-walls, and an unfavourable site was assigned them to the east of the city. Many of the Bohorás' houses in this and in the neighbouring Gopipura ward are very large, and a few have as many as seven stories. Some irregularities in the face of the wall of one of these houses are said to mark windows, which, as they overlooked his palace, were blocked up by order of one of the governors of Surat. Sangáriávád.

xiii.—*Bareh Khán chaklo*, or Bareh Khán's ward, west of Gopi's ward, includes about thirty-eight acres of low-lying land. In the centre of this division, behind the Desáipol street, is the '*Válandáni kothi*,' or Dutch building. This is the site of the Dutch lodge or factory, for long the best built and healthiest house in Surat. Even the ruins of the old house have been carried off. The only relics of its former splendour are an underground chamber and the basin of the fountain.[1] Though this division was not visited by the fire of Bareh Khan's ward.

[1] There is some doubt about this building. Like the English, the Dutch would seem, during the seventeenth century, to have had their factory in the Mulla chakla quarter.—(See above p 303) If this was the case, this 'Walandani Kothi' must be 'the house of Itibár Khán,' given to the Dutch under the provisions of the charter of 1712, 'on condition that no angles nor embrazures should be made in it, nor any great or small guns conveyed into it.' (Stavorinus, III., 74.) In 1762 the nawáb, apparently at the instigation of the English, subjected the Dutch to 'a long siege' in this building.

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1837, there are in many empty spaces, once, it would seem, the sites of houses. Of the Musalmán dwellings and places of worship that, in 1817, are mentioned as ornamenting this quarter, the Káji masjid, the principal mosque in Surat, is the only one that remains. The inhabitants are chiefly Musalmáns, artizans, and labourers.

A'surbeg's ward.

XIV.—*A'surbeg chaklo*, or A'surbeg's ward, west of the Bareh Khán ward, includes about forty-one acres of low-lying land. The space behind the civil hospital, now occupied by timber-yards, was formerly the site of the nawáb's palace, and is still commonly known as the *juna darbár*, or old court. In 1817 this division was chiefly inhabited by Musalmáns. At present there are, besides, Musalmáns, Máchhis, and Dhers. The new comers, who formerly lived in the Nánpura suburb, between the commodore's house and the Dutch wharf, were brought here in 1860.

The inner wall.

Though its masonry work has been almost entirely removed, the line of the inner wall still divides Surat into city and suburbs. The wall was begun in consequence of the success of Shiwáji's attack in 1664; but does not seem to have been finished for several years.[1] The fortifications, when completed, were styled *shelterpana*, or the shelter of the city. In 1817 this wall is described as varying from twenty to twenty-eight feet in height, and from eight and a half to twelve feet in breadth. There were twelve gates,—to the north the Wariávi; to the east the Syedpuri and Burhánpuri; to the south the Navsári and Majura; to the west the Mecca and Bádsháhi; and along the river front the Dacca, Rája Owára, or custom-house water-gate, the Mir Ber, and the Mulla Khadki, or Láti gate.[2] In 1817 the northern face of the wall was in good repair. The Wariávi gateway, over twenty-eight feet high, was flanked by two towers, each rising to the height of twenty-six and a half feet. On the east face the wall was 'in many places decayed beyond repair.' The Syedpuri gate was in ruins; but the Burhánpuri gateway was still standing twenty-nine feet two inches in height, and flanked by two towers, each of them twenty-two and a half feet high. To the south the Navsári gate was flanked with two towers, but the whole was 'much decayed.' The Majura gate and the tower were also in a ruinous state. The tower and wall of the Mecca gate, at the south-west, were in a decayed state, and to the west, at the junction of the river and the Mecca creek, the Bádsháhi gate and towers were also in ruins. Along the river front, south of the castle, was the Dacca gate, like the rest of this part of the river wall, in a bad condition. No remarks are made about the wall as far as the Mir Ber gate, where there was a tower in good repair. Finally, the

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The contest ended in the defeat of the Dutch, who were forced to take all their effects to their wharf on the river bank near the Mecca creek. The building in the city was not then taken away from the Dutch. But in 1774 it was already in an 'extremely ruinous condition,' used only for 'bazaaring,' or examining piece-goods.—(Stavorinus, II, 476.)

[1] When Fryer wrote (1672-1681) the walls were still building. "High," he adds, "and of good well-baked brick."—Fryer's New Act., 98.

[2] It was through this gate that, under the terms of the charter of 1716, the English were, on payment of a yearly sum of £10,000, allowed to pass their goods free of duty.—See above p. 113.

wall near the Mulla Khadki, or Láti gate, had fallen down in many places. Since 1817 the remains of the inner wall have from time to time been used in making and repairing roads. At present (1876), along the northern face to near the site of the inner Wariávi gate, the wall remains but little decayed. Beyond this to near the Syedpuri gate, its base shows a few feet above the level of the ground; but throughout the rest of the circuit, as far as the site of the former Bádsháhi gate, nothing but the foundation can be seen. Along the river bank, from the Mecca creek to the gate of the public gardens, the foundation only is visible.[1] From this point to the castle the wall remains, and the top has been converted into a promenade. The Dacca gate has been removed, but the Rája Owára, or custom-house water-gate, the Mir Ber, and the Mulla Khadki, or Láti gate, still remain Between the Rája Owára and Mir Ber gates three hundred and seventy-five feet of masonry were washed away in 1837.[2] Along the line of the wall dwelling-houses have been built, so that the foundations are the only parts remaining visible. Near the Dacca gate is a wooden platform for loading and unloading vessels. And in front of the Rája Owára, the Mir Ber, and the Mulla Khadki gates, are flights of stonesteps reaching to low-water mark. Outside of the inner wall runs a hollow, or natural moat, known as the Mecca creek. This hollow, joining the river at the southern corner of the public gardens where the old Bádsháhi gate once stood, passes along the line of the wall, the level of its bed gradually rising until the site of the former Syedpuri gate is reached. From this point the slope of the hollow falls in the opposite direction, that is, towards the Wariávi gate, and a branch runs down and joins the river at the northern extremity of the inner wall. Quite two-thirds of the area of the city is drained into this moat, or creek.

Suburbs.

Outside of the inner wall lie the suburbs of Surat, consisting of fifteen divisions, covering a total area of 1,818 acres. Beginning from the north, and working eastwards, the first suburb is Gástipura. This division, with the river Tápti on the west, includes about one hundred acres of low-lying land subject to almost yearly inundation from the Tápti. The name is said to come from Gheyás-ud-din, governor of Surat (1667). Once cultivated as gardens, the greater part of this quarter now consists of fields and timber-yards. The chief objects of interest are the Dutch, Armenian, and Portuguese burying-grounds on the east side of the Katárgám gate. No part of this quarter is laid out in lines of streets and houses. The dwellings are scattered—a few huts in one place, and a small hamlet in another. There are, besides, several garden houses belonging chiefly to Pársi merchants and lawyers, surrounded by wild-date, mango, and tamarind trees. With the exception of the owners of these solitary houses, the inhabitants are all poor people of the lowest castes.

Gástipura.

II.—*Rámpura*, east of Gástipura, and stretching as far as the outer wall, includes about forty-six acres of comparatively high land. This

Rámpura.

[1] The flood of 1837 made a breach, thirty-five feet long, in this part of the wall.

[2] Statement of the Faujdár of Surat, forwarded with letter dated 13th September 1837.

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suburb is said to have been founded by an Anávla or Bháthela Bráhman. The southern part is thickly peopled by Kanbis, weavers and cultivators by trade. Their houses, arranged in rows, are, though small, as a rule, substantially built. In the northern parts Dhers, Bhangiás, Wághris, and Khálpás live in groups of untidy huts.

Raghunáthpura.

III.—*Raghunáthpura*, south of Rámpura, includes about twenty acres of comparatively high land. Like Rámpura, this suburb is said to have been founded by an Anávla Bráhman. Parts of it, once devoted to gardens, are now cultivated as fields. The only place of interest is a large roofed-in well, whose water is much used by silk-dyers. The houses, which in most parts are thickly set together, are small one story buildings, but well built with brick walls. The chief part of the population are Hindus, including among them almost all the Deccan Bráhmans in Surat.

Medharpura.

IV.—*Medharpura*, east of Haripura, includes about fifty-seven acres of comparatively high ground. This suburb is also said to have been founded by an Anávla Bráhman. Except towards the west, where are some poor wattle and daub Musalmán huts, the houses are tolerably well built and of middling size, inhabited by Hindus, most of them cultivators and weavers.

Haidarpura.

V.—*Haidarpura*, east of Medharpura, and reaching to the outer wall, includes about forty acres of slightly raised land. This suburb is said to have been founded by Haidar Kuli Khán, governor of Surat (1717-1719). The northern part is inhabited by Hindus, the southern by Muhammadans. Near the city wall are some rows of huts belonging to people of the lowest class. But the greater number of the population are Kanbi cultivators, whose fields lie outside of the city walls. Except in the north, this suburb contains large plots of open land.

Begampura.

VI.—*Begampura*, south of Haidarpura, and stretching along the outer wall to beyond the Sara gate, includes about 207 acres of comparatively raised land. This suburb was founded about the beginning of the eighteenth century by a sister of the emperor Aurangzeb, after whom it is called. The northern part of this suburb is occupied by the nawáb's palace, now the residence of the sons-in-law of the late Mir Jáfar Ali. Between the palace buildings and the outer wall, a distance of about a quarter of a mile, the land is given up to gardens and orchards. South-west of the nawáb's palace is the Jáfar Ali spinning-mill.

Syedpura.

VII.—*Syedpura*, south of Gástipura, and west of Raghunáthpura, and extending westwards to the inner wall, includes about fifty-six acres of comparatively high ground. This suburb is said to have been founded by an ancestor of the present Sheikh Syed Idrus, C.S.I. Besides Hindus of all castes, Muhammadans and Pársis inhabit this suburb. Dhers, Bhangiás, and other low-caste people also live in huts near the line of the inner wall. The part of the suburb inhabited by Hindus is thickly covered with small, but well-built houses.

Haripura.

VIII.—*Haripura*, south of Syedpura, and skirting the inner wall, includes about forty-seven acres of low-lying land. The founder was,

it is said, an Anávla Bráhman. This suburb contains a curious mound, called *ruwáláno tekro*, or the cotton-merchant's mound. It is about twenty feet high, and is said to be artificial. Of its origin nothing has been traced. The population are, in the north, Musalmáns; in the west, near the inner walls, Dhers, Bhangiás, and other low-caste people; and in the south-east Hindus of all castes, of whom Shrávaks are the chief. Except in the Hindu quarter, where the houses are closely packed and well built, there are considerable tracts of open land. Part of this suburb was destroyed in the fire of 1837.

IX.—*Navápura*, west of Begampura, and stretching to the inner wall, includes about fifty-nine acres of low-lying land. The northern part of this suburb is inhabited by Muhammadans; the west, next the wall, by the poorer class of Hindus; and the south by Hindus. In the south are some good houses, the dwellings of Shrávaks, Kanbis, and a few Golás and Pársis. It is in this suburb that the rice-market is held. To the east is the Bohora quarter, called Jhámpa,[1] or the gate Here is the palace of the Mulla Sáheb, the religious head of the Bohorás, a large wooden mosque and two handsome mausoleums.[2] The Bohora quarter is separated from the rest of this suburb by a gate. The Bohora houses are the best in Surat, strongly built of brick, and many of them five stories high. Navápura.

X.—*Indarpura*, south of Navápura, includes about twenty-five acres of low-lying ground. The founder was, it is said, an Anávla Bráhman. The population consists of low-caste Hindus, and Musalmáns. This suburb is but thinly peopled, chiefly by weavers. Indarpura.

XI.—*Salábatpura*, south of Begumpura and east of Haidarpura, includes about one hundred and seventy-five acres of low-lying land. This suburb was founded by Salábat Khán, governor of Surat (1687). Salábatpura.

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[1] This part of the town is said to have been called *jhámpa*, or opening, because, in 1664, before orders were received to build the town walls, the governor of the city, for purposes of defence, planted a milk-bush stockade In this hedge only one opening, the *jhampa*, was left If this is correct, the stockade was only put up for a time, as the original mud wall and hedge had three gates.—See above, p. 89, Munshi Abdul Hakim's History.

[2] The following description is extracted from Mr. Bellasis' pamphlet, p. 15 "The mausolea, two in number, are situated in front of the great mosque, in a large quadrangular enclosure, in which are also a cistern constantly full of water, and numerous sarcophagi covering the remains of the less distinguished relations and dependents of the mullás. The more worthy, including several of their preceptors, are permitted to rest within the mausolea These are large domed edifices, with gilded spires, rising to a height of more than thirty feet. The larger, and newer of the two, covers a more extensive area than is occupied by the famous Oxenden mausoleum in the English burial-ground The other is considerably smaller, but encloses a greater number of the illustrious dead, the number of sarcophagi in it being twenty-four, and in the larger only fourteen. Those of the mullás and their preceptors are of marble, the others of cement. They are of the usual Muhammadan form. All have rich silk coverings thrown over them; those of the mullás being distinguished by an additional covering of white muslin. From the centre of the dome of each mausoleum is suspended a magnificent chandelier, which is lighted up on the anniversary of each mulla's death. The remains of five mullás rest within these splendid edifices. Their names and date of death respectively are as follows :—"

Mulla	Nazm-u-din, died	A. H.	1213,	A.D. 1798.
„	Saif-u-din..... ..	„	1232,	„ 1816.
„	Ezzıy-u-din ..	„	1236,	„ 1820.
„	Zeın-u-dın	„	1252,	„ 1836.
„	Bhadru-dın.....	„	1256	„ 1840.

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The greater part is occupied by garden land. It is inhabited by Hindus of all castes, and, near the Mángate, by Máchhis and Dhers. Part of this suburb was consumed in the fire of 1837.

XII.—*Gopi-talav*, or Gopi-pond, west of Salábatpura and north of Rustampura, includes about fifty-eight acres of land, partly the bed and partly the banks of an old reservoir. The banks, strewn with tombs, are covered with bushes of custard-apple and large baobab (Adansonia digitata) trees; on the southern bank are Muhammadan burying-grounds, containing, among other tombs, that of the Nav Syed Pir, in whose honour a fair assembles every year. The bed of the tank, for many years dry, is now used as a garden. This circular earthen hollow, without either water or stone-facings, is all that remains of what was one of the finest works in Gujarát. Hardly any of the travellers who visited Surat in the seventeenth century fails to describe the great reservoir, 'the memorial of a rich Gentoo's piety, a work not unworthy of Imperial Rome,' which the king of Gujarát did his best to give his name to, but did not succeed. From the descriptions of some of the early travellers of the seventeenth century,[1] it would seem that the water was brought from a distance along a channel or moat into a space surrounded with walls, and, after filling this space, was allowed to pass into the 'mighty pond.' The sides of the moat and the walls of both lakes were lined with stone, 'a beautiful free-stone from Cambay.' Though the outer enclosure would seem to have served chiefly as a silt pit, the two lakes were apparently built on the same pattern. The larger and inner lake had, according to Thevenot,[2] sixteen corners, each side one hundred paces in length. The lake was as broad as a musket could shoot. The bottom was paved with large stones, and almost the whole way round, steps, each about half a foot high, rose tier above tier to the level of the ground. In the middle of the lake, to be reached only by swimming or in a boat, was a high building, 'a place for pleasure and taking the air.' The work was originally planned to supply Surat with fresh water, and as late as 1638[3] 'it still fulfilled its purpose. But the silt must have been rapidly increasing, for in 1666 it was already burdened with six feet of earth, and was said to run a great risk of being choked up 'if some kindly Bania did not clear it out.'[4] No kindly Bania seems to have come to the help of the lake, and about seven years later Fryer (1673) says it was like a circus, or amphitheatre; "but," he adds, "if filled with water, the largest ship in the sea might ride in it" The lake would seem to have been allowed to remain in this state of disrepair till, about 1717, the stones were stripped from its sides and carried off, partly to build the outer wall, and partly to make the large well that now stands within the former bed of the lake.[5]

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[1] See La Valle's (1623) letters, 33-35; and Ogilby's (1660) Atlas, V., 211.
[2] Voyages, V., 73.
[3] Mandelslo, 61.
[4] Ham. New Act, 104.
[5] Munshi Abdul Hakim. So thoroughly was the whole place dismantled that Stavorinus, in 1775, searching about for the 'great pool with Thevenot in his hand,' could find no trace of it.

XIII.—*Rustampura,* south of the Gopi lake suburb, includes about twenty-nine acres of comparatively raised land. Except a few dwellings of low-caste people near the outer wall, this suburb is almost entirely inhabited by Pársi weavers. In 1817 these people are said to have been well off; but a few years later, in 1822, the entire suburb was destroyed by a fire. Many of the inhabitants then left for Bombay, where their descendants still find employment as weavers of silk, *gaji,* and silk-cotton, *elâicha,* cloth. In this suburb is a large Pársi fire-temple, and a place for holding public entertainments. These buildings were presented to the Pársis of Surat by the late Sir Jamshedji Jijibhái. Rustampura.

XIV.—*Sagrámpura,* west of Rustampura and Gopi-taláv, and extending along the outer wall from the Navsári to the Majura gate, includes about two hundred acres of low-lying land. This suburb was founded by an Anávla Bráhman, whose house is still to be seen. To the east the houses, chiefly inhabited by Anávla Bráhmans and other Hindus, are built in rows on land raised several feet above the level of the roadway. The houses of Bráhmans, Bhávsars (calico-printers), and Wánás are well built, those occupied by Khatris (weavers), barbers, potters, and washermen are little better than huts, their walls of bamboo lathes plastered with mud. Towards the west the land is open. Near the outer wall it is divided into fields, and is well wooded; but further from the walls are lime-pits and brick-kilns. In the south-west corner two rows of large detached dwellings, generally occupied by Europeans, extend from the Majura gate across the Nánpura suburb westwards to the river. Sagrámpura.

XV.—*Nánpura,* west of Sagrámpura, and stretching along the outer wall from the Majura gate to the river, includes about two hundred acres of low-lying land. The section of this suburb next the outer wall is taken up by a line of dwelling houses, generally occupied by Europeans. At the end nearest the river is the jail. Between these houses and the inner wall, in the eastern part of the suburb, there is much open land of the same character as that of the western part of Sagrámpura. Westward are rows of Pársi houses, and on the bank of the river are the court-house, the site of the old Sidhi wharf, the commodore's residence, where was the English wharf and the Dutch wharf, or *Walanda bandar.*[1] Behind this is the Nánpura market, a thickly-peopled quarter. Nánpura.

[1] The first connection of the Dutch with this wharf would seem to have been in 1729, when, under the terms of the charter of that year, the plot of land near the Mecca creek, known as the *Jahángir-bandar*, was, partly as a gift, partly as a purchase, granted to the Dutch. (Stavorinus, II, 95) In 1774 this plot of ground, about seven or eight acres in extent, was, except for about two hundred and forty yards along the bank of the river, covered with buildings. At the west was the directors' house, and east of it, on the river bank, an open space with an 'ensign staff,' and behind the staff four one-storied dwelling-houses erected about 1770 by 'leave of the English and Moors.' Along the river bank, for about two hundred and forty yards, the Dutch built a stone wall, rising four feet above the level of the river bank. In the wall were two gates, and in front of each gate a pier-head jutting into the river, where goods were discharged and shipped, and vessels lay afloat. It was afterwards found necessary to protect the wall, by building wooden piles, to break the force of the stream.—Stavorinus, III., 159.

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The outer wall.

Towards the close of the emperor Aurangzeb's reign (1707) Surat was harassed by the attacks of the Maráthás and other bands of freebooters. To protect themselves from this danger, the people of Surat, about half a mile outside of the city walls, built sconces and set cannon on them.[1] For about ten years no attempt would seem to have been made, by connecting them with a line of walls, to convert these sconces into a permanent defence. At last Haidar Kuli Khán, governor of Surat from 1717 to 1719, with the help of the stones from the Gopi pond, set to work to complete an outer line of wall. The part first built was the south-west corner, the site of the present court-house, and before the end of his governorship the fortifications were completed as far as the Delhi gate. Taháwar Khán, the next governor, began to build from the north-east near the Rafi tower. This governor made the Wariávi gate, and completed the line of fortification, calling it *A'lampana*, or the shelter of the world.[2] The length of the wall is altogether about five and a half miles.[3] It contains twelve gates. Towards the north-west, the Fátak, towards the north, the Wariávi and Katárgám; towards the north-east, the Lál and Delhi; towards the east, the Sara, on the south-east, the Salábat and Mán; towards the south, the Navsári, Jáfar Ali, and Majura; and towards the south-west, the Athwa gate.

In 1817 the north-western portion of the wall was, unlike the rest, only six and a half feet high, and from three to four feet thick, and, in some places, consisted only of strong wooden piles In the north-west corner was the Rafi tower[4] made of stone, and said to be in good repair. From the Rafi tower, as far as the Wariávi gate, the wall was broken down; but beyond that it was in good order, with a parapet and rampart. The thickness of the wall varied from seven to eight feet, and the height from fourteen to twenty feet. Above each gate was a platform, roofed over and furnished with guns. Besides forty-eight batteries and towers, these platforms were from twenty-five to thirty feet high. The narrow wall along the north-west face was swept away[5] by the flood of 1822, the wood piles only remaining. The Rafi tower is still standing, though in bad repair. From the Rafi tower to the Wariávi gate the wall is in ruins; but further east, from the Wariávi and to near the Lál gate, it is in good order.[6] Near the Lál gate, and in many places between it and the Delhi gate, the wall is in ruins. South of the Delhi gate, which, about ten years

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[1] Hamilton's New Act, I, 148.

[2] Unlike the portions within the circuit of the inner wall, the river bank, between the outer and the inner walls, would seem to have been left unfortified In 1762, when the Dutch were forced to move their head-quarters from their lodge in the city to the Jahángir wharf near the Mecca creek, they had to protect the river bank by building a wall of stone.—Stavorinus, III., 154.

[3] Committee's report to Government, dated 11th June 1800.

[4] This building is also called the French tower—why, it is difficult to say. According to one account, it was built because the castle was found an imperfect defence. But it would seem to have been part of the plan of the outer wall, as it was raised in 1719 by one Mirza Raffi-ud-din.—Munshi Abdul Hakim's History.

[5] Mr. Bettington's Minute on the Flood of 1843

[6] In 1837, between the Wariávi and Katárgám gates, 222 feet were washed away; but this breach seems since then to have been repaired.

ago, was removed to make room for the broad station road, is more than one long breach in the wall. It was through these breaches that, in 1822 and 1837, the flood waters forced their way into the city of Surat[1] from Warácha. Further south, in the wall near the Sara gate, is a large step-well, said[2] to have been one of the wells which watered Surat when the site of the city was still garden land. From this point to near the Jáfar Ali gate the wall is uninjured. Further on the curtain has been removed, the top of the walls forming a pathway about eight feet broad. About five hundred yards beyond the Majura gate is a breach in the wall one hundred and fifty-three feet long, a relic of the flood of 1837.[3] To the row of large wooden piles with which this gap was fenced a brick wall, about four feet high, was in 1869 added. Further west was the Athwa gate, removed to make room for the Dumas road. Between the Dumas road and the river bank the wall is in good order.

Railway suburb.

To the east of the city, between the railway station and the outer wall, a suburb has of late years been gradually extending. The whole has, from the first, been laid out with care. The broad roadway, encircling an open plot of ground planted with trees, separates the railway station from a roomy travellers' rest-house and a crescent-shaped row of large and regularly built dwellings. Besides this crescent, the suburb contains some streets of smaller houses and shops, steam cotton-presses, and a large cotton spinning-factory.

History, 1800-1875.

After the assumption of the entire control of the city by the British (1800),[4] happiness and prosperity are said to have prevailed in Surat.[5] But this time of good order and reviving trade did not last long. In 1813, driven south by the famine in northern Gujarát, crowds of idle and diseased[6] immigrants from Cutch and Málwa, 'by long habit addicted to thieving and the commission of every crime,' caused much injury to Surat. Trade had, also, during these years been steadily passing to Bombay, and, in spite of a brief season of prosperity in 1815, so greatly had Surat lost its importance, that, of the 600,000 inhabitants of 1798, in 1818 only 157,195 remained.[7] In 1818 trade was active; but this year of speculation was followed by a period of great depression. In the following year (June 1819) the shock of the earthquake, which caused so much

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[1] Mr. Bettington's Account of Floods, 1843.

[2] Narmadáshankár's History.

[3] Statement of the Faujdár of Surat, with his letter dated 13th September 1837.

[4] The leading events connected with the city previous to 1800 are given in the chapter on history.

[5] Forbes' Or. Mem., III., 401.

[6] These famine immigrants are said to have introduced small-pox of a very virulent description, and a pestilential disease of the febrile kind, from which Surat suffered severely.—Ham. Des. of Hindustan, I., 722.

[7] These population returns are doubtful. In 1816 no satisfactory estimate had yet been made, though Hamilton (Des of Hindustán, I, 722) admits that the population was then supposed to fall considerably short of 600,000, the estimate twenty years before. The total for 1818 is taken from Briggs' Cities of Gujaráshtra, 138, who also gives 144,355 as the population of the city in 1808.

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damage in northern Gujarát, was distinctly felt at Surat. Though not sufficient to destroy, the disturbance was enough to give to many buildings a marked swinging motion, which lasted about three minutes.[1] In 1825, though the city was still 'very large, with lofty houses overhanging its narrow winding streets,' its trade was trifling, consisting of little but raw cotton shipped in boats to Bombay. With the exception of the Bohorás and the Pársis, 'dismal decay' had fallen on the merchants of the city,[2] and in the dearth of employment the entire population had dwindled down to 124,000 souls.[3] During the next twelve years (1825-1837) trade continued slowly to decline, and the city from year to year, by little and little, grew poorer. In 1837, two great calamities—a fire in the hot season (April 24-26), and a flood (29th August to 1st September) towards the close of the rains—destroyed the greater part of the city, reducing almost all classes of its inhabitants to a state of poverty.

Fire of 1837.

On a Monday afternoon (5 P.M.), about the height of the Surat hot season (April 24th), in Máchhlipith, one of the richest and best-built quarters of the city, the dwelling of one of the leading Pársis was found to be on fire. A jar of boiling pitch had been spilt, and some of the wood-work of the house was in flames. The unpopularity of the owner of the house, according to one account—the cause of the fire,—the helplessness of such of his neighbours as were willing to stop the fire, but as Pársis could not quench it with water,—the lofty closely-packed houses with their frameworks of timber, and their heavy wooden eaves overhanging the narrow winding streets,—were enough, without the help of a 'fresh breeze from the north,' to raise a conflagration that, within a few hours, covered an area of three miles. So fierce was the fire that, when night closed in, from a distance of twenty to thirty miles across the Surat plain, heavy masses of smoke, lit up by flashes of flame, were seen hanging over the city. In spite of the stillness of the night, the fire kept spreading and gaining strength. In the heart of the city it raged with so vast a flame, and so fierce a heat, that nothing could endure or escape it. So far the progress of the fire had been steady and gradual, and before they were burnt many of the dwellings had been stript of what of most value was in them. But at daybreak on Tuesday (April 25th) a breeze sprang up from the south-west. Before it the flames speedily forced their way to parts of the city hitherto deemed safe. Here, huddled together and unprotected, the fire found most of the property that on the previous day had escaped its slower progress, and the flames, dashing suddenly across the only entrance to the Jhámpa, while the men were away helping in another part of the town, destroyed, with many of the women and children, the handsome dwellings and mosque of the Bohorás. About two o'clock on Tuesday afternoon the fire was at its height. From that time it declined, but

[1] Trans. Bom. Geog Soc., XVII., 292 On the 29th April 1864, another earthquake shock was felt. This was less severe, lasting only for two minutes.

[2] Heber's Narrative (1825), II., 174, 175.

[3] Calcutta Review, IX., 103-107.

continued to rage till Wednesday morning (26th). When the fire was over, besides many who were supposed to have perished in the ruins, the bodies of forty-nine dead were found. Of these, seven were destroyed in the rapid change in the course of the fire on Tuesday morning, thirty-two lost their lives in trying to save property, and ten were found to have thrown themselves into wells and ponds. Of the total loss of property no estimate could be framed. But 9,373 houses were destroyed, and this, at an average of £50 (Rs. 500) a house, gives a total sum of £468,650 (Rs. 46,86,500). Of the whole number of houses destroyed, whose ruins stretched along about 9¾ miles of thoroughfare, 6,250 were in the city, and 3,123 in the suburbs.[1] The misery of the people was somewhat relieved by the grant of £5,000 (Rs. 50,000) from government, and from a private subscription of £12,500 (Rs. 1,25,000) collected in Bombay.[2]

Flood of 1837.

Surat was in no position to recover from this disaster. Trade had for years been falling from bad to worse, and many of its most intelligent merchants, both Hindus and Pársis, no longer bound to the city by the tie of a comfortable home, deserted Surat in favour of Bombay. Those who left Surat were fortunate. Towards the close of the rainy season (29th August), the Tápti rose to a greater height than it had ever been known to reach, flooded almost the whole of the city, and for miles round covered the face of the country like a sea.[3] Before the waters subsided, the city had lost eighteen in men, and £27,455 (Rs. 2,74,550) in property. This second calamity left the people of Surat almost helpless. For more than a year nothing would seem to have been done to repair the city. In 1838 (December) it is described as 'but the shadow of what it had been, two-thirds to three-fourths of the city having been annihilated.'[4]

But during the next two years (1838-1840) the fortunes of Surat began to mend. From 1840 its trade improved and increased steadily from year to year. In 1847, though the city walls were still dilapidated, the public gardens uncared for, the streets filthy, and the population 'at the most not more than 80,000 souls,'[5] lines of houses most of them, it is true, of the cheapest materials—had been raised, and the Bohorás had renewed their quarter of the town

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[1] The details of the houses destroyed show the course and limits of the fire. In the city 259 houses were burnt in Máchhlipith, 647 (the whole) in Rahia Som Chaklo, 1,174 in Kelápith and Kanpith, 363 in Ránitaláv, 998 (the whole) in Wárifalia, 390 in Sangáriávád, 876 (the whole) in Kapátia Chaklo, 581 in Bhágátaláv, and 892 in Gopipura. In the suburbs, 1,880 were in Navápura, 68 in Haripura, 524 in Salábatpura, and 721 in Begampura.

[2] The account of the fire is compiled from government letter No. 815, dated 8th May 1837; from the report of the native police superintendent, or *kotwál* of Surat, and from information collected from private sources.

[3] Details of this flood are given in the account of the river Tápti.

[4] Trans. Bom. Geo. Soc., VII., 103.

[5] There are two accounts of Surat in 1847 in the Calcutta Review, IX, 103-137, & 1 in Briggs' Cities of Gujaráshtra. As to population Briggs gives 90,000 to 95,000; the estimate in the text is from the Calcutta Review.

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'with large well-built dwellings, with every regard to light and ventilation.'[1] By 1851 the population had risen to 89,505. In the following years, as trade continued to increase, the city gradually recovered some of its former prosperity till, in 1858, its position as the centre of railway operations in Gujarát gave Surat a sudden increaseof wealth and importance. Large sums of money found their way into the city, and before the reaction had set in the American war had broken out, and the rapid rise in the value of its produce again made Surat a rich city. Too closely connected with Bombay to escape unhurt from the financial disasters of 1865-1866, the merchants and men of capital in Surat were, in spite of their losses, able to keep uninjured a considerable part of their wealth. As the value of agricultural produce had still declined but little, and as no other investment seemed safe, a large amount of capital was in these years, and as late as 1869, invested in the purchase of land in Surat and its neighbourhood.

Since 1869 the fall in the prices of agricultural produce has reduced the value of property in Surat. Trade has declined, and, with the loss of employment, the price of labour has fallen. At the same time the condition of Surat is by no means one of general depression. The activity of some branches of its manufactures, and the successful establishment of steam-presses and factories, give good employment to many of the poorer classes. The large sums they spend on their feasts and in improving their dwellings show that, among the middle and upper classes, wealth is considerable; and its well-kept streets, its public buildings, and its park, give the city an air of general order and prosperity.

Trade.

As will be seen from the accompanying tabular statement, the great sea commerce of Surat has declined from an estimated total value of £1,043,222 (Rs. 1,04,32,220) in 1801 to £273,241 (Rs. 27,32,410) in 1874. At the same time, since the opening of the railway, a great and growing land traffic has been developed, the returns for the Surat station showing an advance in passenger traffic from 414,797 in 1868 to 491,789 in 1874, and in the quantity of goods carried from 23,189 to 30,868 tons:—

Statement showing the estimated value of the Sea trade of the Surat (City) Port, 1800-1875.

Years.	Imports.	Exports	Total	Years.	Imports.	Exports.	Total
	£	£	£		£	£	£
1801-2	545,101	498,121	1,043,222	1850-51	278,578	374 368	652,946
1810-11	462,204	443,546	905,750	1855-56	419,633	467,363	877,896
1820-21	443,376	406,124	849,500	1859-60	1,048,841	521.098	1,569,939
1830-31	427,025	389,320	816,345	1865-66	258,954	723,437	982,391
1835-36	28,529	257,996	286,525	1869-70	121,692	225.479	347,171
1843-44	304,043	258,826	562,869	1874-75	32,902	240,339	273,241
1844-45	286,984	294,790	581,774				

[1] These materials, 'wood-planking, bamboos, and matting,' made Surat extremely liable to fires. In the two years between March 1848 and March 1850 six fires are recorded, which between them destroyed 413 houses, with a loss of property estimated at £19,548 (Rs. 1,95,480).

With the transfer of its trade to Bombay, the great population of Surat, as late as 1797 estimated at 800,000 souls,[1] would seem to have rapidly declined. In 1811 it is returned at 250,000 souls,[2] and in 1816 at 124,406 souls,[3] and, continuing steadily to fall off, it had in 1847 reached as low a figure as 80,000. The fortunes of Surat were then at their lowest. In 1851 the total had risen to 89,505, and with the increase of prosperity in 1872 stood as high as 107,149 souls. According to the census of 1872, of the whole population, 79,076, or 73·80 per cent, were Hindus; 21,260, or 19·84 per cent, Musalmáns; 6,500, or 6·06 per cent, Pársis; and 313, or 0 29 per cent, Christians and others. The following is a summary of the available information regarding the strength, occupation, and condition of the different sub-divisions of the Surat townspeople: Among Hindus, Bráhmans 8,988, except the Nágar and a few of the other sub-divisions, on the whole, poor; Wániás 11,559, engaged chiefly in trade, some rich, and many well-to-do, but with a large residue of petty shop-keepers and poor clerks; Shrávaks 3,717, traders, merchants, money-lenders, and jewellers, on the whole, a prosperous community, though many members are in poor circumstances; Bhátiás 465, and Luwánás 459, milk-sellers, turners and shop-keepers, prosperous; Brahma-Kshatris 449, government servants, pleaders, and bankers, prosperous; Káyasths 720, and Parbhus 130, chiefly clerks in government offices, middling; Kanbis 7,739, money-lenders, traders and merchants, weavers and cultivators, good, Káchhiás 2,004, vegetable-sellers, a few weavers and artizans, prosperous; Mális 217, sellers of flowers, good; Khamárs 143, weavers and vegetable-sellers, good; Bhávsárs (calico-printers), and Chhipás (calenders) 1,392, middling; Galiárás, indigo-dyers, 206, middling; Khatris 5,941, and Sálvis 110, weavers, middling; Ghánchis, oil-pressers, 4,295, engaged in various callings, vegetable-sellers, sweetmeat-makers, labourers, prosperous. Sonis, goldsmiths, 2,560, prosperous; Suthárs, carpenters, 1,741, good; Kansárás, coppersmiths, 904, good, Kadiás, bricklayers, 772, prosperous; Saláts, masons, 99, prosperous; Luhárs, blacksmiths, 844, middling; Darjis, tailors, 1,687, prosperous; Kumbhárs, potters, 659, a large number engaged as carpenters, prosperous; Hajáms, barbers, 997, prosperous; Dhobhis, washermen, 894, prosperous; Bhistis, water-bearers, 46, middling; Rajputs 718, servants and labourers, middling; Gandhraps, songsters, 43, middling; Golás, rice-pounders, 3,282, weavers, labourers, private servants, middling; Khárwás, seamen, Bhois, palanquin-bearers, 1,327, and Máchhis, fishermen, 906, middling; Purabiás 347, servants, middling; Maráthás 702, servants and labourers, middling; Bhádbhuja, parchers of grain, 402, middling; Bhandáris, toddy-drawers, 342, middling; Bharwáds, shepherds, 102, middling; Kolis 3,089, labourers, middling; Rájbharás, makers of the warp, 113, middling; Wághris,

[1] Surat Papers, 91. This number is probably excessive Other estimates of the city population during the latter part of the eighteenth century vary from four to ten lákhs (see p. 134).

[2] Report of the collector to Government dated 4th December 1811.

[3] Book of reference to the plan of the city of Surat, by Captain Henry Adams.

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fowlers and hunters, and Rávaliás, cotton-tape-makers, 780, poor; Wánsforás, bamboo-splitters, 219, poor; Mochis, shoe-makers, including Dabgars, drum-makers, and Chánlágars, spangle-makers, in all 1,001, middling; Khálpás, tanners, 186, poor; Dublás and other aboriginal tribes 1,670, poor; depressed classes, Dhers and Bhangiás 3,698, prosperous; religious mendicants 349; miscellaneous 63. Musulmáns numbered 21,260. With the exception of 3,336 Bohorás, most of them prosperous traders, the Musalmáns,—government messengers and police, petty shop-keepers, weavers, and labourers, are in depressed circumstances. Pársis numbered 6,500. Except some families of poor weavers and menials, the Pársis, as government servants, lawyers, doctors, merchants, artizans, and shop-keepers, form a prosperous community. Under the head of 'others' 313 persons, of whom 297 were Christians, were included.

Style of living.

A fondness for good living, pleasure, and show, alike among Hindus, Pársis, and Musalmáns, is the characteristic of social life in Surat.[1] Hindus have two favourite forms of excitement—their caste feasts and wedding processions, and their local fairs and festivals. In Surat caste feasts and processions are both more common and more costly than in other parts of the province. Nor is this form of extravagance confined to Hindus of the higher classes. Especially of late years oil-sellers and other artizans give feasts, of which a Wánia would be proud. The fairs, held a few miles out of Surat, are, as they used to be two hundred years ago, largely attended. Rows of gay bullock-carts, filled with richly dressed men and children, press along to the places outside of the city walls, where the 'citizens resort to banquet and amuse themselves.' The Pársis join largely in the merry-making at these festivals, and, besides holding their old-fashioned feasts in their public hall, the practice of forming into clubs for amusement and entertainment has lately become common. Among Musalmáns, the Bohorás, the only prosperous class, are famous for their hospitality and love of good living. Other Musalmáns have not, as a rule, much to spend on private feasting; but once at least in the year, on the Bakri Id,[2] they make a 'brave show' as they pass through the streets of Surat.[3]

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[1] Details of the daily life of the different classes of townspeople will be found in the general chapter on the population of Gujarát

[2] In memory of the ram sacrificed for Isaac The feast falls in the Muhammadan month of Zilhaj. The procession of *tabuts*, or effigies of the tomb of Hasan and Hussein, another day of show and excitement, is not referred to in the text, as in Surat Hindus have almost as great a share in the procession as Musalmáns.

[3] Except that there is no salute from the castle, and that no European officers are present, the Bara and Chhota Sahebs, as the sons-in-law of the late Mir Jáfar Ali Khán are commonly called, very closely maintain the Bakri Id procession as it was a hundred years ago (see above p. 132). On the Bakri Id, about eight in the morning, a palanquin waits on the Káji, or religious head of the orthodox Musalmáns, and brings him to the nawáb's palace From the palace, about nine o'clock, the procession starts—first, to the castle; then, by the Bakshi's palace, the municipal hall, and Syed Idrus' mosque to the place of prayer outside of the Katárgám gate Mounted drummers head the procession, followed by a body of out-runners in scarlet; then the Káji, in a richly ornamented palanquin. After him a brass band and an elephant with rich trappings; then another palanquin, with some of the Chhota Sáheb's children, a second band, and the Chhota Sáheb's son on horse-back; then more out-runners, and the Chhota Sáheb in a carriage drawn by four grey horses. A guard of about forty entertainers, armed with

Another feature in the social life of the traders and craftsmen of Surat is their organization into guilds. The chief of these guilds, composed of the leading bankers and merchants, is called the *máhájan*, or trade-guild. Its funds, derived from fees on cotton and on bills of exchange, are spent partly on the animal hospitals and partly on the temples of the Maháráj́ás of the Walabhácháŕi sect. The title and office of Nagarseth, or chief merchant of the city, hereditary in a Shrávak family, has for a long been little more than a name. Though including men of different castes and races, each class of craftsmen has its craft-guild, or *panchávat*, with a headman, or referee, in petty trade disputes. They also have a common purse, spending their funds partly in charity and partly in entertainments. A favourite device for raising money is for the men of the craft or trade to agree, on a certain day, to shut all their shops but one. The right to keep open this one shop is then put up to auction, and the amount bid is credited to the guild funds. Craft-guilds.

In the matter of house-building, the cheapness of timber brought from the Dáng forests gives Surat an advantange over Ahmedábád and other cities of northern Gujarát. In Surat, each story of a dwelling is built so as to be independent and self-supporting. The weight of the building rests not on the brick-walls, but on the large wooden pillars, placed at the corners and at intervals along the inner walls. Surat houses may be roughly classed as belonging to one of the three styles: the Muhammadan style, in vogue from about 1600 to 1759; the Hindu style, common in houses built between 1759 and 1837; and the modern Bombay style that has been in fashion for perhaps the last twenty years The houses of the first period were for the most part built two or three stories high, round an open court, with a fountain in the centre. At the end of the building, on the ground floor, was the public reception-room, and in the upper stories other public rooms. The women's quarters and the cook-room were separate. Under the Muhammadans (1573-1759), even rich Hindus, through fear of exaction or robbery, lived in small poor-looking houses. But in the security that followed the establishment of British power in Surat (1759), Hindus not only began to build large and handsome dwellings, but spent much money in decorating the fronts of their houses with carved pillars and cornices of wood. The heavy eaves and the massive wooden doors were also highly ornamented. This form of house decoration continued fashionable till, in 1837, the greater number of the large houses were destroyed by fire. A few still remain, some of which are said to have cost as much as £10,000 (Rs. 1,00,000). Reduced to poverty by the fire, Surat was rebuilt 'of the cheapest materials,—wooden planks, and bamboo matting,'—and as late as 1850, in some parts of the town, only here Dwellings.

guns, escort the Bara Sáheb's son, who is seated on an elephant; then more out-runners; and after the Bara Sáheb and the Bakshi, who pass riding abreast, a mounted body-guard closes the procession. Strings of bullock-carts and carriages press on behind. Few are the families, says Munshi Lutfullah, so badly off as not to appear on this day in gay, almost in rich clothes, and on their return regale themselves, for once in a way, on a dinner of mutton and maccaroni (*sev*).

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and there was a house with brick-walls.[1] But, with returning prosperity and growing wealth (1853-66), houses, built after a new fashion, began to rise in many parts of the city. These new houses differ from the old ones chiefly in being lighter and more open. Instead of being square the wooden pillars in front are rounded, and are taller and slighter than the old ones. The wood-work is almost entirely plain, no heavy eaves, carved cornices, or richly-cut capitals. Indoors the rooms are larger and higher, and, with broader and more open windows, they are brighter and more airy, though, perhaps, not so cool as the old houses.[2]

The details of the inner arrangements of a town house given in the provincial chapter apply to the Surat houses. But the *bhoyrun*, a cellar or under-ground strong-room, is seldom found except in Surat. Though alike in being always made of brick and cement without timber, these cellars vary much in size and construction. In some houses they are but little more than treasuries or safes for keeping articles of value. In others they resemble the underground retreats in a Muhammadan mansion, rooms furnished with swinging cots, favourite resorts in the hot season. Occasionally, especially in the houses of rich traders, the cellar contains an inner safe, or *khajáno*, secreted with great care in one of the walls of the chamber. Another point worthy of note in the arrangements of Surat town houses is that very many of them are provided with a private well and a cistern for holding rain water. With only one or two exceptions the water in the city wells is, from its brackishness, fit only to be used for bathing and cleaning. Almost all the well-to-do drink rain water. This, falling on the flat cement coated roofs and terraces, is drawn through metal pipes or masonry channels down to a cement lined cistern, where it remains fresh and fit for drinking throughout the year. Those who have no store of rain water, drink water drawn from the Tápti or from one of the few wells of sweet water in the suburbs and outskirts of the city.

Public Buildings. The English Church.

On the bank of the river, between the castle and the custom-house, stands the English church. The foundation-stone of this building

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[1] Collector's report dated 6th February 1850.

[2] One of the best specimens of the new style of house architecture is the dwelling of a Hindu, the most tasteful maker of wooden bracelets in Surat. On a foundation raised several feet above the level of the ground, a row of wooden pillars, well rounded and varnished, supporting the upper story, runs along the edge of a broad terrace or veranda paved with stone. Beyond this veranda is the workshop, a large room, taking up all the frontage of the house, about thirty-five feet long, ten feet high, and fifteen feet broad. This room is open to the street, airy and clean. In the back wall, at either end, is a door. Of these one opens into a little enclosed court-yard. Through the other, on the left hand, are the rooms for cooking and bathing, and to the right the stair-case. This stair-case is a great advance on the old rope and ladder arrangement for getting into the upper story. It has broad wooden steps, and a wooden hand rail. The ascent is easy, with a turning or resting-place half way up. In the upper story there is but one room of the same dimensions as the workshop. This room is open and airy, the ceiling boarded, and the walls painted to represent crimson curtains. The furniture consists of a bed, chairs, and cushions near the walls. The floor is of mud. A ladder leads to a flat paved terrace on the roof. The rain water is collected in pipes, and carried down to a cistern in the court-yard. Outside of the wall is a small well. £800 (Rs. 8,000) are said to have been spent in building this house.

was laid, on the 16th February 1820, by Mr. Elphinston, chief of Surat. The church was opened in 1822, and was consecrated by bishop Heber, April 17th, 1825. The building, which holds seats for a congregation of about one hundred persons, cost a sum of £5,800 (Rs. 58,000).[1]

The Mission chapel.

The Mission chapel near the old English factory, built about the year 1835, by Mr. Fyvie, of the London Missionary Society, is supposed to accommodate a native congregation of three to four hundred, and a European congregation of two hundred persons.

The Portuguese chapel.

The Roman Catholic or Portuguese chapel in the Bhágátalav ward, not far from the site of the old Dutch factory, would seem, from a tablet on the door, to have been built about the year 1802 It can hold a congregation of about one hundred and fifty persons. Opposite the chapel is a small burying-ground with about twenty tombs.[2]

European tombs.

The European tombs, built during the latter half of the seventeenth century, are among the chief objects of interest at Surat.[3] Mr. Bellasis (1861) has left the following account of these monuments :—

"The most pompous mausoleum in the English cemetery is that erected over those 'most brotherly of brothers,' Christopher and Sir George Oxenden. The structure is, in fact, made up of two tombs, of which one is interior to the other. Christopher died in 1659; and the first building, a domed structure with a pinnacle at each corner, was erected over his grave, and an epitaph, written by his brother, was placed within it on a small marble slab. It is written in the old English character, and is a model epitaph for an exact merchant. It is as follows :—

"Hic situs est Christopherus Oxinden, probitatis
Exemplum vitâ, sed vitæ morte caducæ,
Intrat et exit, hic incepta animamque finivit.
Ille dies tantum numerare logistâ valebat,
Non annos, nam raptim exegit mors rationem
Quæritis, O Domini, quid damni vel quid habetis
Lucri? vos servum, socium nos, perdidit ille
Vitam, sed per contra scribat mors mihi lucrum
Exijt e vitâ Apr 18, 1659"

This may be translated :—

Here is laid Christopher Oxenden, in his life a pattern of fair dealing; in his death, a proof of the frailty of life.

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[1] Calcutta Review, IX., 134.

[2] The Portuguese had two chapels in Surat– one, built in 1624, at the site of the Portuguese tombs, near the Katargám gate. For the support of this chapel the emperor of Delhi granted, in 1729, a yearly sum of £12 12s (Rs 126) In 1759 a second chapel was built, and was supported by the English Government. (Collector of Surat to the Bombay Government, 532, dated 30th August 1828) Some account of the Armenian chapel has been given above in the description of the Mulla's ward, p. 305.

[3] European travellers in Surat were very proud of the tombs Ovington (1690) speaks of them as monuments, whose large extent and beautiful architecture, and aspiring heads, made them, visible at a remote distance, lovely objects of the sight, and give them the title of the principal objects and magnificences of the city.

He comes, and he is gone. Here he ended his ventures and his life.

Days only, not years, could he enter in his accounts; for, of a sudden, death called him to a reckoning.

Do you ask, my masters, what is your loss and what your gain?

You have lost a servant, we a companion, he his life; but, against this, he can write 'death to me is gain.'

"Sir George Oxenden died in 1669, and Christopher's tomb was then inclosed in another, similar in style, but two stories high, and remarkable for the peculiarity of its dome, which represents an open cross. The height of this monument is forty feet The diameter twenty-five; massive pillars support two cupolas rising one above the other; and round their interiors are galleries reached by a flight of many steps. In the upper compartment of this building is inserted a large marble slab bearing an inscription to the memory of Sir George, in which he is magnificently described as 'Anglorum in Indiâ, Persiâ, Arabiâ, Præses."

"The inscription is as follows:—

Interrogas? Amice Lector!
Quid sibi vult grandior hæc structura? Responsum habe,
In hoc gloriatur satis quod alteram illam grandem continet,
Superbit insuper quod una cum illâ tegit generosos duos fratres
Fraterrimos,
Qui et in vivis fuerunt et etiam in mortuis sunt quam conjunctissimi.
Alterum velis intelligas? lege alibi.
Intelligas velis alterum? lege hic
Dominus Georgius Oxinden Cantianus
Filius natu tertius D Jacobi Oxinden Equitis.
Ipse equestri dignitate ornatus
Anglorum in Indiâ, Persiâ, Arabiâ, Præses,
Insulæ Bombayensis Gubernator
Ab illustri Societate pro qua presidebat et gubernabat
Ob maxima sua et repetita in eam merita
Singulari favoris et gratitudinis specimine honestatus.
Vir
Sanguinis splendore, rerum usu,
Fortitudine, prudentiâ, probitate,
Pereminentissimus
Cum plurimorum luctu, obijt Julij 14°
Cum plurimorum frequentiâ sepultus est Julij 15°
Anno Domini 1669
Anno Ætatis 50.
Heus Lector!
Ex magno hoc viro, vel mortuo aliquid profecias"

"In the immediate neighbourhood of the Oxenden mausoleum is a building of considerable pretension, but without an inscription, supposed to be the tomb of Gerald Angier (1677). Near to these are tombs which bear the names of Bernard Wyche, chief of Surat, (1736), and of Annesley (1700), displaying the armorial bearings of their families. The devices of western heraldry quaintly contrast with the semi Saracenic architecture of the tombs, and with the luxuriant tropical foliage in which they are embosomed. Three others, with Latin inscriptions, are in memory of Francis Breton, president, 1649; of Henricus Gary, 1658; and of Bartholomew Harris, president, 1686."

"Of the Dutch tombs that of Baron Van Reede is said to have exceeded all the rest in magnificence. This tomb, built with the intention of eclipsing that of Sir George Oxenden, consists of a double cupola of great dimensions, with a gallery above and below, supported on handsome columns. It was formerly adorned with frescoes, escutcheons, and passages from Scripture, and the windows were filled with much beautiful wood-carving. Some idea may be formed of the original cost of this tomb, by the fact of a bill being extant, charging £600 (Rs 6,000) to the Dutch company for mere repairs. While time and the elements have left most of the other tombs without name or date, Van Reede's tomb still retains three inscriptions The one to Baron Van Reede is inscribed in a compartment on the wall itself, opposite the entrance door; and on either side are hung two large black wooden tablets, with the following Dutch inscription cut in white letters, and in a running hand. The inscription, which records the Baron's titles and the date of his death, is as follows :—

Hier Rust
Het Lichaam van
Zyn Hoog Edelheyt
D Hr —Hendrik Adriaan
Baron Van Reede
Tot Drakensteyn Heere van
Meydiegt
Onder de ordre van de Ridder
Schap en agt de selve ordre
Gecommitteerd in de Ordinaris
Gedeputeerde van D'Edle Mogend
Heeren Staaten S Lands van
Utreyt
Commissaris van de Generale
Nederlandse Geoctroyeerde
Oost Indische Compagnie over
India
Representerende in dier qualite
De Vergaderinge der Edle Hren
XVIIen
Overleden den 15en December
Ao 1691
Op't Schip Dregerlant Zylende
Van COCHIM naar SOURATTA
Op de Hoogte van de Engelse
Sterkte bombai ;
Oud Ongevaer
56 Jaaren.

"This may be translated: Here rests the corpse of his high nobility the Lord Henry Adrian, Baron of Reede of Drakenstein, Lord of Meydiegt—graced with the Order of Knighthood, and usually delegated by the same Order as Deputy of the noble and mighty Lords, the States of the Province of Utrecht, Commissary of the United Netherlands licensed East India Company for India, representing in that quality the assemblies of the noble Lords the Seventeen. Departed the 15th December, Anno 1691, on board of the Ship Dregerlant sailing from Cochim to Souratta abreast of the English Fort, Bombai, aged about fifty-six years."

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But the best known of the Surat tombs was that raised over a jovial Dutch commander, a great drinker, and said to be a relation of the prince of Orange. At the top was a great cup of stone, and another at each corner. Opposite each cup was the figure of a sugar-loaf. Dutch drinking parties used to frequent this tomb, brewing their punch in the large stone basins,[1] remembering, says Ovington (1690), their departed companion so much, that they sometimes forgot themselves. In 1847 no trace of this tomb was left.[2]

Musalmán mosques.

The Musalmáns have the four following chief places of worship: Khájey Diwán Sáheb's mosque, built, it is said, about 1530, by a certain Khájey Diwán Sáheb. This teacher came to Surat from Janok, near Bokhára, lived to the age of one hundred and sixteen years, and lies buried in this mosque, where, once a year, a large fair is held in his honour.

The Nav Syed Sáheb's mosque, or the mosque of the nine Syeds, on the west bank of the Gopi lake, is another place of Musalmán resort, where a yearly fair is held. Beside the mosque are nine tombs, raised, according to one account, in honour of nine warriors, whom the Khájey Diwán Sáheb miraculously discovered were buried there.

The Syed Idrus mosque in Syedpura, with a minaret, one of the most conspicuous objects in Surat, was in 1639 built by a rich merchant, named Mirza Syed Beg, in honour of the original ancestor of the present Sheikh Syed Hussein Idrus, C.S.I., who is said to have come to Surat in 1564, and died in 1622. A fair is held here every year in the Muhammadan month of Zilhaj

Lastly, there are, the most interesting of the Musalmán remains, the Mirza Sámi mosque and tomb in Mirza Sámi ward. The tomb, of stone, ornamented with carving and tracery, is said to have been built about 1540 by Khudáwand Khán, the architect of the Surat castle. The wooden mosque in the enclosure near the tomb is said to have been erected out of materials taken from a Jain temple in Sháhápur ward.

Pársi fire-temples.

There are two chief Pársi fire-temples, or A'tasbeherám,—one for Sháhanshái Pársis, built in November 1823, and the other for Kadmi Pársis, built in December of the same year.

Hindu temples.

Of Hindu places of worship the following are deserving of notice The Walabhácháris have three principal religious buildings, the temple of Gosávi Maháráj, of Govindji Maháráj, and of Lálji Maháráj. Gosávi Maháráj's, also called Bálkrishnaji's temple and the great temple, is in the Kanpith ward. Built in 1695, this temple was burnt in 1837, and has since been renewed at a cost of more than £10,000 (Rs. 1,00,000). Govindji Maháráj's temple in Gopipura has been built, at a cost of about £5,000 (Rs. 50,000), on the site of a dwelling-house used as a temple, and burnt in 1837. Lálji Maháráj's temple

[1] Thevenot's Voyages (1666), V., 71

[2] Calcutta Review, IX., 125.

...as been rebuilt, since the fire of 1837, at a cost of £2,000 (Rs. 20,000). The original temple is said to date from 1770.

Hindu Temple.

The temple of Rámji in Gopipura was, at a cost of £1,500 (Rs. 15,000), constructed out of the estate of a Bombay banker. Attached to this temple is a garden, a place for caste entertainments, and two large two-storied houses for the use of travellers.

The Swámi Náráyan temple, a large building with three white domes, is visible from most parts of the city. The chief portions of the temple, which are of stone, were built in 1869 by workmen from Káthiáwár. These men, about one hundred in number, had their expenses paid by the followers of Swámi Náráyan in Káthiáwár; and, as they gave their own labour, the temple was built without any cost.

The Báláji temples in the Rahásom ward were built, between 1803 and 1819, at a cost of about £30,000 (Rs. 3,00,000) The builder was Tarwári Shrikrishn Arjunji Náthji, banker of the Honourable East India Company, whose name is still well known in Surat for liberality The greater portion of these buildings was destroyed in the fire of 1837.

Two temples of Hanumán, the monkey-god, are much respected by the people Of these, one known as Pátalia is situated on the bank of the river near the Mulla-khadki, and the other in Sagrámpura

In Ambáji ward are two old temples,—one dedicated to Ambáji, the other to Kálka Máta Of the temples in honour of Mahádev, one known as Muleshwar, in Gopipura, and another as Káshi-vishwanáth, in the Rahásom ward, deserve notice. In both of these the shrines are about fifteen feet underground; a relic, it is said, of Muhammadan persecution.

Of forty-two places of worship belonging to the Shrávak community, the chief are the Mahávir Swámi and the A'desar Bhagwán temples, both in Gopipura, and from one hundred and fifty to two hundred years' old Some interest also attaches to Chintaman Párasnáth's temple in Sháhápur. The present building stands, it is said, on the site of an earlier temple of wood carried off by the Muhammadans, converted into a mosque, and set up in the enclosure near Mirza Sámi's tomb.

Of places of worship frequented by low-caste Hindus, the chief are Khetarpál, a small temple in Dhertaláv near the police lines; and Marimáta, a hut in the outskirts of the city opposite to Ránder.

Rest houses.

Near the railway station is a roomy rest-house for travellers, with separate quarters for Europeans, Pársis, Musalmáns, and Hindus. This building was constructed in 1864, at a cost of £2,528 (Rs. 25,280), by Mr. Kharsedji Fardunji, a Pársi merchant of Bombay. Other rest-houses for Europeans are the travellers' quarters on the Dutch wharf, and an hotel at the railway station. Musalmán strangers, besides accommodation in mosques, have quarters in the municipal

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buildings set apart for their use. For Pársis, besides three large old rest-houses,[1] an hotel has lately been opened near the Nánpura bridge. For Hindus is Himatrám Mayárám's *dharamshála* near the Wariávi gate. This building, before the days of railways, was much used by travellers passing northwards. Ráichand's *dharamshála* in Gopipura, built in the year 1864-65, is in appearance much like a first-class Hindu dwelling. This rest-house is reserved for the use of high-caste Hindus, particularly Shrávaks. Davies' *dharamshála* near the commódore's wharf, formerly much resorted to by persons going by sea to Bombay, was built in 1852-53, at the cost of £300 (Rs. 3,000), in honour of Mr. John Marshall Davies, who, after distinguished service as collector of Broach and Surat, died in that year as resident at Baroda. Besides these, near the railway station, a board-house has lately been opened for Hindus.

pitals.

There are two chief places for the relief of the sick in Surat, the Káwasji Jahángir hospital and the Fardunji Párakh dispensary. Of these, the Káwasji Jahángir hospital, situated to the south of the castle green, with accommodation for eighty in-door patients, was built at the sole cost of Sir Káwasji Jahángir, K.C.S.I., for a sum of £7,190 (Rs. 71,900). The Fardunji Párakh dispensary, on the north side of the Delhi gate road, nearly opposite to the clock-tower, has accommodation for twelve in-door patients. It was built at a cost of £1,200 (Rs. 12,000). In and near Surat are four hospitals for animals—in Gopipura, in Sagrámpura, in the village of Majura, about two miles, and in the village of Bhestán, about five miles from Surat. These four hospitals have together room for about a thousand head of cattle. At each of them healthy animals, as well as the maimed, diseased, or old, are received. The sick are treated with care and provided with medicine; the feeble and worn-out are sent to a distance to graze; the healthy, and animals born in the hospital, are used to bring in supplies of grass and grain, and do other light work. In February 1877, 522 animals were in hospital. Of the whole number 107 were cows, and 134 were bullocks; and thirty-nine buffaloes, thirty-two horses, ninety-five goats, five deer, seven dogs, one ass, three ducks, and one cock, made up the total. Of Ovington's hospital for bugs, fleas, and other insects, where 'a poor man was now and then hired to rest all night upon a cot or bed, and let the animals nourish themselves by feeding on his carcase,' the only remaining trace is a loft where weevils and other vermin are collected and fed on grain. The inmates are fed on green grass, hay, and pulse, with, it is said, an average daily consumption of 2,100 bundles of grass and about 124 pounds of grain. Dogs and other animals that do not eat grass or grain are fed with milk and bread. Once a year, on the day of *sankránt* (12th January), all are feasted on *kuler*, a preparation of millet-flour, molasses, clarified butter, and milk. These hospitals, which together have a yearly revenue and expenditure of about

[1] These rest-houses, also used by the Pársis on occasions of public entertainments, are—one in Sindhiwád, said to have been built in 1763; one in Syedpuri Bhágal, built in 1800, and the third at Nánpura, built in 1819.

£900 (Rs. 9,000), are managed by a committee of Hindu merchants and bankers.[1]

Government offices.

In the castle are the offices of the collector and magistrate of Surat; of the first, second, and supernumerary assistant collectors; of the district and head-quarter, or *huzur*, deputy collectors; of the district superintendent and city inspector of police; and of the chief native revenue officer, or *mámlatdár*, of the Chorási sub-division. There are also the treasury, the city survey office, the offices of the sub-registrar and the custom-house. A portion of the castle is also used as a lock-up, consisting of three wards, together capable of accommodating about twenty prisoners. In buildings on the Dutch wharf are the offices of the executive engineer, the post office, and the civil jail. Close by are the small cause court and the courts of two subordinate judges. To the south of the subordinate judge's court is the jail, constructed about fifty years ago, with accommodation for one hundred and thirty-nine prisoners. It contains thirty-one wards, and in front of the entrance-door is a garden extending over an acre. The building is guarded by a detachment of native infantry. Beyond the jail, at the south-west corner of the outer wall, is the court-house where the district and assistant judges hold office. Between the Majura and Athwa gates are the offices of the superintendent of the revenue survey and of the assistant collector of customs and salt. No separate buildings are provided for the offices of the educational inspector, northern division, and the deputy conservator of forests, Gujarát circle, who hold office in their own houses. The government telegraph office is at present a hired building on the Delhi gate road near the clock-tower.

Miscellaneous.

Of miscellaneous public buildings is the clock-tower on the Delhi gate road. This building, which, in campaniform, rises to the height of eighty feet, was completed in 1871 at the sole charge of Khán Bahádur Barjorji Merwánji Frazer, at a cost of £1,750 (Rs. 17,500). The high school, with eight class-rooms and one central or lecture hall, provides accommodation for about five hundred boys. It was completed in 1872 at a cost of £8,600 (Rs. 86,000). Of this whole

[1] The following were the chief items in the hospital balance sheet for 1876-1877 :—

Balance Sheet of the Surat Animal Hospitals, 1876-1877.

Receipts	£	Expenditure.	£
Cess on cotton at ½*d.* per bale	23	Grass	534
,, bills of exchange at ¼ per cent	14	Grain	99
Shrávak and Bania marriages at 2*s* per marriage	14	Establishment	105
Cess on silk at ¼ per cent	10	Miscellaneous repairs, medicines	167
Other cesses	13	Balance	5
Rent of hospital land	110		
Sale proceeds of hospital produce ...	36		
Admission fees*	10		
Contribution and donation	80		
,, from the Bombay animal hospital	600		
Total ..	910	Total...	910

* Admission fees are charged at the rate of 6*s.* on horses, and 2*s.* 6*d.* on other animals. Cattle and goats purchased from butchers are admitted without any entrance charge.

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amount £3,500 (Rs. 35,000) was contributed by Mr. Sorábji Jamshedji Jijibhái of Bombay, and the remainder by government. The girls' school in the Kapátia ward, to which Mr. Ráichand Dipchand contributed a sum of £200 (Rs. 2,000), was completed in 1864 at a cost of £600 (Rs. 6,000).

Railway station.

Built at a point where the line passes along the top of a high bank, the Surat railway station is two storied on the city or west front, and single storied on the platform or east side. From the town road the platform is reached by a flight of broad stone steps. Large, and furnished with first class offices and refreshment-rooms, the station cost a sum of about £25,000 (Rs. 2,50,000). In spite of the difficulty of finding good foundations, the buildings have, since 1862, stood without injury the daily vibration of heavy trains.

Markets.

Among the places of interest in Surat are the markets. These are of two kinds, wholesale, or *pith*, and retail, or *bazár*. Of wholesale markets there are four,—the rice-market in Navápura; the millet, pulse, and grass-market in Begampura; the wheat-market near the Wariávi Bhágal; and the *ghi kánto*, or butter-market, in Haripura. Except in making purchases of the better varieties of butter, one system of buying and selling is observed at all of these markets. In the fair-weather months, at the grain and grass-markets, bands of carts assemble between five and six in the morning. The sellers are chiefly cultivators; the buyers, retail-dealers and private persons anxious to lay in their yearly or monthly store of grain.[1] The buyers and sellers do not deal with each other direct. The bargain is negotiated through a broker, or *dalál*. These men, almost all of them Hindus, are paid by the seller from one to two shillings the cart-load of grain. When a bargain has been struck, the work of weighing the grain, and delivering it at the purchaser's house, is left to the broker. Grain remaining unsold after the private buyers have left for the day is, at somewhat reduced rates, generally bought up by retail-dealers. In the Haripura suburb are two markets, one for Kaira, or *charotar*, and the other for Surat, or *talabda*, butter. At the Surat butter-market the sellers are chiefly cultivators; the buyers private householders and retail-dealers. This market is held at the house of a Wánia, whose family have for generations been the regulators of the price of butter. Here, at about eight in the morning, retail-dealers and private buyers assemble. Earthen pots of butter,[2] from villages near Surat, are arranged round the room. The regulator, after consulting with the dealers as to the general state of the market, passes round the room, fixing, by tasting them, the quality of the contents of each jar. Purchases are then made, first by private persons, and afterwards by the retail-dealers. When a jar is bought, the regulator weighs it, chalks its weight and price across it, and receives from the seller

[1] Especially among Hindus, the well-to-do of all classes take advantage of its cheapness in harvest time to lay in a store of grain for the whole year.

[2] The Surat, or *talabda*, that is, home-made butter, is of two kinds: the better sort called *ghádwa*, brought in earthen jars, each holding from three to thirty pounds, the produce of one cultivator's farm-yard; the cheaper variety called *potalia*, in large earthen jars, containing about eighty pounds, is often collected from several farms.

a fee of one halfpenny. The buyer and seller then start together for the buyer's house. Here the jar is emptied, weighed, and, with a deduction according to the weight of the jar, the price fixed by the regulator is paid. The supplies of Kaira, or *charotar*, butter, an inferior article often mixed with oil, are in the hands of rich dealers. At their store-houses, after attending the Surat butter-market, private buyers and retail-dealers meet together. The price for the day is fixed by discussion between buyer and seller, and, after the price is fixed, purchases are made. The butter, kept in large leather jars, is weighed, and taken to the buyer's house by a class of the Márwári carriers, who enjoy the monopoly of the butter-carrying trade.

For the sale of vegetables and grain are five chief retail markets, known as the Wariávi, Burhánpuri, Jhámpa, Navsári, and Nánpura bazárs. The sellers, as a rule, rent their shops. Between six and seven in the morning, for almost all of them pass the night at their dwellings, they open their shops and stay there till eight or ten at night. Except among the poorest classes, the customers are all men, either servants or the males of the family. The favourite hours for marketing are from eight to ten in the morning, and from seven to nine in the evening.

City Survey.

In 1875 was completed a survey of the city of Surat, undertaken in 1864 with the object of distinguishing lands belonging to private individuals from those that were the property of the state.[1] The total cost of this survey amounted to £17,557 (Rs. 1,75,570), and the receipts to £16,335 (Rs. 1,63,350).[2] Government expended £6,714 (Rs. 67,140), and received £6,884 (Rs. 68,840); while the municipality of Surat expended £10,843 (Rs. 1,08,430), and received £9,451 (Rs. 94,510). The following statement shows in detail the distribution of the surveyed lands:—

Statement showing the distribution of the Lands of the City of Surat, 1875.

Total area surveyed	Private land.		Government land			
	Building sites	Lands paying summary settlement.	Government buildings	Railway buildings.	Occupied or assigned land.	Vacant, for sale or lease.
Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.
9,763,699	4,708,840	2,044,452	133,933	78,520	2,349,449	448,505

Municipality.

The municipality of Surat dates from April 1852.[3] In 1875 its total income amounted to £20,435 (Rs. 2,04,350), and its expendi-

[1] The details about the city survey are obtained from the accompaniments of G. R. No 5987, dated 20th October 1876.

[2] This amount does not include the value of the 448,505 square yards of land remaining to be sold, nor does it include the reversionary right of government to the leases granted for ninety-nine years.

[3] In 1849 a local fund was formed at Surat for the purpose of improving the communications in the town. The Municipal Act (XXVI. of 1850) was introduced in 1851 (3rd July), but the working rules were not framed and sanctioned till 1852 (April 23rd).

Chapter XIV. Places of Interest. SURAT. Municipality.

ture to £23,171 (Rs. 2,31,710). The incidence of taxation in that year was 3*s.* 6¾*d.* (Rs. 1-12-6) per head of the population. The following tabular statement, exclusive of balances, advances, and deposits, shows the chief heads of receipts and disbursements in the year 1875 :—

Balance Sheet of the Surat Municipality for 1874-75.

Receipts.	£	Disbursements.	£
Taxes on sugar, clarified butter, toddy, toll, and wheel-tax	13,800	Establishment	2,462
Taxes on spirituous liquors	1,178	Road-sweeping charges	1,245
Sale proceeds of lands	494	Privy and cess-pool cleaning charges	3,636
Revenue from markets and slaughter-house	493	Watering	1,213
Sweepers' cess	3,615	Lighting	1,759
Miscellaneous	855	Public Works. { New works	1,073
		{ Repairs	2,450
		Fire establishment	722
		Market and slaughter-house establishment	240
		Maintenance of dispensaries	565
		Grant-in-aid to schools	350
		Public park	387
		Dead-stock	35
		Loan repaid	6,742
		Miscellaneous	292
Total ...	20,435	Total ..	23,171

Since the date of the establishment of the municipality, twenty-one miles of roadway have been constructed at a cost of £75,463 (Rs. 7,54,630). These lines of road are, throughout almost their whole length, kept lighted and watered. The most important of them is that known as the Delhi gate road, running from the wharf near the castle, eastwards, to the railway station, a distance of about one mile and three-quarters. This road, about thirty feet wide, and complete in all details, cost but little less than £50,000 (Rs. 5,00,000).[1] Besides the expenditure on roads, a sum of £7,757 (Rs. 77,570) has been spent in protecting the city from floods, and a sum of more than £2,000 (Rs 20,000) in lessening the risk of loss by fire. Systems of drainage, conservancy, and public markets have also been established. Except Bombay, no city in the presidency owes so much to its municipality as Surat.

SUWA'LI.

Suwa'li, the seaport of Surat, a village about twelve miles west of the city, in the Olpád sub-division, outside the mouth of the Tápti, with a good roadstead and deep water. The channel, about one and a half miles in breadth and seven miles in length, lies between a long strip of land, dry at low water, and the shore. 'Suwáli hole' is a cove which cuts into the land about the middle of this

[1] The exact total cost is £48,949 (Rs. 4,89,490). Of this amount £15,992 (Rs 1,59,920) have been met from the sale of land and of materials of houses purchased, and £14,839 (Rs. 1,48,390) paid from municipal, £8,448 (Rs. 84,480) from local, and £9,670 (Rs. 96,700) from imperial funds.

channel.[1] With the arrival of large European ships, which had often to remain in the Tápti for several months, Suwáli became the seaport of Surat. In 1626 it had already become a place of importance. In the fair season (September to March) the Wániás 'pitched their booths and tents and huts of straw in great numbers, resembling a country fair or market.' Here they sold calicoes, China satin, porcelain, mother-of-pearl and ebony cabinets, agates, turquoises, carnelians, as also rice, sugar, plantains, and native liquor.[2] For some years all ships visiting the Tápti were allowed to anchor at Suwáli; but so great were the facilities for smuggling that, before many years had passed (1666), the privilege was limited to the English, Dutch, and French.[3] About half a mile from the sea 'the factors of each of these nations built a convenient lodging of timber, with a flagstaff in front, flying the colours of its nation.[4] On the sea-shore was an European burial-ground, where, among others, was laid Tom Coryat, the eccentric traveller and author, who, according to Terry (by drinking too freely of sack), overtook death in December 1617, and was buried under a little monument like one of those usually made in our churchyards.[5] Towards the end of the eighteenth century (1777) Suwáli was no longer a place of anchorage. The vessels had again taken to lie in the road a league south of the river mouth.[6]

Una'i. Una'i,[7] north lat. 20° 45′; east long. 73° 17′. A hamlet, remarkable for a very copious hot spring, whose waters are collected in a stone-built tank, about thirty feet square. Though not actually in the Surat district, Unái is sufficiently close to it to be, during the continuance of the fair, in constant communication with the town of Chikhli. The spring is said to have been produced by an arrow shot by Rám in order to supply with water 18,000 Bráhmans. Here the only important fair in the Surat district is held every year at the full moon of the month of Chaitra (March to April). This fair lasts for six days, and is on an average attended by about fifteen thousand people. Most of the visitors, about twenty per cent of whom are, as a rule, Anávla Bráhmans, belong to Surat and the neighbouring territories. But for purposes of trade many merchants, perhaps a thousand or so, come from greater distances with cloth from Ahmedábád, and copper and brass pots from Khándesh and Násik. The value of the goods is estimated at £2,500 (Rs. 25,000). Cholera breaks out once in every five or seven years. Unái owes its sanctity to the belief that while the waters of its spring are at all other times too hot to be borne

[1] Orme's Historical Fragments, 350.

[2] Herbert's Travels, 45.

[3] Thevenot (1666), V., 78.

[4] Fryer, 82; and Ovington, 164.

[5] Terry (1617), quoted by Bellasis in his account of the Surat tombs, 13. Herbert (1626) and Fryer (1681) would place Coryat's tomb in the suburbs of Surat. But Terry is probably in this, as in other details, more accurate than Herbert.

[6] Parsons, 245; and Stavorinus, II., 379.

[7] The hot springs are situated partly in Bánsda and partly in Baroda territory. The temple is in Bánsda.

Chapter XIV. Places of Interest.

UNA'I.

by the human body, on one day in the year it is possible to bathe there with comfort and profit. Thermometric readings taken by J. S. Law, Esquire, Bombay Civil Service, in 1836, seem to confirm the fact of a change of temperature.[1] According to the legend, it is the god who cools the water for the good of his worshippers. No trick or device would seem to have been detected, and, failing the legend, no explanation appears to have been offered, except the rather fanciful suggestion that the number of devotees leaping at once into the pool may have the effect of reducing its temperature.

VAUX'S TOMB.

Vaux's Tomb.—On the right bank of the Tápti, near the mouth of the river, is a useful landmark for vessels sailing up the Tápti to Surat. The dome, about thirty feet high, built in the Muhammadan style, was formerly called the tower of Suwáli. The tomb contains no inscription, but in the upper part of it is a chamber, in olden times (1777) used by the English as a meeting place for parties of pleasure. The officer whose name the monument bears began life in England as book-keeper to Sir Josiah Child. In the latter part of the seventeenth century he came to Bombay as a factor, was subsequently (1685) promoted to be a judge, and finally rose to be deputy governor of Bombay. After acting in this position for two years he was, apparently on account of suspected traitorous relations with the French, suspended from the Company's service He remained unemployed until 1697. In that year, as he and his wife were enjoying a sail on the Tápti, the boat was upset, and both of them were drowned.[2]

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[1] Trans Med. and Phy. Soc., Bombay, 1836-37, I., 76. The following is a summary of the thermometric readings taken in April 1836.—

Date.	Time	Large Bath	Small Bath.
		Degrees Far	Degrees Far
April 23rd (Full moon) .	5-30 A.M.	105	116
	1 P M	103	118
	10 P.M	78	94
April 24th	5 A M.	113	119
	1-30 P M.	107	120
	5 P M	113	124
April 25th	5 A.M. .	110	122
	6 P M .	113	124

[2] Anderson's English in Western India, 256-287.

BROACH.

BROACH.

CHAPTER I.

DESCRIPTION.

POSITION AND AREA.

The district of Broach, lying between 21° 25′ 45″ and 22° 15′ 16″ north latitude, and 72° 34′ 19″ and 73° 12′ 15″ east longitude,[1] has a total area of 1,458 square miles, and a population of 350,322 souls, or 240 to the square mile.[2] Of £216,499 (Rs. 21,64,990), the total realizable land revenue, £216,409 (Rs. 21,64,090) were recovered before the close of the year ending 31st July 1875.

BOUNDARIES.

Separated on the north by the river Mahi from the territory of the nawáb of Cambay and the district of Kaira, Broach, to the east and south-east, borders with the states of Baroda and Rájpipla, and to the south is cut off by the river Kim from the Olpád sub-division of the Surat district. To the west lies the Gulf of Cambay, along whose shore the lands of the district stretch for a distance of about fifty-four miles.

ADMINISTRATIVE SUB-DIVISIONS.

For administrative purposes the district of Broach is distributed among five sub-divisions, with an average area of 291 square miles, containing on an average the lands of eighty-five villages, and a population slightly in excess of 70,000 souls. The following summary gives the chief statistics of each of these sub-divisions:—

Comparative Summary of the Chief Sub-divisional Details of the Broach District, 1872-1875.

Sub-divisions.	Area in square miles	Number of Villages and Hamlets									Population according to the census of 1872	Pressure of population to the square mile.	Land revenue for the year ending 31st July 1875.
		Government			Alienated.			Total Villages					
		Villages		Hamlets	Villages.		Hamlets.	Government	Alienated.	Total			
		Inhabited.	Uninhabited	Inhabited	Inhabited	Uninhabited	Inhabited.						£
Jambusar	378	83	2	2	2	.	.	85	2	87	93,249	247	44,541
A'mod	176	51	2	3		..	.	53		53	40,260	229	25,586
Wágra	308	68		2	1			68	1	69	38,779	126	33,570
Broach (a)	303	99	3	5	8	1		102	9	111	110,291	364	62,443
Ankleswar ...	293	99	3	2	3			102	3	105	67,743	231	50,359
Total	1,458	400	10	14	14	1	.	410	15	425	350,322	240	2,16,499

(a) The population of Broach includes the population (36,932) of the town of Broach.

[1] The latitudes and longitudes shown in this account have been supplied by the officer in charge of the Gujarát party of the Great Trigonometrical Survey.

[2] Population figures, when nothing to the contrary is said, are taken from the Census Returns of 1872.

Chapter I. Description. ASPECT.

The lands of the district form an alluvial plain fifty-four miles in length from north to south, and sloping gently westward to the shore of the Gulf of Cambay. In breadth this plain varies from thirty miles in the north to over forty about twenty-five miles further south, narrowing again from this point until, at the Kim river, the eastern boundary is not more than twenty miles distant from the sea. Politically this tract of land is compact. With the exception of three villages[1] belonging to the Baroda state, it is free from the intermixture of lands under the jurisdiction of native rulers. Geographically the district is, by two of its rivers, the Dhádhar and the Narbada, divided into three sections, almost peninsular in form. Of these divisions, the most northerly, between the lines of the Mahi and Dhádhar rivers, contains the lands of the Jambusar sub-division; the central and largest section, south of the Dhádhar and north of the Narbada, includes the lands of the sub-divisions of A'mod, Wágra, and Broach; and the southern portion between the Narbada and the Kim forms the Ankleswar sub-division.

With regard to the character and appearance of its surface, the Broach plain may be divided into three belts running, on the whole, north and south parallel to the line of the Gulf of Cambay. On the coast a narrow strip of sand; then a low salt waste; and behind the salt lands, beyond the reach of the tidal waters, a rich, well-cultivated plain. The line of sand fringing the coast offers good pasture to herds of deer and flocks of sheep. Its little hills are in part cultivated, protected by hedges and clothed with trees. Of the salt waste immediately behind, the greater part lies below the level of the highest spring-tides. During the rains patches of salt grass, the favourite food of the antelope, spring up But in a soil that holds no fresh water, grass soon withers, and before the hot months have well begun this whole tract has become a black desert, swept over by burning winds and clouds of salt dust. Out of the reach of the sea, and free from the overflowing of tidal lagoons, the land, by degrees growing less bitter, yields crops, chiefly of wheat. Here, in the harvest time, the whole country is rich and full of life, the ripening grain drawing from all sides flocks of crane and herds of antelope. But this tract is without trees, its fields are hedgeless, and its scanty supply of water is, at best, but brackish. When the crops are housed, the land is bare. And during the hot weather months this stretch of wheat fields is but little less bleak and desolate than the salt desert beyond. Further inland the soil becomes richer; the water sweeter and more plentiful; the villages large, and each sheltered by its group of trees; and the fields, though without hedges and with hardly a bush to break the line of the level plain, are rich enough to bear crops whose freshness lasts after many months of the dry season are over. But, even in the best of black-soil villages, for a month or two before the rain falls, the water is almost spent, the fields are bare, baked, and seamed with the heat, and there are no trees to give shelter

[1] Two of these villages, Mesrál and Asnera, are in the A'mod sub-division, and one, Karmáli, in the Broach sub-division. (Govt. Memo. 3932, dated 3rd December 1869, Political Department.)

against the dust and hot winds. Though about nine-tenths of the land of the rich Broach plain is of this black cotton soil, in different parts of the district—in the north-east corner, where Jambusar borders with the fertile garden lands of Baroda and Kaira; on the right bank of the estuary of the Narbada, surrounded by a salt waste at Dehej; further up along the margin of the river near the town of Broach; and finally, in the extreme south-west corner below Hánsot —are tracts of land always fresh and fertile. The soil of these favoured spots is light and easily worked; their sweet and unfailing supply of water; their fields bearing a succession of crops, protected by hedges and enclosing rows of tall-spreading and shady trees; the animal life abundant and gay; the villages well built and prosperous; and the healthy and contented peasants are spoken of with pleasure by all who know the district.

Rivers.

Besides the Mahi,[1] the line of whose course forms the northern limit of the district, and the Kim, separating it on the south from Surat, Broach is crossed from east to west by two rivers—by the Dhádhar, about twenty miles south of the Mahi, and between the Dhádhar and the Kim, by the broad stream of the Narbada. Since the days when the deposits brought down by their floods helped to form the alluvial plain through which they now pass into the sea, the conditions of the Broach rivers have undergone considerable change. These streams are now wearing away the clays and gravels They have cut deep channels into the alluvial deposits, and the neighbourhood of their banks is often a net-work of ravines hollowed out by the force of their waters. They are, in short, denuding, and not depositing, streams.[2] Passing, during their course through the district, between high banks of earth and mud, the waters of these rivers are not made use of in tilling the soil, and though each has a tidal estuary extending over several miles, none of them, except the Narbada and, for a short distance, the Dhádhar is serviceable for purposes of navigation.

The Dhádhar.

The Dhádhar, with a course seventy miles in length and a drainage area estimated at 1,850 square miles,[3] falls into the Gulf of Cambay about twenty miles south of the estuary of the Mahi. Rising behind Chámpáner, in the western spurs of the Vindhya range, the main stream of the Dhádhar flows in a westerly direction till, about thirty miles from the sea, it is joined from the right by the Vishwámitri, on whose banks stands the city of Baroda, the capital of His Highness the Gáekwár.

The course of the Dhádhar through the district of Broach forms two sections, each about twelve miles in length. During the first, the bed of the river, bounded by high banks of earth and mud, winds in a south-westerly direction with the A'mod sub-division on the left and Jambusar on the right. About six miles below the

[1] Details of the Mahi river are given in the Statistical Account of Kaira.

[2] Mr. Blanford in Memoirs of the Geological Survey of India, VI., 67.

[3] Trans. Bom Geo. Soc., Vol. XIX., II., 17. Mr. Saunders gives the drainage area at 1,800 square miles.—Sketch of Mountains and Rivers of India, p. 31.

Chapter I. Description. Rivers.

town of A'mod, it is joined on the left by a lagoon or back-water called the Mota creek. Below this point, with a generally westerly direction, the stream widens into an estuary, still passing between the sub-divisions of Jambusar and A'mod, till, on the right, about seven miles from its mouth, the Dhádhar joins the creek, on the eastern bank of which is situated the port of Tankári. Above the range of the tide the stream in the fair season is small, seldom more than three feet deep. But in the rainy months, rising from twenty to thirty feet above its usual level, it becomes an impassable torrent. Though navigable as far as Tankári, about seven miles from its mouth, the passage of the river is difficult. The channel is obstructed by mud and sand banks of various sizes. At low water the creek on which Tankári is situated, cannot be approached within two or three miles. It has then, in its deepest channel, but a foot or two of water, and this, during the dry season, becomes reduced to six or seven inches.[1]

The Dhádhar.

The Narbada.

The river Narbada, known also as the Rewa, and so giving its name the Rewa Kánta to the portion of Gujarát through which the river passes between the Sahyádri hills and the eastern limit of the Baroda territory, has a course, including windings, of from seven to eight hundred miles in length;[2] a drainage area estimated at 36,400 square miles; and a discharge, in times of maximum flood, of about two and a half million feet per second. To give some idea of the volume of water brought down by the Narbada, it has been estimated that in a season, with the average rain-fall of thirty-six inches, to receive its waters, a lake would be required 324 square miles in area and 100 feet deep, or upwards of one-eighth part of the capacity of the Gulf of Cambay.[3]

Source.

The source of the Narbada is in the hill of Amarkantak, in the Biláspur district of the Central Provinces, 3,500 feet above the level of the sea.[4] After descending from the hills in which it rises, and until it reaches the Gujarát plain, the course of the Narbada for about 500 miles lies between the Vindhya range on the right and the Sátpura hills on the left. Throughout this distance the valley of the Narbada is narrow. The mountain ranges on either side, with an average distance of from eighteen to twenty-six miles, are nowhere more than forty miles apart.

Course.

The course of the Narbada divides itself into five stages[5]: the first, about two hundred miles in length from its rise in the hill of Amarkantak to its fall, about nine miles below Jubbulpore, into the

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[1] Mackay's Western India, 225.

[2] Trans. Bom. Geo. Soc., Vol. XIX., 17. Mr. Saunders, as above, gives length 801, drainage area 36,400.

[3] Estimate by Mr. Sowerby.—Trans. Bom. Geo. Soc., as above.

[4] Though naturally forming a part of the Biláspur district, the hill of Amarkantak has been, on account of his services in 1857, conferred on the rája of Rewa.—Central Provinces Gazetteer; Aitchison's Treaties and Engagements, Vol. III., 192.

[5] This account of the Narbada is condensed from the description given in the Central Provinces Gazetteer.

deep cut channel of the marble rocks; the second, a great basin, supposed at one time to have been a lake, stretching from Jubbulpore to the town of Handia, a distance of nearly two hundred miles; the third, about 180 miles, is from Handia to Haranfál, where the river begins to force its way from the table-land of Málwa to the level of the Gujarát plain; the fourth, eighty miles, from Haranfál to Makrai, the scene of the last rapid; and the fifth, a passage of 100 miles across Gujarát to the Gulf of Cambay.

In the first stage the river, after descending some hundreds of feet from the heights of Amarkantak, skirts the uplands of the Mandla district, and, pursuing a westerly course, flows under the walls of the ruined palace of Rámnagar. Thus far the river's course, constantly interrupted by rocks and islands, has been frequently tortuous. But, after passing Rámnagar as far down as Mandla, it flows in a comparatively straight line, with an unbroken expanse of blue waters, between banks adorned with lofty trees. Below Mandla the Narbada, pent up among rocks of magnesian limestone, flings itself over a ledge with a fall of some thirty feet, called Dhuán-dhár the 'misty shoot,' and then enters on a deeply-cut channel carved through a mass of marble and basalt for nearly two miles. The river, which above this point had a breadth of a hundred yards, is here compressed into some sixty feet, passing through a double row of white bluffs from fifty to eighty feet high, the well-known marble rocks. From Jubbulpore to Handia the river flows for some two hundred miles through a valley, broad, rich, and highly cultivated.

The third stage of 180 miles, from Handia to Haranfál or the deer's leap, is varied in character. At first the descent is rapid, and the stream, quickening in pace, rushes over barriers of rock. At two points, Mandhár, about twenty-five miles below Handia, and Dadrái, twenty-five miles below Mandhár, the river falls over a height of forty feet. A few miles further on, below Barei, where it is crossed by the road from Bombay to Indor, the Narbada enters on its second basin, a deep reach stretching for a distance of 120 miles, broken only by the fall known as Saheswar Dhára. Here the country is open with the Sátpura hills to the south, in some places forty miles distant, while to the north the Vindhya range approaches to within sixteen miles. Towards the west of this basin the hills begin to draw closer together, and before they finally dwindle down to the level of the plain, they are separated from each other only by the cleft through which the waters of the Narbada have worn a passage. From the Haranfál to the Makrai falls, a distance ofabout eighty miles, the river forces its way by a succession of cataracts and rapids, from the elevated table-lands of Málwa to the low level of the Gujarát plain.

Below Makrai the Narbada flows westward to the Gulf of Cambay. For the first twenty or thirty miles the river separates the Baroda territory on the right from the state of Rájpipla on the left, and then, for the rest of its course, a distance, including windings, of about seventy miles, it passes through the lands of the district of Broach. Throughout this section of its course the Narbada moves through a rich, flat plain, between high rough banks of hardened mud and sand.

Chapter I.

Description

Rivers.

The Narbada.

Course.

In breadth the bed of the river varies, from about half a mile where it first enters the district to a mile near the town of Broach. Below Broach it slowly widens into an estuary, whose shores, where they fall away into the Gulf of Cambay, are more than thirteen miles apart.[1] To the east and west of the city of Broach the northern bank of the river is high and precipitous, its seamed and roughened surface gradually wearing away by the action of the waters.[2] This bank has been found to consist of a stratum of black earth three to four feet deep; under this, mixed with pieces of nodular limestone, alternate layers of sand and clay, varying in thickness from two to eight feet; and, lowest of all, about twelve feet from the bed of the river, hard and tenacious clay, well fitted to withstand the action of the floods. The south bank is low and shelving, raised about twenty-one feet above the fair-weather level of the water of the river. The upper stratum of this bank consists of an alluvial deposit of earth and sand, in some parts cultivated, in others covered with low brushwood extending for a distance of more than a mile southwards to a former channel of the river, when the bank again rises abruptly.[3] Borings have shown that the bed of the stream consists near the northern bank of a stiff clay; of sand and gravel in the centre; and that close to the southern bank about ten feet of loose stones and shingle rest on a bed of hard sand. The mean of three observations taken near the town of Broach, when the river was free from the influence of the tide, and was at its fairweather level, gives the velocity of the stream at 1·23 feet per second, or a rate of less than one mile an hour.[4]

Tributaries.

In its course through the district of Broach, the Narbada receives three tributaries, two on the left bank and one on the right. Of the two that join from the left, the Káveri, flowing from the Rájpipla hills, enters the Narbada nearly opposite Sukaltirth, the famous place of pilgrimage, and further down, about six miles above Broach, the Amrávati stream forms the boundary between the Rájpipla territory and the Ankleswar sub-division of the Broach district. On the right the Bhukhi, after draining the greater part of the lands of the Broach sub-division, falls into the Narbada near the village of Mehgám, fifteen miles west of Broach.

Islands.

Within the limits of the banks of the river are several tracts of land raised above the level of the bed, which in times of flood become islands. Of these, the place of most interest is the flat stretch

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[1] This and most of the figures that relate to the estuary of the Narbada are taken from Mr. Sowerby's Paper.—Trans. Bom. Geo Soc, XX., II.

[2] Bom. Govt. Sel, New Series, IX., 56. These banks are supposed to lose by detrition about a foot and a half a year.

[3] The following is the legendary account of this change in the course of the river "A disciple of the sage Bhragu, from whose name the present Broach is said to be corrupted, one day, complaining to him of the distance he had to go to wash his clothes, was told that his grievance would be at an end if, the next time he went to wash, he, on his way home, dragged his clothes after him and did not look behind him. The advice was followed, and the man, on turning round to look, when he reached his own door, found that the river flowed at his feet instead of at Ankleswar."—Rev Comr, N. D., to Govt., No. 882, dated 14th February 1872 (see page 98 of the Survey Report of the Broach sub division.)

[4] Bom. Govt. Sel., IX., 56.

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near Sukaltirth, about ten miles from Broach, barely above the level of an ordinary fresh, on which the banian-tree, known as the *Kabir wad*, though decayed from age, and shorn of much of its beauty by the violence of floods, still remains one of the objects of most interest in the west of Gujarát. Opposite the mouth of the Bhukhi river is an accumulation of sand and drift known as the Alia Bet.[1] From the latest account of this island, it appears that it has at present an area of 22,000 acres, and is covered by a dense forest of marine trees growing upon dark clayey soil, in every respect very different from the silicious deposit left by the floods higher up in the channel of the river. As it contains no springs of fresh water, and as the greater part of its surface is liable to be covered by the tide, the land of the Alia Bet is still unfit for cultivation. This tract has only lately reached its present size. Fifty years ago the deposits opposite the mouth of the Bhukhi river formed four small islands.[2] Of the two largest of these, Kádavia, nearest the land, and Alia, further in the channel of the river, Mr. Newport, by whom they were surveyed in 1819, has left the following account[3]: "Opposite to Kaládra and Mehgám is an island called Kádavia. Its northern and eastern sides present a bank from five to seven feet high, but to the south and west it slopes gradually into the water of the Narbada. This island is not arable It produces the herb called *hál*, and coarse grass on its southern side. The *hál* is excellent fodder for cattle when washed in fresh water, and in September it yields grain or seed, which they also call *hál*, and of which the poorer people make flour for their own consumption. The eastern half of the Alia island has perpendicular banks six feet high and upwards. To the westward it falls into the water with a gentle declivity. It is about three miles in length, and is not arable. It produces the *hál*, and another plant called *karwaia*, in great abundance. Alia as well as Kádavia are common to all who choose to resort to them."

Islands.

The influence of the tides is felt as far up the channel of the Narbada as Ráyanpur, about twenty-five miles above Broach, where the rise is said not to exceed a span. Down the course of the river the effect of the tide gradually increases till, at Broach, the variations are nine feet two inches in the springs and two feet two inches at the neap-tides, and at the mouth of the river, in the season of spring-tides, the tidal wave has a height of from twenty-five to thirty feet. The presence of this salt-water in the bed of the river, and, further up, the high level of the surface of the country near the river bank, prevent the waters of the Narbada being used for irrigation.

Tidal section.

Several attempts had been made to navigate the Narbada from the Central Provinces to the sea, but, until 1847, without success.[4] In

Navigation.

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[1] Mr. Beyts' Settlement Report of the Broach sub-division, 1871.

[2] Colonel Williams' Map of Broach (1825).

[3] Taken from Mr. Newport's Survey Remark Book. A century ago, on the other hand, the island would seem to have been larger than at present. At that time (1770-1790), half-way between the town of Broach and the sea, the river was said to divide into two branches, and to form a long and narrow island, on each side of which a channel ran into the Gulf of Cambay.—Stavorinus' Voyages, Vol. III., 108.

[4] For a summary of those attempts, see Trans. Bom. Geo. Soc., Vol. VIII., 118, 144.

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the month of July of that year Mr. Evans, a lieutenant in the seventeenth regiment of Bombay native infantry, taking advantage of the swollen state of the river, started from Mandlesar, in Indor territory, and reached Broach after a passage of eleven days. He had with him two boats—one was a common ferry-boat, flat-bottomed, wall-sided, about thirty feet long, four and a half broad, and two and a half high, requiring four men to manage, and capable of carrying 2,880 pounds; the other consisted of three canoes lashed together, with a platform of bamboos placed across them. By the help of the flood, which in some places raised the water of the river from twenty to seventy feet above the fair-weather level, Mr. Evans passed without difficulty twenty-four miles beyond the Haranfál, where the rapids begin. After this the banks became wilder and the current stronger until, about twenty-five miles further on, so fierce was the rush of waters that the waves, curling up, washed into the canoes and sank the raft. The water was not, however, too rough for the ferry-boat, which passed safely, and, helped over the Makrai fall by the flooded state of the river, Mr. Evans reached Broach without further danger. Though this expedition proved that in certain states of the river its rapids can be passed, it would seem to show that above the Makrai falls the Narbada is never likely to become the channel of any considerable traffic.

The navigation of the Narbada may, therefore, be said to be confined to the part of its course that lies within the limits of Gujarát. For purposes of navigation, this consists of three sections,—a reach in the river from Chánod to about fifteen miles above Makrai, where, in the dry season, small boats can make way against a gentle current; a second section from Talakwára to Broach, passable, in the months of freshes and floods, to vessels of from twenty-five to forty tons (seventy to 112 *khándis*); and a third below Broach, dependent to a large extent on the tide, available for vessels of as much as seventy tons burden.

From an examination of the course of the Narbada undertaken by the orders of government in the year 1822, it was found to be impossible to force a vessel of any size against the current further up the stream than the village of Talakwára, situated above thirty-five miles direct, and, by the windings of the river, sixty-five miles above the town of Broach.[1] But from inquiries made at Talakwára, and at the town of Chánod some miles lower down, the officer in charge of this survey of the river found that in the fair-weather months, from November to March, a certain amount of traffic was at that time carried on in small boats as far up as fifteen miles above the Makrai falls. The vessels used for this purpose were canoes about twenty feet long, four to five feet broad, flat-bottomed, and drawing about two feet of water. Makrai, where during the fair-weather months

[1] Lieutenant Elwin, H. C. M., 1822, the officer in charge of the expedition, says, "a mile above Talakwára the water runs with such rapidity that I have no hesitation in saying it is impossible for a boat to overcome it at this time of year (July)".—Trans. Bom. Geo, Soc., VIII., 140.

the river makes a clear fall of from eight to ten feet, is the chief obstacle to this traffic.[1] On the passage up the river, the goods, cloth, salt, and spices are taken out of the canoe and carried on men's heads. The empty boats are then dragged up the rocks by about twenty men for a distance of from 800 to 1,000 feet. On the return voyage the boats are again emptied, and as, for about four or five hundred feet, there is not sufficient water to float them, the canoes are launched along a smooth bed of stones, covered with a green mossy weed, on which, sliding down, they are with little trouble guided to the foot of the fall. Here they reload, and in two or three days reach the town of Chánod, the head-quarters of this trade.[2]

The limits of the trade in the rainy months, from July to the end of September, are from Talakwára to the town of Broach, a distance, as mentioned above, by the windings of the river, of about sixty-five miles. In the beginning of July, boats, varying in size from three to thirteen tons (8¾ to 36⅔ *khándis*) burden, and, when fully laden, with a draught of from three and a half to five feet, begin to sail up the stream from Broach. By the middle of July, when the river is at its height, larger boats of from twenty-five to forty tons (seventy to 112 *khándis*) burden, and drawing about seven feet, are able to make the run. When there is no lack of water, the upward passage for all of these vessels, sailing before a strong south-west wind, takes from three to four days. For the downward run, with the help of the current, and against the wind, about the same number of days is required. Between Talakwára and Broach there are six passes, or *ghát*, in the bed of the river, rapids, or shallows, according to the amount of water in the stream. Starting from Talakwára these passes are met in the following order: Tumdi, Kotrar, Amroli, Bávpiára, Pora, and Jeresha.[3] At each of these points, in the course of the river, the current, in a time of flood, is so strong that the boatmen on their way up are obliged to send out long ropes from the end of their mast to be fastened to the trees on the bank of the river, and by this means draw the boat forward through the current. On the return voyage, should some days have passed without rain, to get over the shallows the sailors have to unlade the cargo into a small boat, float the large vessel down empty, and refill it again when the shoal water is passed. Except for a few fishing boats, and some small craft that do the carrying trade between the villages on the banks of the river, no trading vessels ply below Broach during the rains. As soon as the fair weather sets in September, boats, varying in size from thirty to eighty tons, prepare to start on their

[1] Lieutenant Del Hoste, in April 1829, found the fall at Makrai twelve feet high.—Trans. Bom. Geo. Soc., VI., 174.

[2] Condensed from Lieutenant Elwin's survey.—Trans. Bom. Geo. Soc., VIII., 140, 142. This traffic is still kept up. Particulars will be found under the head 'Trade' p. 424.

[3] These names are taken from Lieutenant Elwin's survey of the river in 1822, referred to above. Mr. Webbe, in 1820, mentions the following passes, *ghát*: Tatrida, Bávpiára, Amroli, Kandoli, Chánod, Kenorauli, Norenda, and Tumdi. But this list would seem to have been made from inquiry at Broach, and not from personal experience.—Trans. Bom. Geo. Soc., VIII., 138 and 139.

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distant voyages to Mángrol in Káthiáwár, and Mándvi in Cutch. As there is no body of fresh water during the fair season, the passage of these vessels up the Narbada to Broach depends upon the tide.

The following[1] is the latest available information regarding the present channel of the river from Broach to the sea: "Commencing at Broach, the deepest channel is on the north bank of the river; below this point the channel passes over to the southern side, and runs for some distance along by a high bank until there is a creek or inlet opening to the south. Opposite to this creek is where the water shoals, and beyond this barrier large vessels cannot at present pass. The channel then oscillates to the opposite or north bank to a point about four and a half miles below Broach, near a village called Dasán. Here the river is divided into two channels, the principal channel being greatly confined by an island. The south channel is comparatively dry. The chief passage continues along the right bank for about five miles, the depths of water at low spring-tides being from eighteen to twenty-five feet. These soundings are found close in shore to within fifty feet of the right bank, and continue for a considerable distance across the river. Along this beach an immense number of vessels might be moored, or lie at anchor to load and discharge their cargoes, and they would be well water-borne at all times of the tide if drawing about fifteen or sixteen feet. These deep soundings continue along the river up to a point opposite Samni village on the northern side of the river. Afterwards the channel again crosses over to the left shore, where is an inlet or creek leading past Hánsot. Owing to the Hánsot creek, there is comparatively shallower water, but during low tide never less than six feet in the channel; and there is a tidal rise of from six feet six inches at dead neaps to seventeen feet six inches at springs, giving an average of eighteen feet of water and twenty-four feet at spring-tides, sufficient to allow vessels drawing fifteen feet to pass up, except at extreme neap tides, which last from four to six tides (three days). The channel again crosses, and continues along the right side, with fair depth of water, past Kaládra to a point near Vegni, where there is a high and well-defined bank, with a tidal rise of from eight feet four inches at extreme neaps to nineteen feet six inches at spring-tides, the extreme neaps being very exceptional, and lasting only from four to six tides (three days). From Vegni the river again oscillates across to the southern side, the width here being one and a half miles. On the south is the Alia island, with a well-defined high bank, and deep water all alongside, the channel being broad and ample in depth. There is rather shoal water near the first point of the island, a buoy being placed in eight feet soundings at dead low-water; but the great tidal rise renders this point no obstruction whatever to the navigation. The channel continues along the south bank until it is opposite to a place called Suwa, lying to the north of the river, when it again oscillates northward, striking the shore about two miles from

[1] Article by Mr. Sowerby, C.E.—Trans. Bom. Geo. Soc., XIX., II., 17.

Ambheta. Here is a slight shoaling, but as the tides are very high at this point, it offers no obstruction to the navigation. At this part of the river there is always from twenty-one to twenty-seven feet of water at dead low-water springs, so that the largest vessels might lie safely at all times of the tide well water-borne. There has prevailed an opinion that the channel of the river changes greatly every year. On comparing its present condition and course with the admiralty charts published in 1845, so far as it goes, which is up to a point above Mehgám, the channel, except near the river's mouth, has not materially changed. There is no doubt that minor changes do annually occur in the river during the monsoons, but it is probable that these changes are chiefly in the upper part of the river, near to and beyond Broach; for the tremendous scour of the tide must very soon remove any obstructions within its influence."

The condition of the Narbada in former times would, to some extent, seem to bear out Mr. Sowerby's opinion, that the channel has not of late years been silting up. Fifty years ago, when bishop Heber[1] (1825) visited Broach, he noticed that the Narbada was very shallow, and that then no vessels larger than moderately sized lighters could come beyond the bar. Two hundred years ago, when Fryer (1673-1681) crossed the river at Broach, he found the stream broad, swift, and deep; but adds that, on account of the sand forced down by the rains, skilful pilots are required, "by whose direction good lusty vessels are brought up to the city walls"[2] Finally, the account of the Narbada left by the author of the Periplus of the Erythrean Sea, would seem to show that during the last 1,800 years[3] the character of its channel is but slightly altered. He says, "even when the passage into the Gulf is secured, the mouth of the Barugáza river is not easy to hit; for the coast is low, and there are no certain marks to be seen. Neither, if it is discovered, is it easy to enter, from the shoals that are at the mouth. For this reason pilots are appointed by government with attendants in large boats called *trappaga* and *kolumba*: these vessels advance as far as Surastrene (Káthiáwár), and wait there to pilot the trade up to Barugáza. Their service at the entrance of the Gulf is to bring round the ship's head, and keep her clear of the shoals. This they do by means of the many hands they have on board, and by taking the vessel in tow from station to station, which stations are all known and marked. They move with the beginning of the tide, and anchor as soon as it is spent, at certain berths that are called basins, and these basins still retain water after the tide is out all the way to Barugáza. The town itself lies thirty miles up the river."

Sanctity of the river.

The following legends,[4] extracted from the Rewa Purán, show the popular feeling of the Hindus towards their holy river. The

[1] Bishop Heber's Narrative, II., 169.

[2] Quoted in Forbes' Oriental Memoirs, II., 217.

[3] Vincent, II, 359. The date of the author of the Periplus is supposed by Dr. Vincent to have been about 64. Others put it later, 198-210.

[4] These legends have been compiled by Mr. Chhaganlál Bhudarji in the office of the collector of Broach.

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Narbada is said to have sprung from the god Rudra or Mahádev, and so is known as Rudradehi or Shankari, that is, Mahádev's daughter. According to account, she is represented as a virgin wooed by the sea. According to another account, she was married to Shádhmak, the son of Agni, the son of Brahma, and from their union was born Dhrastindra, the champion of the gods in their war with the demons. The devotees of the Narbada place its sanctity above that of any other river. Freedom from sin, they say, is obtained by bathing for three days in the Saraswati, or for seven days in the Jamna. In the Ganges, one day is surely enough, while the mere sight of the Narbada suffices to make pure from guilt. The sanctity of the Ganges will, it is said, cease in the year 1895 (Samvat 1951 ; Maha 7th Shud). But the sanctity of the Narbada will continue the same throughout all the ages of the world. The purifying power of the Ganges is confined to its northern bank. But the virtue of the Narbada, not only extends to both its banks, but is felt thirty miles northward, and eighteen miles southward, so that an ablution in any pool or well of water within that distance is as meritorious as bathing in the Narbada herself. On the banks of the Narbada, close to the town of Broach, is the site of king Bali celebrated ten-horse-sacrifice, or *dashásh*wamedh. This sacrifice has added much to the sacred importance of the river. That he may breathe his last on the Narbada bank, and that his body may be burnt on the site of the *dashásh*wamedh, is the last wish of an aged devotee Even the ashes of those who have died hundreds of miles away are brought by their friends to rest on this holy spot. As one of the glories of the Narbada, it is said that once a year, about the end of April (Waishákh 7th Shud) the Ganges wanders in the form of a black cow to the Narbada, and, bathing at the village of Nanderia, near the town of Chánod, gets rid of the dark colour, and comes from the water free from all her stains. On this day to wash at Nanderia has the double merit of bathing in the Ganges and in the Narbada. So holy is the water of the river that, as it flows, the very stones in its bed are worn into the shape of emblems of Mahádev ; according to the proverb, *Narbadána kankar tetla Shankar*, that is, 'the pebbles of the Narbada are (emblems of) Mahádev' Though no peculiar festivals are held in honour of the Narbada, on certain days and at certain seasons worship and bathing in the river have a special merit. The days and seasons in which bathing in the Narbada is specially enjoined belong to three classes : (i) of the ordinary months, the latter half of September, October, A'shvin, and the first of October, November, Kártik, as well as in July-August, Shrávan, and in each month the 8th, 12th, 14th, 15th, and the last day, amás ; (ii), the intercalary months ; and (iii), on special occasions such as eclipses. During intercalary or adhik months, the ceremony of visiting the different sacred spots, *panchtirth*, is performed. On these occasions crowds of worshippers sail up the river in boats, bathing at each of its sacred spots and giving charity to Bráhmans. So full of holiness is the Narbada that, from Mahárudra to Bahuchráji, a distance of less than three miles, no fewer than fifty-five places have to be visited on the occasion of the *panchtirth* festival,

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At each of these the priest should receive a certain sum in money. But the total would, if the orders were strictly kept, amount to not less than £171 16*s.* (Rs. 1,718). The difficulty is avoided by giving water, the 'root of gold and silver,' instead of an actual coin. Persons who come to worship the river belong to two classes, devotees and ordinary lay-pilgrims. One of the most meritorious works a devotee or professional ascetic can perform is to travel round the source of the river. The devotee, starting from a certain spot, walks along the bank of the river towards its source at Amarkantak. At this point he passes round the spring, making his way down the other bank till he comes to a point opposite the spot from which he started. Such a pilgrimage, called *parikram* or *pradakshana*, generally lasts for about a year, and, as great portion of the course of the Narbada lies through wild uncultivated tracts, the devotee is often exposed to many hardships. The parts of the country from which the mass of the ordinary lay-pilgrims come, are Surat, Ahmedábád, Baroda, Poona, Bombay, and Káthiáwár. Of these, the worshippers from the Deccan and from Káthiáwár have the credit of being the most zealous believers.

An oath on the water of the Narbada has a special sanction. Few Hindus would dare to swear falsely standing in the river with a garland of red flowers round the neck, and holding in the right hand the water of the sacred stream. The common belief is said to be that the attempt to bind her banks by a bridge was displeasing to the Narbada More than once she all but swept her bonds away. But lives were lost in putting the bridge to rights, and so, pleased with this sacrifice, the river now guides her waters quietly among the piles of the bridge.

The Kim.

The Kim river, with a course seventy miles in length and a drainage area estimated at 700 square miles, falls into the Gulf of Cambay about ten miles south of the estuary of the Narbada. Rising in the Rájpipla hills, the Kim, for the first part of its course, passes through Rájpipla territory and the Wasrávi district of the Baroda state. For its last eighteen miles the river winds in a westerly direction between the Ankleswar sub-division of the Broach district on the right, and the Olpád sub-division of Surat on the left. Like the other rivers of the district, the course of the Kim lies between high banks of earth and mud, the northern bank being the steeper and more rugged. The following is a section of the north bank of the Kim river about twenty miles from its mouth: Of a total height of fourteen feet, the six feet nearest the surface consist of alluvial deposit, embracing irregularly imbedded masses of conglomerate; underneath this are three feet of horizontal strata of sandstone from one to two inches in thickness, and then five feet of sandstone varying in hardness. The bed of the river consists of conglomerate coarser in grain than the masses found in the higher parts of the bank.[1] The fall in the bed of the river is rapid. During the rainy months the floods are so heavy that it is very difficult to

[1] Journal Asiatic Society, Dec. 1836, V. (2), 764.

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cross. But in the fair weather the stream dwindles down to a succession of pools. Its waters are not used for irrigation, and though the tidal wave is felt for some miles up its channel, there is not depth enough to allow of the passage of boats.

Drainage system.

Though its rivers are the chief natural feature of the Broach plain, the height of their banks, up to which the whole country slopes, prevents the rivers from effectually carrying off the surplus waters of local floods. For drainage purposes the district is, therefore, to a great extent, dependent on creeks or back-waters running inland either directly from the coast line, or from the banks of rivers at points in their course below the line of tidal influence. The following levels, taken in connection with a proposed railway line from Broach to Jambusar, show, to some extent, the varieties of surface due to this system of drainage[1]: Starting from the north of the district, the land slopes from the left bank of the Mahi for about six miles to near the town of Jambusar. It then, not far from the Dhádhar river, falls almost to the sea level, rising again, after about three miles, seven or eight feet to the town of A'mod; southwards, from A'mod, the land sinks about six feet as the basin of the Náhier, a second tidal creek, is crossed. Beyond the Náhier, within another six miles, the level rises this time about twenty feet to a ridge near the village of Sudi, the water-parting of the valleys of the Dhádhar and Narbada. In the next six miles there is a fall of about nine feet as the land draws near a third tidal back-water, the Bhukhi creek. Another interval of six miles, and the land rises again fourteen feet to the north bank of the Narbada. South of the Narbada, for about eight miles, the land slopes gently towards a fourth back-water, the Wand creek. Beyond the Wand there is again a rise to the bank of the Kim in the extreme south of the district.

Back-waters.

Of the salt-water creeks or back-waters, the three most important are the Mota, breaking off from the Dhádhar river about six miles west of the town of A'mod; the Bhukhi, running inland from the right bank of the Narbada, about fifteen miles west of the town of Broach; and the Wand, an inlet from the shore of the Gulf of Cambay, about eight miles north of the mouth of the Kim river.[2]

The Mota.

The back-water, known at its mouth as the Mota, becomes, about three miles further up, the A'chhod creek, and after five miles more, where it is crossed by the high road from Broach to A'mod,—from the name of a village on its bank,—it is known as the Náhier creek. In the dry season the tidal waters are the only difficulty in crossing this creek. This difficulty is removed by a rough earthen embankment thrown across at a trifling expense by the people of the neighbouring villages. In the rains this causeway is washed away, and the creek becomes a formidable river, to be passed only by swimming, or on a raft buoyed up by empty earthen jars.

The Bhukhi.

The Bhukhi back-water drains the Broach sub-division. Between

[1] Bom. Govt. Sel., New Series, XCI.
[2] Condensed from a report by Colonel Playfair, No. 780, dated 2nd March 1854.

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the villages of Kelod and Diádra, about sixteen miles from its mouth, where it is crossed by the Broach and A'mod road, the bed of the Bhukhi forms a deep basin, in which a little water remains throughout the year. During the fair season the Bhukhi is crossed by a rough earthen causeway. In the wet season it becomes a very deep river, passed by the few travellers either by swimming, or seated upon bedsteads supported by earthen jars. Four miles further down the Bhukhi is joined on the left by the Kari, and after this its bed stretches out to a considerable breadth. In the dry season this channel is crossed by a cheap earthen embankment, which, though strong enough to stop the tidal waters, is swept away by the first rain-fall. Eight miles further on the Bhukhi receives two more tributaries; on the left the Ganwa, draining the south-west corner of the Broach sub-division, and from the right the Bhán, whose streams pass inland to near the town of Wágra. Beyond the point, where it is joined by these two streams, the Bhukhi, by the time it falls into the estuary of the Narbada, has become a large inlet of the sea, especially at high spring-tides, when broad tracts of land on either side of its regular channel are covered. At low water carts can cross, and at full tide there is a ferry for passengers.

Back-waters.

The Wand drains the central part of the Ankleswar sub-division, and falls into the Gulf of Cambay about eight miles north of the Kim river. This creek is at all seasons of the year a great impediment to traffic.

The Wand.

The remaining creeks and water-courses are as follows:—In the A'mod sub-division, a water-course between the villages of Bodka and Tanchha; close to the village of A'chhod, a back-water difficult to pass even at low tide; and in the east of the sub-division a troublesome crossing between the villages of Mesrál and Ukhar. In Wágra, the Badalpur creek near the village of that name. In Broach sub-division there are four small creeks or water-courses: on the Broach and A'mod road between Diádra and Derol; on the Baroda road near the village of Sitpán; at Kantháría, about two miles north of Broach; and on the right bank of the Narbada, about six miles above Broach, between Tavra and Karod, is a wide water-course with a small tidal channel at high-water hard to cross. In the Ankleswar sub-division, the A'mla, about a mile west of the town of Ankleswar, passes northward to the Narbada, and on its way, near the villages of Diwa, Pungám, and Sajod, forms creeks at high tide difficult to pass.

Minor creeks.

Geology.

[1] Near the sea, and from twenty to thirty miles inland, except in one or two places, near the south of the district, no rocks are seen.[2] The whole country is covered with alluvial clays, which pass generally on the surface into a highly fertile and well-cultivated black cotton soil. The first rocks to emerge from beneath the

[1] The paragraphs on geology are extracted from Mr. Blanford's article in the Memoirs of the Geological Survey of India, Vol. VI.

[2] The south, near the river Kim, is the only part of the district where rocks are met with. Some details will be found at p. 32 of the Surat Statistical Account.

Chapter I. Description. Geology.

alluvium are usually the gravels and clays of the nummulitic series, and from beneath these, somewhat further inland, the traps crop out. Like that of the upper Narbada valley, the alluvium of the Broach plain consists near the surface of brown clay containing nodular limestone, and deeper down of conglomerates, gravels, and sands. Through this clay the streams cut deep ravines, and it forms cliffs of some height along their banks. Its surface is frequently perfectly horizontal, over large areas; at other times slightly undulating, in consequence of inundation. It is by no means clear by what process this alluvial deposit has been formed. It is very similar to that seen along a large portion of the Indian coast, a deposit usually supposed to have been recovered from the sea by a slow process of upheaval. But how this has taken place is not so evident. Along the sea itself, where raised coast lines are constantly met with, they usually consist of blown sand hills: and similar hills fringe the present shore. So fine a sediment as that which has formed the fertile plain of Gujarát is deposited, in comparatively deep water, at a distance from the breakers. During slow emergence from the sea the upper portion of the clay would be mixed with, and covered by, sand. But the reverse is the case—the sand is covered by clay, and it is, therefore, more probable that the latter is a river deposit. In favour of this is the fact that, wherever shells have been seen associated with it, they are of fluviatile species: but they have only been noticed at a considerable distance up the rivers and near the hill country. It is possible, and even probable, that the clays of Gujarát may have, to a considerable extent, accumulated in 'back-waters,' that is, in coast lagoons. Still it does not seem likely that these could have covered the whole surface, and the uniformity of the deposit is remarkable. The carbonate of lime now existing as *kankar* may have been originally derived from shells, as has frequently been suggested before. One peculiar circumstance in connection with these deposits was noted on the Narbada below Broach. The alluvium, which formed cliffs along the river banks, was not only much consolidated (apparently through cementation by carbonate of lime), but the beds in places were seen curved as if disturbed. The curves, however, as far as was seen, were always synclinal, and may, perhaps, have been formed during the filling up by newer deposits of channels in the pre-existing alluvium.

Nearly all the upper part of the Kim valley is occupied by alluvium. In this a kind of *unio* is sometimes found. No bones were observed. In two or three places laterite belonging to the nummulitics crops out from beneath the alluvial clays, but, in general, the traps are the first rocks to appear to the eastward. The principal exception is in the south branch of the Kim river near Trimbarwár. Here laterite appears, forming a small anticlinal; and ferruginous sandstone, containing dicotyledonous leaves and some seeds, together with bluish clay, rests upon it. Below all this alluvium it is probable that the nummulitics roll over to the south, for the beds which come in about Suráli dip nearly west, and are considerably south of the strike of those near Whaliát, which they so closely resemble in character as to render it most probable that they are a continuation of

the same beds. The southerly dips seen to the west in the Kim near Iláv are in favour of this hypothesis.

The rains usually begin in June and end in October. At other times rain is rare, though showers occasionally fall in the months of December and January. According to Mr. Davies, the average rain-fall in the sub-division of Broach, for a series of years ending with 1849, was about thirty-three inches. Between 1852 and 1860 the indication was forty-one inches sixty cents; from 1860 to 1870 it fell to thirty-four inches; in 1872-73 it was slightly above; and in 1873-74 slightly below thirty-six inches. The supply of rain in the Broach sub-division would seem to be more plentiful than in other parts of the district. During a term of years, 1857 to 1866, while the average fall for the whole district was 29·6, in Broach sub-division it was 37 88. Though this supply is short of the rain-fall in the coast districts further south, it is, from October to December, supplemented by heavy dews, and is said not to be insufficient for the wants of the flat, absorbent, and imperfectly drained surface of black soil, of which the greater part of the plain of Broach is composed. The climate of the district is as healthy as that of any part of Gujarát, and is much more pleasant than the climate of parts of the province situated farther from the sea. In December, January, and February, the mornings are sometimes bitterly chill, the thermometer showing a mean average minimum of 50°. Occasionally, however, the cold is much more severe. "Frost occurs," says Mr. Davies, "at intervals of ten to twelve years, and always after a season of excessive rain-fall." In January 1788, Dr. Hové, a Polish traveller, found near Ankleswar, 'in every indent of cattle the dew-water frozen the thickness of the tenth part of an inch, though the cotton seemed not to have suffered in the least degree.' The frost of 1835 must have been keener, for in that year it is recorded that all the crops in the district perished. The heat at noon, said Mr. Davies, does not vary much throughout the year. The cold northern or east wind, which at night depresses the mercury to 40° or 50°, at mid-day is intensely hot and dry. Even after the most biting mornings, the thermometer at 2 P.M. will stand at 85°. The latter days of March and the month of April are the hottest season of the year. Then the north-easterly wind, heated by its passage over the baked black soil, and carrying with it clouds of dust, blows with intense force. Under canvas in the Wágra sub-division, the thermometer has been known to stand as high as 120°, and at this season, in every part of the district, even in well-built houses, the temperature occasionally rises to 110°. At the close of April the west and south-west winds begin to blow, and during May and June, in parts of the district near the sea, the

Summary of average Rain-fall between 1857 and 1866

Sub division.	Fall in inches
Jambusar	23 23
A'mod	24·66
Wágra	26 70
Broach	37 88
Ankleswar	33 4
Average	29 6

Chapter I. Description. CLIMATE.

heat is tempered by a strong, steady south-westerly breeze, though a fiery hot day, with the wind at north or north-north-west, may now and then be looked for. After the middle of March the mercury, in the coolest hour of the twenty-four, rarely falls below 72°. When once the rains have set in, generally the first fortnight in June, the range of the thermometer becomes less and less, the variations being between 78° and 83°. With continued rain the mercury does not vary one degree day and night. In October the easterly winds set in again, but very lightly, and during October, November, and December, the air is still, with, perhaps, towards evening, a gentle breeze.

CHAPTER II.

PRODUCTIONS.

With the exception of a conglomerate stone found in Sáhol, in the Ankleswar sub-division, and limestone obtained in Pánoli, Sámor, and Obha, in the same part of the district, the plain of Broach is destitute of mineral resources.

There are no forests in the district. A tract of about 161 acres has recently been set apart for the cultivation of the gum-arabic tree, *báwal* (Acacia arabica). In the south of the district, and on the sand hills that fringe the sea near the mouth of the Narbada, the palmyra, *tád* (Borassus flabelliformis), and the wood or bastard date palm, *khajuri* (Phœnix sylvestris), are frequently seen. In the black soil, trees are few and stunted, seldom more than a small group of mangoes, *ámba* (Mangifera indica); tamarinds, *ámli* (Tamarindus indica); gum-arabic trees, *báwal* (Acacia arabica); and *piplo* (Ficus religiosa), clustered round the village site. The tracts of light, or *gorát*, soil, on the other hand, abound in trees. Of these, besides those mentioned above, the chief varieties are the ash-leaved bead tree, *limbdo* (Azadirachta indica); the *ráyan* (Mimusops hexandra); the blunt-leaved zizyphus, *bordi* (Zizyphus jujuba); the *jámbudo* (Syzygium jambolanum); the big gum-berry or broad-leaved cordia, *gadgudi* (Cordia latifolia); the eatable-podded prosopis, *samdi* (Prosopis spicigera); custard-apple or sweet-sop, *sitáfal* (Annona squamosa); and the smooth-leaved Pongamia, *karanj* (Pongamia glabra).

The palmyra palm is the only liquor-yielding tree of the district. Its local limits are south of the Narbada within the Ankleswar sub-division. In 1868, of a total of 39,400 palm-trees, 15,000 were tapped. Of the remaining trees, the mango, tamarind, and guava yield fruit; [illegible] *báwal* is used for firewood and worked up into agricultural tools; and teak, *ság*, and *tanach* (Dalbergia ujainensis), are used for building purposes. For posts that have to be driven into the ground, the wood of the *kher* (Acacia catechu) is much valued.

Near the sacred Sukaltirth, about twelve miles above the town of Broach, on a raised plot of flat ground in the bed of the Narbada, stands the famous banian tree, known as the *Kabir wad*. The origin of this tree was, says the legend, a twig with which the sage *Kabir* had been cleaning his teeth. Growing on land raised but little above the ordinary rainy weather level of the stream, heavy floods have more than once swept away large portions of this tree. About a hundred

Chapter II. Productions. Trees.

years ago, when Mr. Forbes knew the *Kabir wad*,[1] it had already suffered much from floods. At that time, within its principal stems, the tree enclosed a space nearly two thousand feet in circumference. Overhanging branches, not yet struck down, covered a much larger area, and under the branches grew a number of custard-apple and other fruit-trees. There were then 350 large and over 3,000 small stems. In the march of an army the tree had been known to shelter 7,000 men. Nearly fifty years later (April 1825), Bishop Heber wrote,[2] "though a considerable part of the tree has within the last few years been washed away, enough remains to make it one of the most noble groves in the world." In 1819 the tree was thus described[3]: "Its lofty arches and colonades; its immense festoons of roots; the extent of ground it covered; and its enormous trunks,—proclaimed its great antiquity, and struck me with an awe similar to what is inspired by a fine Gothic cathedral. I should guess it to cover from three to four acres, and the fresh green of its thick foliage shows that it is still in the vigour of life. Its branches rise so high, that many miles off it is a conspicuous object, standing out like a hill on the end of the island. The tree is washed on its eastern base by the river, having to the west and south a ridge of sand covered by the spring-tides. On the north the island extends for three miles, a plain most fruitful in all crops suited to its light sandy soil. The river here, altering its course from north and south, runs east and west. At the latter end of the rains, the season of high floods and freshes, the island is not unfrequently overflowed, and the few inhabitants, like so many of the monkey tribe (with whom they mingle), are compelled to take refuge in the lofty branches of the tree, and, as the current runs too fast for boats to come to their help, to remain there, sometimes for several days." Since 1819 the tree has suffered from floods, and storms, and from old age. Of the central trunk scarcely a trace remains. A small temple, the shrine of the saint *Kabir*, marks the spot where it once stood. Round the temple, mango, custard-apple, and other trees and shrubs, hide the lines of younger trees that formerly encircled the parent stem. In walking through the wooded part of the island, the leaves and hanging roots of the banian show themselves from time to time above the tops of the brushwood, or among the branches of the larger trees. But they are only fragments of a ruin too isolated and irregular to show the form or size of the whole to which they once belonged.[4]

Domestic Animals.

The[5] domestic animals of the district are cows, buffaloes, oxen, camels, horses, asses, sheep and goats. As fodder is scanty, cattle bred in the district are considered inferior. The best oxen and buffaloes come from Nariád, Borsad, and A'nand in Kaira, the coun-

[1] Forbes' Oriental Memoirs, I., 26. Mr. Forbes was at Broach at different times from 1776-1783.

[2] Heber's Narrative, II., 171.

[3] Trans Bom. Lit. Soc., 1819, 290.

[4] Survey report of Broach sub-division, 1871, 9.

[5] These notes on domestic animals have been corrected by Chunilal Venilál, Esq., district deputy collector.

DOMESTIC ANIMALS.

try known as the *charotar;* the best bullocks from Rádhanpur and Kákrej, and the best cows from Káthiáwár. On account of their greater hardiness, and the superior richness of their milk, the rural population prefer buffaloes to cows. On the other hand, buffaloes are seldom kept by the higher class of townspeople, who, to a greater degree than the cultivators, regard the cow with a special reverence. In 1872, according to the census returns, there were 54,643 buffaloes, and only 15,891 cows, or nearly three buffaloes to each cow. The oxen, of which, in 1872, there were in all 67,306, belong to two breeds—the indigenous, or *talabda,* bullock, a small inferior type of animal, and the large muscular ox of the Kaira and Rádhanpur stock. These Rádhanpur bullocks are the pride of the Bohora cultivators, who are said sometimes to spend as much as £40 (Rs. 400) on a well-matched pair. Of camels, there were in 1872 only 120, and these confined to the Jambusar and A'mod sub-divisions. At present (1876) camels are not reared in the district.[1] They are brought down from northern Gujarát as beasts of burden, chiefly in connection with the trade in tobacco. Broach is no breeding place for horses, and, except a few reared by Garásiás and well-to-do cultivators, most of the animals of this class would, for size, not rank above ponies. Asses are kept only by potters, or *kumbhárs,* and rice-huskers, or *golás.* They are used to carry bricks, earth, and rice. The majority of them are in a very fair condition. The pasture grounds for sheep are chiefly in the belt of sandy soil along the coast. Of cats, there are two varieties —the wild cat, *ráni bilára,* and the small domestic cat. The dogs are all of the pariah breed.

WILD ANIMALS.

The following[2] are the chief varieties of wild animals met with in the district:—

Hog.—Of late years the number of wild hog, or *bhund,* has greatly fallen off. In the spread of tillage, waste lands, where they used to find shelter, have been taken up, while bands of Bhils, Wághris, and the lower class of Kolis, who eat their flesh, and parties of European sportsmen, have given the wild hog but little rest. In the Jambusar sub-division, hog are still to be found in the north-eastern corner near the border of Baroda territory, and in the country of thick hedges to the east of the town of Jambusar. In the A'mod sub-division, hog are met with in the rich alluvial, or *bhátha,* lands on the banks of the Dhádhar river. Here, while the cotton and *tuver* (Cajanus indicus) crops are on the field, they find a shade thicker than any natural cover, and, when the crops are cut, the hedges give them shelter. In the Ankleswar sub-division, in the rich lands on the south bank of the Narbada, close to the limits of the Rájpipla territory, hog find ample cover among the bushes of bastard cypress in the river bed, in the clumps of *bábul* trees on the bank, and during the cold-weather months in fields of sugar-cane and millet. The month of April, when the crops are off the fields, is the best time of the year for

[1] In 1820 camels were reared in the Jambusar sub-division.—Col. Williams, 47.

[2] These and the notes on game birds have been contributed by H. Scannell, Esq., district superintendent of police.

Chapter II.

Productions.

WILD ANIMALS.

hunting the hog. Broach has not, however, good hunting ground. In the north of the district the hedges are high and troublesome, and near the Narbada the hog have by April sought shelter in the patches of bastard cypress on raised plots of land in the bed of the river, where the sharp and strong stubble of the castor-oil plant makes riding unsafe.

Wolves.—Wolves are the only predatory animals in the district. Their prey is the antelope, and they are generally found on the large salt plains, chiefly in the south-west of the Jambusar subdivision, sometimes in pairs, and sometimes three or four together. This is the ordinary grey wolf, and their skins are soft and rather handsome. They are not very shy, and with a cart can be approached as near as from sixty to eighty yards.

Antelope.—The chief game of the district is the antelope, which abound in the northern sub-divisions of Jambusar, Wágra, and A'mod. From January to March, the cotton-picking season, when the fields are full of men, women, and children, the antelope grow so tame that it is easy to get near them. They are then, however, comparatively safe, for at that season there is much risk in shooting over the flat fields.

Hares.—In Rájpipla, not far from Broach limits, on hillocks covered with grass and bushes, hares are plentiful. But within the district, where, except the salt lands, almost every square foot is cultivated, in a day's shooting not more than two or three hares will be bagged.

DOMESTIC FOWLS.

Of domestic fowls there are hens of two kinds, a larger *kulam* and a smaller *fentia;* ducks and turkeys; a few geese and tame peacocks. Hens are reared by Musalmáns, Pársis, and several of the lower Hindu tribes (Kolis, Máchhis, Wághris, Bhils, and Dhers). They are kept for sale, chiefly by Musalmáns, and occasionally by Wághris. But few turkeys are met with, and these are generally in the hands of Musalmáns. One or two geese and a few tame peafowl are to be found in the town of Broach, kept as show-birds by rich Musalmáns and Pársis. Besides Rajputs, Khatris, and Bhandáris, all the classes who breed chickens and ducks use them for food. Even cultivating Kolis are said to eat chickens, though they do not eat them openly. Peafowl are found near villages in all parts of the district, especially in the light soil tracts. In the south-west corner of the Ankleswar sub-division, peafowl are so plentiful that this tract is commonly known as *morkátho,* or peacock's bank. As an article of food peafowl are not objected to by any of the classes mentioned above, except, perhaps, by the cultivating Kolis, and turkeys, it is said, would also be generally used, could the people afford to rear them. Except by Pársis and Hindus of the very lowest classes, geese are never eaten.

WILD FOWLS.

Though less rich in game birds than the districts of northern Gujarát, wild-fowls are more plentiful in Broach than in Surat. The following are the chief varieties found in the district:—

Florican, karmar (Sypheotides auritus), is said to be seldom or never shot north of the Narbada. South of that river, on the

other hand, in the Ankleswar sub-division, on the borders of Rájpipla, fair bags of from four to five brace may be made. These birds are nearly always found on dry land. Like the hare, they seem to avoid all damp and wet places. Except during the hot-weather months, florican are to be found throughout the year. In September and October, when it feeds on the blister-fly (Cantharides), the florican is considered unfit for food.

Sand Grouse, batar (Pterocles arenarius), or rock partridge. Both the ordinary variety and the variegated grouse (Pterocles fasciatus) are met with in the district.

Partridge.—Of partridges, *titar*, there are two kinds,—the painted (Francolinus pictus), with yellow legs, and the ordinary brown partridge (Ortygornis ponticeriana), whose legs are red. Of the two, the painted partridge is much the scarcer.

Quail.—Where the light, *gorát*, soil is met with, good quail shooting can be had. The best quail grounds are in the fields south of the Dhádhar; on the light soil tract, about Lakhigám, near Dehej; on the right bank of the estuary of the Narbada; and over the belt of alluvial land along the south bank of the Narbada, nearly opposite the town of Broach. Five kinds of quail are found in the district: 1, the grey quail (Coturnix communis); 2, the rain quail (Coturnix coromandelica), 3, the bustard or three-toed quail (Turnix taigoor); 4, the button (also three-toed) quail (Turnix sykesii), 5, the bush quail (Perdicula asiatica). The grey quail arrives in November, when they are found in the most perfect condition in fields of *tuver* (Cajanus indicus). In November, December, and January, one gun will not uncommonly kill in a morning as many as thirty brace of quail. In the low-lying belt of alluvial soil south of the Narbada, soon after the rains begin, two guns will in a day shoot from 100 to 200 brace of rain quail. Later on, when the floods come down, the rain quail are driven to the higher ground beyond the old bank of the Narbada. But in the cold weather they come back, and are found in the fields along with the grey quail. During the hot-weather months, when the fields cease to shelter them, the rain quail move about twelve miles eastward to the lower slopes of the Rájpipla hills, where, among the long dry grass and *bordi* (Zizyphus jujuba) bushes, they are to be found near the close of the hot weather (April and May) in considerable numbers. The bustard and button quail are very scarce. They generally go in pairs. Only a brace or two fall to the gun during a day's quail shooting. The bush quail move about in coveys, and are found in bushes and in open land. These birds are, strictly speaking, partridges, and, unlike the true quail, their flesh is white throughout.

Geese.—The *nukta*, or black-backed goose (Sarkidiornis melanonotus), is said to be the only variety of goose found in the district. This bird is remarkable for a singular protuberance on the top of the bill, which, in the male, is two inches high.

Duck.—Of duck there are many kinds, of which the common grey duck (Chaulelasmus streperus), the mallard (Querquedula crecca),

Chapter II. Productions. Wild Fowls.

and the common and whistling teal (Dendrocygna arcuata), are the most common. Other kinds, such as the widgeon (Mareca penelope), the widgeon or Garganey teal (Querquedula circia), the pin-tailed duck (Dafila acuta), are also met with. Some of the varieties do not seem to migrate, and have been shot in May. But the greater number come in November, when they collect by thousands in the Narbada, in large numbers in the Dhádhar and Bhukhi rivers, and fill the tanks, especially in the Wágra and Ankleswar sub-divisions.

Snipe.—There are three kinds of snipe—1, the common or full snipe (Gallinago scolopacinus); 2, the jack snipe (Gallinago gallinula); and 3, the painted snipe (Rhynchaea bengalensis). All three kinds arrive in November, and very fair shooting is to be had in the Wágra and Ankleswar sub-divisions in tanks, especially such as have grassy edges. The low-lying ground on the south bank of the Narbada, opposite Broach, is also a great place for snipe. When the tanks dry up, about March, the snipe leave the district.

Curlew, kuliaru (Numenius lincatus), are found on the banks of the salt-water creeks. These birds are very shy and difficult to get at. They are caught by fishermen with nets, and sold as a great luxury. They are generally purchased by Pársis.

Plovers.—Of plovers, the common (Squatarola helvetica) and the golden (Charadrius longipes) varieties are both found in the district. Grain fields are their favourite resting places, and here they are found sometimes in flocks and sometimes in pairs.

Cranes, kalam.—These birds, of which there are two varieties, —the small or Demoiselle crane (Anthropoides virgo), and the larger or common crane (Grus cinerea),—are migratory, coming into the district about November. They arrive in flocks when the wheat is ripening. They do much damage to the crops, and leave as soon as the wheat fields are bare.

Fish.

The rivers of the district are well stocked with fish. The following list gives the local names of a few of the chief varieties arranged, as far as possible, under the three heads of—(*a*) fresh water, (*b*) salt water, and (*c*) migratory fish.[1]

(*a*) The following are fresh-water fish: 1. *Bhálu*, found in the Narbada, above Broach, at all seasons of the year. It is fished for with the *jádi* net. 2. *Bhing Mudár*, or *Bhim*, is found in the Narbada, both above and below Broach, in the cold and rainy season. It is fished for at Hánsot, Janor, and Sukaltirth with the *jádi* net, and is cooked both fresh and salted. 3. *Jingha*, called *sondia* if large, and *bedi* if small, is found in all parts of the Narbada at all seasons. It is fished for with the hand-net, *chhogia*, and with the *jádi* net, and is cooked both fresh and dried. 4. *Fitan*, is found in ponds and tanks at all seasons. It is fished for with

[1] This list professes to give only a few of the chief varieties. It has been drawn up by Messrs. Chhaganlál and Dinsha in the office of the collector of Broach.

the hand-net, *chhogia*, and is cooked fresh. 5. *Fánsi*, is found in the Narbada in the cold season. It is fished for at Janor and Bhádbhut with the mullet net, and is cooked fresh. 6. *Cháksi*, is found in the Narbada, above and below Broach, in the rainy season. It is fished for with the *jhini* or *jádi* net, and is cooked both fresh and salted. 7. *Dhángdi*, is found in the Narbada in the cold season. It is fished for by hook and line, and is cooked both fresh and salted. 8. *Guri*, is found in the Narbada, above Broach, in the cold season. It is fished for with the *jádi* net, and is eaten fresh.

(*b.*) The following are the names of ten of the chief varieties of salt-water fish: 1. *Som*, is found in the Narbada, below Broach, in the cold season. It is fished for with the stake-net, *golwa*, and is cooked fresh. 2. *Wankhar*, is found in the estuary of the Narbada in the cold and rainy seasons It is fished for with the *jádi* net, and is cooked fresh. 3. *Gul*, is found in the estuary of the Narbada in the cold and rainy season. It is fished for with the drag-net, *mhágh*, and is cooked fresh. 4. *Magra*, is found in the estuary of the Narbada in the cold season. It is fished for with the *taresar* net, and is cooked fresh. 5. *Mushia*, is found in the estuary of the Narbada in the cold season. It is caught with the *jádi* net. It is cooked fresh. 6. *Kanachla*, is found in the estuary of the Narbada in the middle of the cold season. It is fished for with the drag-net, *mhágh*, and with the hand-net, *chhogia*. It is cooked both fresh and salted. 7. *Bhát*, is found in the estuary of the Narbada in the cold season. It is caught in the stake-net, *golwa*, and is cooked both fresh and salted. 8 *Kantia*, is found in the estuary of the Narbada in the cold season. It is caught in stake-nets, and is cooked fresh. 9. *Cheval*, is found in the estuary of the Narbada in the cold season. It is fished for with a net called *bándh*, one and a half feet broad and twenty feet long, and is cooked both fresh and salted. 10. *Pálwa*, is found during the rains in the estuaries of the large rivers, and caught with the *choklu*, a drift-net.

(*c.*) Of migratory fish, the list contains ten: 1. The mullet, *boi*, is found in the Narbada in the cold season, and during the rains in the estuary of the river. It is fished for with the hand-net, *chhogiá*, with the *faroda* net let down from a canoe in the net and cobble fashion, and with the drag-net, *mhágh*. The mullet is cooked fresh. 2. *Mangan* or *magiyan*, is found in the Narbada in the cold season It is fished for with the *jádi* net, and is cooked fresh. 3. *Ráu*, is found in the Narbada, both above and below Broach, in the cold season. It is fished for with the *taresar* net, and is cooked fresh. 4. *Chholla*, is found at the mouth of the Narbada at all seasons of the year. It is caught in stake-nets, *golwa*, and is cooked both fresh and salted, 5. *Jipti*, is found in the Narbada in the cold season. It is caught in stake-nets, and is cooked fresh. 6. *Singáli*, is found in the Narbada, both above and below Broach, at all seasons of the year. It is fished for by hook and line, and is cooked fresh. 7. *Tisra* or *kágra*, is found in the Narbada in the cold season.

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Productions.

Fish.

It is fished for by a line, and is cooked fresh. 8. *Chhamna*, is found in the Narbada in the cold season, and is caught in the stake, and fished for with the drag-net, *mhágh*. It is cooked fresh. 9. *Levta* or *nerta*, is found in the Narbada in the cold and hot seasons. It is caught by putting the juice of the cactus plant near the mouth of its hole. Another way of catching the *nerta*, is to drive a wooden peg into the mud near the mouth of the fishes' hole, and hang a noose of horse's hair from the peg, so that it may fall over the mouth of the hole. The fish, as he leaves his hole, leaps into the noose which, tightening with his struggles, holds him fast for the fisher. The *nerta* is cooked both fresh and salted. 10. *Jiptu*, is found in the Narbada, both above and below Broach, in the cold season. It is fished for with the hand-net, and is cooked both fresh and salted.

The Broach fisheries belong to three classes—local fisheries, sea fisheries, and monsoon fisheries.

Fisheries

Every town of importance along the coast has its local fishery, which supplies fresh fish to its inhabitants and those of the surrounding villages The fishing grounds, as a rule, occupy one of three positions,—(1) in a river, (2) at the entrance of a river, and (3) just outside a river in the open sea. The fisheries outside of the river mouth are, however, not far from the shore, and are mostly so situated, as regards distance, that the fish can be brought into market in a perfectly fresh state. Sometimes *bumla* and *bhing* fish are caught in quantities in excess of the demand. When this happens, they are cured—the *bumlás* by drying, and the *bhing* by salting. In the Broach district the fresh fish supplied to the Broach market are caught in the Narbada river. Salt-water fish are netted at the mouth of the river, and fresh-water fish in the vicinity of Sukaltirth and Janor. Between November and April some fishing-boats from Broach join the fleet engaged in *bumla* fishing on the Káthiáwár coasts between Diu and Jáfarábád. The monsoon fishing is entirely restricted to the catching of the *bhing*, *mudás*, or *pálwa*, which is plentiful along the coast from July to September. The chief seats of this fishing in the Broach district are the estuaries of the Narbada and the Dhádhar.[1]

The fishers are of two classes, the regular fishing population, and certain wild tribes,—the Wághris, Bhois, and Bhils,—who catch fish for their own food. Men of the latter class fish only in small streams and pools. They use both hand-nets and stake-nets. Their hand-net, *háth-jál*, is a casting net, in shape and make similar to that described below under the name of *chhogia*. Their stake-nets are of two kinds. One, called *nadi* or *bhandar*, is described as fixed across a stream, and strengthened at intervals by stakes, the stakes not fastened into the ground, but tightened by a couple of ropes at either end. This net is sometimes used as a drag-net, hauled by ropes against the stream. Another similar net, the *supra jál* or

[1] This account of the fisheries of the district is condensed from a paper by A. Faulkner, Esq., assistant collector of salt.

beheri, has a bag or purse in the middle. In these nets the smallest size of mesh is said to be about one-sixth of an inch in diameter.[1] During the rains men of this class fish at night. They work generally in couples, wading in pools and still places where the flood waters have flowed over their regular banks. As they move along, one of them holds a wisp of burning hay near the surface of the water, and, while the fish are attracted to the top, his partner entraps them in a net. The nets used for this torch fishing are of three kinds: (1) the ordinary hand-net, *chhogia*, or *háth-jál*, as described further on; (2) the *kandia*, a piece of netting about four feet square, thrown over the fish as he shows on the top of the water, and then beaten smartly with a stick, (3) the *jámda*, a net about four feet in length, with a piece of bamboo passed through both ends. In fishing with the *jámda*, each fisher holds an end of the net in one hand, and, as they move along, they dredge the pool. Harpooning or listering is said to be unknown. These methods of fishing by torch-light are said to be specially successful in the case of the *ráu* fish, which in times of flood leaves the main stream of the river and rests in ponds and still back-waters. The professional fishers, *Máchhis*, live chiefly in villages on the banks of the Narbada and Dhádhar rivers. They catch fish both with nets and with baited hooks. The nets are of different kinds: hand-nets, drag-nets, trawling-nets,—paid out from the stern of a canoe in the net and cobble fashion,—and stake-nets. The stake-nets and some of the trawling-nets are said to be used at sea as drift-nets. Some of these nets are made of cotton, but most of them are of hemp, *san* (Crotalaria juncea). The thread is generally spun, and the net prepared by men of the fishing caste Except a few, used in fresh water, and when the stream is clear, these nets are dyed with the bark of the *báwal* tree (Acacia arabica) When in use this dye lasts only for eight or ten days. Part of their half-monthly holiday, the 11th of each half, is spent by the fishers in re-dying their nets. The cost of the *báwal* bark is about one halfpenny per pound (1¼ *ser* per ¼ anna).

Nets.

The following are some of the nets used by the Narbada fishers:—

Hand-net.—The hand-net,[2] *chhogia*, is made of twine spun from Bombay hemp, with a mesh about half an inch in width: it is conical in shape, the lower lip loaded with pieces of lead about the size of a rifle bullet. Standing near the shore, the fisherman winds the string fastened to the top of the net round his hand, and, arranging the folds of the net on his arm, walks into the river till he is up to the waist in water, and hurls the net several yards from him with a quick circular jerk or twirl. As it passes through the air the net spreads out, enclosing on the surface of the water a space of from eight to twelve feet in diameter. On touching the water it sinks rapidly, and, collapsing by the weight of the lead, as it nears the bottom the

[1] Dr. Day's report on Fisheries of India, p. xliv.

[2] The Bombay Monthly Times, May 1850, quoted by Balfour in his Cyclopædia (Fisheries).

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mouth closes. The fisherman then tightens the string in his hand, and draws back the net by its top. The fish, if the throw has been successful, are found caught in the meshes of the net.

Drag-net.—There are three kinds of drag nets in use in the large rivers. The *sonki*, worth about 14*s.* (Rs. 7), made of cotton-thread dyed brown, and to look at not unlike a shirt of rusty chain armour, is about five feet long and four feet wide. This net is used for catching eels and the small blue-spotted mud fish called *levta*. In using the *sonki*, a fisher stands at each extremity of the net, and each man, passing a stout string through his side of the net, winds the upper end of the cord round his right hand, and the lower end round his left. In March and April, when the water of the river is low, these eel fishers may be seen moving along dredging near the bank. The second of the drag-nets is the *veri*, worth about £1 16*s.* (Rs. 18), made of the same material as the eel net, *sonki*, and of a similar stitch, though slightly larger in the mesh. This net is used in the hot and cold weather months to catch mud fish, *levtás*, and prawns. In size the *veri* is forty feet long and twenty feet broad. When fishing, each end of the net is lashed to a bamboo pole about five feet long. Two fishermen, one up to the chest in water, the other near the shore, with the net between them, work along abreast against the current, holding the bamboo in a slanting position, with the lower end of it in the mud. The third kind of drag-net is called *mhágh*. This net is about thirty feet long and eight feet deep, with a mesh about half an inch wide It costs about £1 (Rs. 10) About four feet from the foot of the *mhágh* lead weights are fastened by strings. These pieces of lead drag down this part of the net, forming a bag about two feet deep, in which the fish are entrapped. Prawns, *jinga*, and mullet, *boi*, are generally caught in this net. The time for dragging is on dark nights, with an ebb-tide, when five or six men abreast pull the net against the current.

Trawling-net.—The following varieties of nets would seem sometimes to be used as stationary nets, and sometimes as drift nets :—

The *jhini-jál* (fine net) and *jádi-jál* (coarse net), made of Bombay hemp dyed in *báwal* bark, is a net about twenty-four feet long and eight broad. The mesh is an inch and a half wide. In fishing with these nets, they are let down across the current of the stream. Each end of the net is then fastened to an anchored canoe, and the net is kept stretched in its place, about two feet from the surface of the water, by a fringe of pumpkin floats above, and a row of weights below. These nets cost to buy about 6*s.* (Rs. 3), and last only from ten to fifteen days, during which time they have to be dyed twice or thrice over. This net is used only during the rains, and then for not more than four or five days at a time, two or three days before and two or three days after the spring-tides. The fish caught in this net are called *cháksi* or *cháski*. These *cháksi* are fresh-water fish, and are caught only in the rains. During the fair weather, the fishers

say these fish keep in deep water out of reach of their nets. In size the *cháksi* vary from about eight to twelve inches in length, and in weight average about half a pound. The young of the *cháksi* are called *bhelva* or *lashkari*.

Nets.

The *faroda*, or mullet net, is of very delicate workmanship, made of a particular cotton-yarn, called *godiu*. It is used without being dyed. The net is four feet deep and from twenty-five to thirty feet long. Each mesh is about half an inch in diameter, and along the top of the net a fringe of pieces of dried pumpkin is tied. These floats are fastened ten meshes or about five inches apart This net is used during the months of November and December, when the floods are over and the water of the river is clear. This net is worked with a canoe in the net and cobble fashion. One man stands, not far from the river bank, up to his waist in water; the other fisher paddles off in the canoe, making a semi-circular course, and letting the net drop into the water as he goes. When the half circle is complete, both men beat the water with their hands, their paddles, or with a stick, and frighten the fish into the net. This kind of fishing generally takes place at night, and the netting is repeated until as many fish have been collected as are wanted. The fish caught in this net are the mullet, *boi*. In the Narbada a mullet, nine inches long, and half a pound in weight, is considered a big fish. They average about five to a pound. The mullet is found in salt as well as in fresh water In the rains and hot weather it does not come up the river, staying in the estuary about twelve miles below the town of Broach, where it is caught by the fishermen of Hánsot, Mehgám, and Lakhgám. In the Broach market mullet fetch a penny or three-halfpence a pound (two to four pice a *ser*). Mullet are always eaten fresh. They are never salted or dried.

The *choklu* or *pálwa* fish net is a large strong net, about one hundred feet long and five feet deep, made of Bombay hemp; the mesh is about two inches wide, and the cost 8*s*. (Rs 4). Fishing with this net is carried on, during the rainy months, in the estuaries of the large rivers Like the *jhini-jál*, it is let out of a boat, and kept stretched near the surface of the water by a row of floats above and weights below. This net is used to catch the *pálwa*, a salt-water fish, that seldom comes up the estuary of the Narbada above Hánsot. *Pálwa* are generally about nine inches long, and weigh, on an average, about one pound each.

The *taresar* or *ráu* fish net, about 325 feet long and fifteen feet deep, with a mesh three and a half inches in diameter, is made of Bombay hemp, and costs about 12*s*. (Rs 6) This net is used in the dry and hot weather when the water is clear, and is therefore not dyed. Like the nets mentioned above, the *taresar* is let out from a boat across the stream, and is kept in its place by an arrangement of floats and weights. The *ráu* fish, for which the net is used, is found in the Narbada above Broach, near the villages of Janor and Nánd. The *ráu* is one of the largest fish caught in the Narbada, being, on an average, about two feet long and ten pounds in weight.

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This fish fetches a good price, from 1*s.* to 1*s.* 3*d.* (8 to 10 as.) each. It is eaten fresh, chiefly by the Pársis of Broach.

Fishing-stakes.

Though there is no restriction, except that they should not block up the channel of the river, lines of fishing-stakes are put up only in a few places along the estuary of the Narbada, at the villages of Kukarwára, Hánsot, Dehej, Jáhádeshvar, and Maktampor. These stakes are set up about the middle of November, Kártik, after the rains are over, and taken down again in April or May, Waishákh, [1]The fishing-stakes vary in length from fifty to 150 feet. They are built of successive pieces of wood, the lower portions being frequently the long straight trunk of the *sádro* tree. As many as five or six pieces of wood, from eight to ten inches in diameter, are used in the construction of a single stake. They are scarped across each other, the scarping being from three to five feet: the pieces are fastened together by strong rectangular fillets of wood. Two or three boats are employed in towing the stake out to sea. The point of the stake is made wedge-shaped, and round the point a rope is tied The two ends of the rope are made fast to boats, anchored at considerable distance off. Other boats now proceed and haul up the upper end of the stake till the point is found to descend by its own weight. When the point has once caught hold of the mud, the rope is released from its lower end, and the boats, to which the rope was attached, are now employed in steadying the top of the stake in the direction of the run of the tide. At high water two boats are made fast, one on each side, to the top of the stake, which is forced by their weight ten or twelve feet into the mud. Stakes are thus put in, one after the other, till the whole row is set up.

Stake-nets.

Between each pair of stakes is extended a long purse net, the circumference of the mouth of which is about sixty feet, so that, when attached to the stakes, it exhibits an aperture twenty feet across and ten feet perpendicularly, the upper edge being a little above high water. The purse is from 100 to 170 feet in length, terminating in a point. The meshes gradually diminish in size from the mouth to the further extremity, being about six inches at the former and three-fourths of an inch at the latter. The fish are carried into this by the tide, and entrapped. Boats are always in waiting, at high and low water, to secure the fish caught and reverse the nets. Stake-nets of this kind, known as *golwa*, belong chiefly to the fishermen of Maktampor. The fish caught in them are *bumlás*, *chharus*, and other small varieties. The stake-nets, *golwa*, as well as the *jhini-jál* and the *jádi-jál*, are also, during the rains, used as drift nets by the Broach fishers. For this fishing they start in their sailing boats, *nárdi*, in bands of five if they take the *jhini-jál;* or in parties of ten if they mean to fish with the *golwa*. They carry with them about 120 pounds (three *mans*) of salt, and visit in turn Hánsot, Dehej in the estuary of the Narbada, and, in the Dhádhar river, Jambusar, and Devjagan, stopping for five days at each place. They

[1] This account of setting up stake-nets is taken from Balfour's Cyclopædia. A few changes, to suit local peculiarities, have been made.

generally catch the *pálwa* and other small varieties of fish. These fish are not dried, but salted. When the supply of salt is at an end, the fishers go back to Broach. This whole trip takes them about six weeks to two months according to their luck in fishing.

Long lines.

In fishing with the long line, hooks about the size of a pike-hook baited with prawn are tied about five feet apart. The hooks should hang about midway between the surface of the water and the bottom of the river. With this object stones are attached by strings to the line, and, to keep the line from sinking, floats made of dried pumpkins are also connected with it. The fish caught on these lines are called *guri*. They vary in size from two to forty pounds (two *sers* to one *man*). After the line has been baited and laid, the fisher seated in his canoe watches the floats, and when from their motion he sees that a fish is hooked, he paddles up, plays the fish for a while, and when it is exhausted draws it into his boat Sometimes very large fish are hooked and break away. Trawling-lines made of cotton with a single baited hook at one end are also used. Fish of two kinds are caught by means of these trawling-lines; with a small hook the *singári* fish, weighing on an average about a quarter of a pound, and the *dhángdi*, a large fish, averaging in weight about half a pound, and caught by a hook of a larger size. These hooks used formerly to be manufactured by country blacksmiths; but of late years cheaper articles from Europe have supplanted the local manufacture.

Boats.

About 150 boats are engaged in the Broach fisheries These boats are of two kinds,—sailing boats, *machhwa* or *nárdi*, and canoes, *kotia*. About two-thirds are canoes. The Narbada fishing-boats are flat-bottomed, unlike the deep-keeled boats used in the neighbourhood of Bombay, and are, on an average, about ten tons (twenty-eight *khándis*) burden. They are built, some in Broach, and others in Bilimora and Balsár in the Surat district. Canoes are of two kinds, hollowed tree trunks and plank-built skiffs. The latter, which are the more common, are made in Broach. The dug-out canoes come generally from the Malabar coast. The best canoes of this sort are made of the angeley-wood tree (Artocarpus hirsuta); the inferior sort, from a kind of tree called *chirne maram* These canoes are cut out from the solid trunk, and are from eight to twenty feet long, and from one and a half to two feet broad. Their depth varies from one to one and a half feet[1]

Markets for fish.

The markets in Jambusar, Broach, and Hánsot are said to be fully supplied with fish, and large quantities, both salt and dried, are exported. In A'mod the quantity of fish is said to be falling off, and both there and at Ankleswar the supply is less than the demand. Of the whole population of the district, about one-third, or slightly more than one hundred thousand persons, eat fish.

[1] Balfour's Cyclopædia (Boat).

CHAPTER III.

POPULATION.

In 1820.

The earliest year for which details regarding the population of the district are available is 1820, when the total number of inhabitants was returned at 229,527 souls, or 157 to the square mile. Of these, 223,908 lived in state villages, and 5,619 in alienated villages. Of the inhabitants of state villages, 174,438, or 77·9 per cent, were Hindus; 45,636, or 20·38 per cent, Musalmáns; and 3,834, or 1·71 per cent, Pársis. The total population, according to the census of

In 1851.

1851, was 290,984, giving 200 souls to the square mile. The Hindus numbered 231,134, or 79·43 per cent; the Musalmáns, 57,272, or 19·67 per cent; the Pársis, 2,552, or 0·87 per cent; or there were four Hindus to one Musalmán, and twenty-two Musalmáns to one Pársi. There were, besides, twenty-six Christians. The census of 1872 gives a total population of 350,322 souls, or 240 to the square mile. Of

In 1872.

these, 277,032, or 79·07 per cent, were Hindus; 69,033, or 19·7 per cent, Musalmáns; and 3,116, or 0·88 per cent, Pársis; or there was one Musalmán to every four Hindus, and one Pársi to every twenty-two Musalmáns or eighty-eight Hindus. Besides these main classes there were eighty-six Christians, eight Jews, fifteen Sikhs, and 1,032 'others.'

Population statement, 1820-1872.

From the following statement, which, in tabular form, contrasts the results of those three enumerations, it would seem that in the fifty-two years between 1820 and 1872 the population has advanced from 229,527 to 350,322, or an increase of 52·62 per cent. During the same time houses have increased from 54,197 to 96,723, or 78·46 per cent; ploughs from 18,112 to 37,408, or 106·53 per cent; oxen from 41,632 to 67,306, or 61·66 per cent; and cows and buffaloes together from 50,542 to 70,534, or 39·55 per cent. Again, in the twenty-one years between 1851 and 1872, the population has advanced 20·39 per cent; the number of houses is greater by 21·02 per cent, while, on the other hand, agricultural stock under all heads would seem to show a decrease of 24 per cent:—

Contrasted Statement of the Population of the Broach District in 1820, 1851, and 1872

Statement of stock, 1820-1872.

Year.	Population					Houses.
	Hindus	Musalmans	Pársis	Others.	Total	
1820					229 527	54,197
1851	291 134	57,272	2,552	26	290 984	79 923
1872	277,032	69,033	3,116	1,141	350,322	96,733
1820 and 1872 Increase per cent					52 62	78 46
1851 and 1872 Increase per cent	19 85	20 53	22 1		20 39	21 02

Contrasted Statement of the Agricultural Stock of the Broach District in 1820, 1851, and 1872

Year	Agricultural Stock								
	Implements		Live stock						
	Ploughs	Carts	Oxen.	Cows	Buffaloes	Horses	Camels	Sheep and goats	Asses.	Total
1820	18 113		41 612	50,542	Information not available					
1851	31 124	18 347	8 975	94,601	5 1633	2,340	100	21 828	1 013	262 390
1872	37 408	19,020	67 306	15,891	54 643	2,727	120	37 759	1 530	179 996
1820 and 1872 Increase per cent	106 53		61 66	39 55						
1851 and 1872 Increase per cent	20 19	6 39	27 2	117 73	18 83	16 53	20	68 46	18 07	31 40

Sub-divisional details, 1872.

The following tabular statement gives for the year 1872 details of the population of each sub-division of the district according to religion, age, and sex.—

Sub-divisional Details of the Broach Population in 1872

Sub division	Hindus								
	Not exceeding 12 years		Above 12 and not exceeding 30 years		Above 30 years		Total		Grand Total
	Males	Females	Males	Females	Males.	Females	Males	Females	Persons.
Jambusar	14,429	12 752	13,367	13 293	12 144	10 972	41 940	37 017	78,957
Amod	5,790	5, 90	5,992	5,581	4 981	4 492	16,763	15,163	32,134
Wágra	6,072	5 706	6,0.1	5 613	5 4 5	4 730	17,578	16 128	33,706
Broach	13,417	12 487	14,461	13,493	12 521	10 708	40 399	36 088	77 087
Ankleswar	10,036	9,758	9,877	9,366	8 474	7,847	28,387	26,701	55,148
Total	49,744	46 093	51,718	47,415	43,605	38 449	145 070	131,962	277,032
	Musalmans.								
Jambusar	2,674	2,475	2,614	2,341	2 069	2,029	7,357	6,845	14,202
Amod	1,411	1,463	1,439	1,246	1,303	1,.04	4,133	3,703	7,836
Wágra	882	777	938	810	871	780	2,691	2,367	5,058
Broach	5,410	5,161	5,424	5,180	4,435	4 634	15 269	14,980	30,249
Ankleswar	2,046	2 016	2 079	2 0.1	1,7.1	1,775	5,846	5,842	11 688
Total	12,453	11,682	12,494	11,633	10,349	10,422	35,296	33,737	69,033

Chapter III. Population.

Sub-divisional Details of the Broach Population in 1872—continued.

Sub-division	OTHERS. Not exceeding 12 years. Males	Females	Above 12 and not exceeding 30 years. Males	Females	Above 30 years. Males	Females	Total. Males	Females	Grand Total. Persons.
Jambusar	26	6	13	11	22	6	61	23	84
A'mod	53	49	48	51	49	38	145	138	283
Wágra	2	1	1	4	5	1	8	6	14
Broach	536	455	430	457	471	542	1,437	1,454	2,891
Ankleswar	178	155	115	142	137	174	430	469	899
Total	795	666	607	665	684	759	2,081	2,090	4,171
	CHRISTIANS.								
Jambusar			4	1	1		5	1	6
A mod	3	1	1		1	1	5	2	7
Wágra		1						1	1
Broach	5	4	24	11	19	1	48	16	64
Ankleswar	1		2	2	3		6	2	8
Total	9	6	31	14	24	2	64	22	86
	TOTAL								
Jambusar	17,129	15,233	17,998	15,646	14,236	13,107	49,363	43,986	93,249
A mod	7,287	6,698	7,475	6,878	6,287	5,485	21,049	19,211	40,260
Wágra	6,936	6,485	6,900	6,686	6,381	5,711	20,217	18,882	39,779
Broach	19,368	18,107	20,349	19,146	17,146	15,885	57,163	53,138	110,291
Ankleswar	12,261	11,929	12,073	11,591	10,435	9,991	34,769	33,074	67,743
Total	63,001	58,452	64,845	59,727	54,665	49,032	182,511	167,811	350,322

Proportion of males to females.

From the above statement it appears that the percentage of males on the total population was (1872) 52·1, and of females 47·9; Hindu males numbered 145,070, or 52·37 per cent, and Hindu females numbered 131,962, or 47·63 per cent, of the entire Hindu population. Musalmán males numbered 35,296, or 51·13 per cent, and Musalmán females 33,737, or 48·87 per cent of the total Musalmán population. Pársi males numbered 1,539, or 49·3 per cent; and Pársi females 1,577, or 50·7 per cent, of the total Pársi population.

Sub-division	Pársi population. Males	Females	Total
Jambusar	29	1	30
A mod	2	2	4
Wágra	8	6	14
Broach	1,070	1,099	2,169
Ankleswar	430	469	899
Total	1,539	1,577	3,116

Division by health.

The number of insanes in the district is returned at 36 males, 14 females; total 50, or 0·014. Idiots numbered 101 males, 40 females; total 141, or 0·04 per cent Deaf and dumb, 239 males, 125 females; total 364, or 0·10 per cent. Blind, 299 males, 375 females; total 674, or 0·19 per cent Lepers, 129 males, 59 females; total 188, or 0·053 per cent of the whole population.

Division by religion.

The following tabular statement gives the number of the members of each religious class of the inhabitants according to sex at different ages with, at each stage, the percentage on the total population of the same sex and religion. The columns referring to the total population discard the difference of religion, but retain the difference of sex:—

Chapter III. Population.

Statement of the Population of Broach arranged according to Religion, 1872.

Ages.	Hindus				Musalmans			
	Males.	Percentage on total male Hindu population	Females.	Percentage on total female Hindu population	Males.	Percentage on total male Musalmán population	Females.	Percentage on total female Musalman population.
Up to 1 year	5,790	3 99	5,698	4 31	1,410	3 99	1,420	4 21
Between 1 and 6	22 467	15 48	22 459	17 01	5,537	15 69	5,712	16·93
Do. 6 and 12	21,487	14 81	17,941	13 59	5,506	15 60	4,550	13·49
Do. 12 and 20	22,289	15 36	20,126	15 25	5,439	15 41	4,701	13·93
Do. 20 and 30	29,429	20 28	27 289	20 67	7,055	19·99	6,932	20 55
Do. 30 and 40	22,114	15 24	18,143	13 74	5,073	14 37	4,667	13 89
Do. 40 and 50	12,611	8,69	10,657	8 09	3,043	8·64	3,014	8·93
Do. 50 and 60	6,271	4 32	6,626	5 02	1,596	4 52	1,888	5 60
Above 60	2,612	1 80	2,993	2 26	632	1 79	833	2 47
Total	145,070		131,962		35,296		33,737	

Ages.	Christians				Others.				Total.			
	Males	Percentage on total male Christian population	Females	Percentage on total female Christian population	Males.	Percentage on total male others.	Females.	Percentage on total female others.	Males	Percentage on total male population	Females.	Percentage on total female population
Up to 1 year	4	6 25	2	9 09	100	4 81	72	3 44	7, 904	4 00	7,192	4 29
Between 1 and 6	3	4 69	2	9 09	336	16 15	304	14 55	28 343	15 53	28,477	16 97
Do 6 and 12	2	3 13	2	9 09	359	17 25	290	13 88	27, 354	14 99	22,783	13 58
Do 12 and 20	1	1 56	5	22 73	282	13 55	282	13 49	28 011	15 35	25 114	14 97
Do 20 and 30	20	46 87	9	40 91	320	15 38	484	18 53	36,834	20 18	34,613	20·63
Do 30 and 40	14	21 87	1	4 55	300	14 42	314	15 62	27,501	15 70	23 145	13 79
Do 40 and 50	7	10 94			208	10 00	183	8 78	15,874	8 70	13,884	8·27
Do 50 and 60	3	4 69	1	4 55	101	5 24	147	7 03	7,979	4 37	8,862	5 16
Above 60					67	3·22	11.	5 50	3 811	1 81	3,941	2 35
Total	64		22		2081		2090		182,511		167811	

Division by occupation.

According to occupation the census returns for 1872 divide the whole population into seven classes[1] :—

I.—Persons employed under government, or municipal, or other local authorities, numbering in all 8,481 souls, or 2 42 per cent, of the entire population.

II.—Professional persons, 4,499, or 1 28 per cent.

III.—Persons in service, or performing personal offices, 4,398, or 1·25 per cent.

IV.—Persons engaged in agriculture and with animals, 104,514, or 29 83 per cent.

V.—Persons engaged in commerce and trade, 4,625, or 1 32 per cent.

VI.—Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 53,608, or 15 3 per cent.

VII.—Miscellaneous persons not classed otherwise—*(a)* wives 51,122 and children 113,208, in all 164,330, or 46·90 per cent; and *(b)* miscellaneous persons 5,867, or 1 67 per cent—total 170,197, or 48 58 per cent.

Hindus.

The general chapter on the population of Gujarát includes such information as is available regarding the origin, customs, and condition of the people of Broach. The following details show the strength of the different castes and races as far as it was ascertained by the census of 1872.

[1] Minute details of each of these main classes will be found in the 1872 Census Report, Vol. II., pages 236-265 The remarks in foot-note 1, at page 51 of the Surat Statistical Account, are, in general, applicable to the details of this classification by occupation.

Chapter III. Population.

Brâhmans.

Under the head of Bráhmans came, exclusive of sub-divisions, thirty-five divisions, with a strength of 15,516 souls (males 8,418, females 7,098), or 5·61 per cent of the total Hindu population. Of the Bráhmans, the Bhárgav Brahmans, in number 869, claim to be the original Bráhmans of Broach, and to be descended from the great Rushi Bhragu, the founder of the city. At one time they are said to have numbered in Broach as many as 18,000 families. At present they are to be found in other parts of Gujarát

Writer classes

Under the head of writers came three classes, Brahma-Kshatris (692), Káyasths (56), and Parbhus (19), with a total strength of 767 souls (males 414, females 353), or 0 28 per cent of the total Hindu population. Though small in number, the Brahma-Kshatris, from their intelligence and wealth, hold a high position among the inhabitants of the district. As a class, the Brahma-Kshatris are rich, and fond of show and pleasure. They own land and house property. Some are hereditary officers, of whom the *desái* of Broach is one. A great number are in government service, many of whom hold offices of trust and responsibility; others are pleaders and money-lenders.

Mercantile classes.

Under the head of mercantile, trading, and shop-keeping classes, came 10,479 Waniás, belonging to sixteen divisions; Gujaráti Shrávaks of three divisions, 2,947; Márwári Shravaks, 326; and Bhátiás and Luwánás, 1,112,—giving a total strength of 14,864 souls (males 7,989, females 6,875), or 5·23 per cent of the entire Hindu population Unlike the Wánias of the Surat district, some of the Broach Wánias are recipients of cash and land allowances from government. The Modh Wánias form an important element in the Wánia community. Under the former governments they used to hold offices of trust and responsibility One of the highest families of the district, the *majmudár*, or district accountant of Broach, belongs to this class. The Gurjar Wánias are known for boldness and enterprise in trade They brought under cultivation tracts of lands in the Ankleswar sub-division, where only they are now to be met with, and in consequence enjoy land and cash allowances.

Cultivators.

Under the head of cultivators came four classes, with a total strength of 55,095 souls (males 29,324, females 25,771), or 19·89 per cent of the whole Hindu population. Of these, 30,705 (males 16,602, females 14,103) were Kanbis; 18,236 (males 9,487, females 8,749) Rajputs; 5,730 (males 2,994, females 2,736) Káchhias; and 424 (males 241, females 183) Mális The most respectable part of the population, and the principal cultivators of the highly tilled and fertile district of Broach, are the Kanbis.[1] They are as peaceable as they are industrious. The Kanbis of Broach derived their origin from the Kaira district, and look upon their own respectability as deteriorating in proportion as they relinquish the banks of the Mahi river.[2] Competition among the Kanbis of the Broach district to give their daughters in marriage to the exclusive Kanbis of the Kaira district

[1] Colonel Williams' Memoir of Broach, 1825.

[2] Mr Davies' Statistical Report, 1849.

resulted in ruinous expenses. The Kanbi had to pay large sums both for securing a husband for his daughter and for securing a wife for his son. Twenty-five years ago, in villages near Broach, there were not half a dozen females in a community mustering hundreds of souls. Seeing the ruinous effects of this competition, the Kanbis of the Broach district entered, about twenty-five years ago, into agreements, backed by heavy penalties, to intermarry only among themselves. The result of the agreement will be seen from the table in the margin. The condition of many of the Kanbi cultivators of the district is said to have been permanently improved by the high prices that ruled during the American war. Unlike the Bohorás, the Kanbis are said to have acted with moderation, employing their gains in paying off old debts, and hoarding what was over in the form of ornaments, or investing it in advances to their less frugal neighbours. Though the Kanbis of the district are almost entirely agriculturists, a few of them live in towns, and act as traders and money-lenders. The Rajputs are divided into two classes: i, Garásiás, and ii, cultivators; the former live upon the rent of land, and the latter cultivate with their own hands. There is nothing in the dress or habits of the cultivating Rajputs to distinguish them from the Kanbis, though, as farmers, they are far inferior in skill. Colonel Williams gives the following account of this body of agriculturists: "The Rajputs of the Broach district afford another instance of a complete change from the warlike and turbulent character to that of quietness, obedience, and industry. The headmen and shareholders of many villages are Rajputs. This description, of course, only applies to such Rajputs as have become exclusively cultivators. There are Rajput inhabitants besides these, chiefly Garásiás, or land-owners, who live a life of idleness on the rent of their lands; but even these do not retain much of the military character beyond what the practice of wearing a sword leaves them." The Káchhiás are market-gardeners and vegetable-sellers. Especially in the southern parts of the district the Káchhiás are skilled cultivators, by the help of manure and irrigation growing large crops from small plots of land. The Mális rent plots of land and grow flowering plants.

Cultivators.

Census of	Males.	Females.	Total	Preponderance of males over females.
1846	17,381	12,651	30,032	37·38
1851	17,902	14,264	32,166	25·5
1872	16,602	14,103	30,705	17 71

Of manufacturers there were five classes, with a strength of 5,506 souls (males 2,878, females 2,628), or 1·98 per cent of the total Hindu population. Of these, 1,045 (males 559, females 486) were Khatris; 792 (males 408, females 384) Bhávsárs, calico-printers; 178 (males 96, females 82) Galiárás, dyers; 75 (males 40, females 35) Bandhárás, washers of silk-cloth; and 3,416 (males 1,775, females 1,641) Ghánchis, oil-pressers. The Khatris weave women's robes and other coloured cloths. This trade has suffered much since the introduction of European piece-goods; the old looms that once used to make the fine cloth, for which Broach was famous, are broken up. Many of the Khatris now work as labourers, and are said to be in poor circumstances. The Bhávsárs print the robes worn by women. Though the competition

Manufacturers.

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with European goods has injured their trade, the Broach prints are considered superior to those prepared at other places, and the workmen are at present in good condition.

Artizans.

Of artizans there were eight classes, with a total strength of 14,542 souls (males 7,542, females 7,000), or 5 24 per cent of the total Hindu population. Of these, 2,419 (males 1,224, females 1,195) were Sonis, gold and silversmiths; 2,868 (males 1,477, females 1,391) Suthárs, carpenters; 253 (males 138, females 115) Kansárás, coppersmiths; 42 (males 18, females 24) Chunárás, bricklayers;[1] 238 (males 116, females 122) Saláts, masons; 1,765 (males 954, females 811) Luhárs, blacksmiths; 4,851 (males 2,543, females 2,308) Kumbhárs, potters; and 2,106 (males 1,072, females 1,034) Darjis, tailors.

Bards and actors.

Under the head of bards and actors came four classes, with a total strength of 1,601 souls (males 910, females 691), or 0 58 per cent of the whole Hindu population. Of these, 869 (males 472, females 397) were Bháts, bards; 365 (males 185, females 180) Ghádvis or Chárans, genealogists; 245 (males 175, females 70) Bhawáyás, strolling comedians; and 122 (males 78, females 44) Vyás. "Many Bháts or Bárots have also," says Colonel Williams, "in this quarter completely abandoned those professions which, more to the northward, they are engaged in exclusively, and live entirely by cultivating the land." The Ghádvis very much resemble the Bháts in all their habits and callings, but are more often engaged in money-lending than the Bháts. The Vyás are, like Bhawáyás, said to have been originally Bráhmans. Some of the Vyás are money-lenders, and a few are cultivators.

Personal servants.

Of personal servants there were three classes, with a total strength of 5,232 (males 2,732, females 2,500), or 1·89 per cent of the whole Hindu population. Of these, 3,936 (males 2,071, females 1,865) were Hajáms, barbers; 1,121 (males 576, females 545) Dhobhis, washermen; and 175 (males 85, females 90) Pakhális, water-drawers.

Shepherds.

Of herdsmen and shepherds there were three classes, with a total strength of 3,260 (males 1,646, females 1,614), or 1·18 per cent of the whole Hindu population. Of these, 1,936 (males 962, females 974) were Bharwáds; 1,183 (males 616, females 567) Rabáris; and 141 (males 68, females 73) Gádarás. About the Bharwáds and Rabáris of the district Colonel Williams says: "There are good many Rabáris or Bharwáds in the Jambusar, A'mod, Dehej, and Hánsot sub-divisions, where pasturage is extensive on the flats that lie between the cultivated parts and the sea. A Rabári cannot tell the number of his flock, but he knows them all by figure and face, and is aware of the absence of an individual. These people lead a perfectly rural life; they are never the inhabitants of towns or villages, and when huts are erected by them, they are of the most slight and temporary description. They are very different in appearance, manners, and dress from the other inhabitants."

[1] In the Broach district the work of brick laying is chiefly in the hands of Musalmáns

Of fishers and sailors there were three classes, with a total strength of 8,238 souls (males 4,288, females 3,950), or 2·18 per cent of the whole Hindu population. Of these, 1,259 (males 615, females 644) were Khárwás, seamen;[1] 736 (males 378, females 358) Bhois, palanquin-bearers; and 6,243 (males 3,295, females 2,948) Máchhis, fishers. Among the sea-faring population there are many families who are not either sailors or fishers. Among the Khárwás, for instance, a portion are employed as tile-turners or in making ropes; some of the Máchhis are cultivators, while the Bhois, who before the opening of the railway were palanquin-bearers, have now, to a great extent, become the domestic servants of well-to-do townspeople. Fishers and sailors.

Of labourers and miscellaneous workers there were thirteen classes, with a total strength of 77,921 souls (males 40,511, females 37,410), or 28 12 per cent of the whole Hindu population. Of these, 68,901 (males 35,698, females 33,203) were Kolis; 1,501 (males 760, females 741) Golás, rice-pounders; 281 (males 140, females 141) Bhádbhujás; 1,125 (males 665, females 460) Maráthás; 221 (males 157, females 64) Purabiás; 1,073 (males 541, females 532) Talwádás, toddy-drawers; 737 (males 377, females 360) Ods, diggers; 248 (males 124, females 124) Ságarás; 110 (males 44, females 66) Lodhás; 2,166 (males 1,149, females 1,017) Wághris, fowlers and hunters; 1,607 (males 856, females 751) Ráwaliás, cotton-tape-makers; 39 (males 23, females 16) Pomlás; 26 (males 16, females 10) Wánsforás, bamboo-splitters; 167 (males 101, females 66) miscellaneous. Though belonging to a race who, in other parts of Gujarát, are well known as robbers and bad characters, the great number of the Broach Kolis have for long been orderly and industrious. In 1820 Colonel Williams found them obedient subjects 'as well as able husbandmen,' and some of the finest villages in the Hánsot sub-division were at that time held by Koli sharers, and peopled and cultivated chiefly by men of that caste. Mr. Elphinstone speaks of the Kolis as among the most respectable cultivators.[2] These remarks apply only to *talabda*, or indigenous, Kolis, who are all agriculturists, and some of them in good condition. The members of the other sub-divisions are almost all poor, supporting themselves as labourers, private servants, and village watchmen. The least respectable class is the Pátanwária branch, who are still known as bad characters. Besides following their regular occupation of rice-pounding, some of the Golás are artizans. Under the head of Maráthás and Purabiás, men of several castes, engaged chiefly as domestic servants, peons, and labourers are included. Labouring classes.

Of aborigines there were two classes, with a total strength of 42,859 souls (males 21,914, females 20,945), or 15 25 per cent of the total Hindu population. Of these, 18,156 (males 9,247, females 8,909) were Taláviás, and 24,703 (males 12,667, females 12,036) Bhils. Mr. Davies gives the following account of the Bhils and Taláviás[3]: "They can hardly, with propriety, be said to be natives of Broach Aboriginal tribes.

[1] Besides the Hindu seamen, there is a considerable population of Musalmán seamen.

[2] Bom. Rev. Sel., III., 663.

[3] Mr. Davies' Statistical Report, 1849.

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since they have emigrated from the neighbouring Rájpipla territory. Of the 3,000 village watchmen in the district fully half are Bhils, the rest are Kolis and Talávias. Some are also engaged as watchmen by small proprietors. Uncouth in personal appearance, and despised as well as feared by nearly all classes of the inhabitants, the immigrant Bhil rarely finds private service. If he does, it is only in some mean and out-of-door capacity. And yet the Bhil and Koli have their virtues; they are by custom almost the only carriers of the public money from the village revenue clerks to the district officers, and in this manner they are habitually entrusted with considerable sums of money. But, though booty is thus placed within their reach, there is scarcely an instance on record of this trust being betrayed. The arms of the Bhil (which he generally carries about him) consist of a bamboo bow, with a rind of the same material for a string, and half a dozen formidable arrows. He dislikes a sword, and is not at home with a gun. His habitual dress is of the coarsest home-made cotton cloth, and his matted hair is seldom seen with any semblance of a covering."

Workers in leather.

Of workers in leather there were two classes, with a total strength of 4,865 souls (males 2,512, females 2,353), or 1·73 per cent of the whole Hindu population. Of these, 1,359 (males 712, females 647) were Mochis, shoe-makers, and 3,506 (males 1,800, females 1,706) Khálpás, tanners.

Depressed castes.

Of depressed castes,—those whose touch is considered by Hindus a pollution,—there were three, with a total strength of 24,345 (males 12,470, females 11,875), or 8·79 per cent of the total Hindu population. Of these, 381 (males 198, females 183) were Garudás, priests to the Dhers; 16,739 (males 8,618, females 8,121) Dhers, sweepers; and 7,225 (males 3,654, females 3,571) Bhangiás, scavengers.

Religious beggars.

Devotees and religious mendicants of various names—Brahmachárís, Wáirágis, Gosáis, Sádhus, and Jogis—numbered 2,140 (males 1,382 females 758), or 0·78 per cent of the entire Hindu population. On account of the sanctity of the river Narbada, many religious mendicants visit Broach and Sukaltirth. Some of them remain for a considerable time, while others, after a stay of a few days, pass on in their tour of pilgrimage. There are many resident Gosáis in the district, who, in addition to their regular work as priests, engage to some extent in trade and in money-lending.[1]

Musalmán classes.

The Musalmán section of the population amounted to a total of 69,033 souls (males 35,296, females 33,737), or 19·7 per cent of the entire population of the district. With the exception of the Bohorás, who are a well-to-do class, the Broach Musalmáns are for the most part in a depressed condition. The Musalmáns include two

[1] Some of them are said to be well off, having money and owning land. The *maths*, or places of residence of Gosáis and others, are open for the reception and entertainment of strangers. There are many resident Gosáis in the Broach district. In 1758, about fourteen years before the nawáb of Broach lost his kingdom, the Gosáis entered the district in an insolent manner and committed some disturbances. The nawáb ordered troops against them, and drove them out of his territory; and, as long as the nawáb remained ruler of Broach, the Gosáis did not again return. Soon after the establishment of the Marátha power (1783) the Gosáis visited the district. At

Musalmán classes.

classes distinct in origin, though now considerably mixed by intermarriage—Musalmán immigrants, and local converts to Islám. Of the Musalmáns, whose origin is traced to Hindu converts, the most important are the Bohorás. Under the head Bohorás the census returns include a total population of 30,825 souls (males 15,656, females 15,169), or 44 per cent of the entire Musalmán population. This large body includes two main classes, distinct from each other in occupation and in religion. Of these, the one, generally engaged in trade and living in towns, are most of them Ismáili Shiás in religion; and the other, belonging to the Sunni community, are a country people, employed almost entirely in tilling the fields. No details are available to show the actual strength of each of these classes. But in the Broach district the pedlar Bohorás are a very small body, to be found only in the towns of Broach and Jambusar, while the peasant Bohorás form a large section of the population, and are distributed over every part of the district. According to Colonel Williams there were, in 1818, eighty-four villages in which the headmen and the shareholders were Bohorás. The peasant Bohorás are a very hard-working, intelligent, independent, and somewhat turbulent body of men. In language and habits they resemble the Kanbi and other Hindus, but are distinguishable from Hindus by their beard as well as by a peculiar cast of countenance. At the same time, while professing the faith of Islám, they do not intermarry with other Musalmáns. These two classes of Bohorás are among the most interesting of the Musalmáns of Gujarát, not only from their peculiar history, many points in which do not seem to be free from mystery, but because, in contrast to the generally depressed state of the Musalmán population, the Bohorás, whether as traders or as cultivators, are among the most prosperous communities of Gujarát. Details of the origin, history, and peculiar customs of both classes will be found in the general chapter on the population of Gujarát. The peasant Bohorás, though as a class well-to-do, are not in so good a condition as, from their shrewdness and industry, they ought to be. Many of them contracted expensive habits during the prosperous times of the American war, and, though now not nearly so well off, continuing to spend large sums, have fallen into debt. A few, when prices ruled high, started as traders; but most of the men who made this venture lost heavily from the fall in prices, and were again forced to take to cultivation.

Besides the Memans, the Khojás, the Shekhdás, the Táis, the Momnás, and the Chhipás, there is, among the orthodox Musalmáns of Broach, a peculiar community called Nágoris. These men have

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first they received presents out of the ordinary revenues; but in 1784 advantage was taken of the presence of the Gosáis to levy, in addition to the regular state demand, a sum of one per cent under the name of the Gosái tax, though the whole of the proceeds of the tax were not devoted to this charity. The Gosáis did not come to the district every year, but visited it at intervals of a year or two. When they did appear, the government officers compromised their claims for a sum much less than the actual proceeds of the cess. The actual payments made to th Gosáis varied, according to circumstances, from £80 to £120 (Rs. 800 to 1,200), rising in one year to as much as £400 (Rs. 4,000), and in another year falling as low as £50 (Rs. 500). When the country fell into the hands of the British, the levy of this cess was discontinued.—Colonel Walker's letter to Government, dated 27th January 1805.

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Musalmán classes.

long been settled in Broach. They are said to derive their names from their former home, Nágor, a town in Málwa. At present cart-men and labourers, the Nágoris are said to be a relic of the days when Broach was the centre of the trade of a large part of Western India. Other bodies of Musalmáns, converted from Hinduism, are the Molesaláms and Maleks. The Molesaláms are half-converts to Islám from among the Rajputs, made principally in the reign of Mahmud Begara (1459-1511). Except such of them as are large landholders, they are said, as a class, to be in an impoverished condition. The women do not help in the work of the field, nor do the men go out as labourers. Given up to the use of opium and spirits, they are involved in heavy debts, and are in the hands of money-lenders. The Maleks are agriculturists, some of them ordinary villagers, others the headmen of their communities. The Maleks, like the Molesaláms, were converted from Hinduism[1] in the time of Mahmud Begara (1459-1511).

Exclusive of females 18,858 and children 25,154,—in all 44,012, or 67·02 per cent of the Musalmán population,—the male adult population (21,658) was, according to the return prepared in 1875 by the collector, engaged in the following professions: (1) persons engaged in government or other service, 893; (2) professional persons, 274; (3) persons in service, or performing personal offices, 479; (4) persons engaged in agriculture, 15,495; (5) persons engaged in commerce or trade, 245; (6) persons engaged in mechanical arts and manufactures, 3,209, and (7) miscellaneous persons, 973.

Pársis.

The Pársis numbered 3,116 souls (males 1,539, females 1,577), or 0·88 per cent of the total population of the district. Twenty-seven years ago Mr. Davies wrote: "The Pársis have a distinct quarter in the town of Broach, in which they are known to have been denizens for upwards of six centuries. No less than four disused towers of silence attest the generations which have passed."[2] Most of the Pársis reside in the town of Broach. When Broach was a great port, the chief ship-owners and brokers were Pársis, and in the days when its manufactures were famous, Pársis were the most skilful weavers. The weavers have now almost all left Broach, and only a few ship-owners remain. In the Ankleswar sub-division a large number of Pársis are engaged in agriculture. Mr. Williams says: "In a few villages of the Ankleswar and Hánsot sub-divisions, the village headmen and some of the cultivators are Pársis, and they are active and skilful husbandmen." The entire monopoly of the manufacture and sale of spirituous liquors and toddy is in the hands of Pársis. They also go into the Rájpipla territory, as far as the Bhil forests, to purchase *mahura* flowers. Owing to the decline of the sea trade of Broach, the Pársis are said to have migrated from time to time to Bombay, thereby reducing their numbers from 3,834 in 1820 to 2,552 in 1851. Since then the population has again

[1] In the village of Chándpor, in the Jambusar sub-division, the headman, a Malek, claims descent from Kapil Bráhmans.

[2] Mr. Davies' Statistical Report, 1849.

increased to 3,116. With the exception of a few families who are badly off, the Pársis of Broach may be described as, on the whole, a well-to-do community. In their way of living they are said to be much more frugal than the Pársis of Surat Exclusive of females 1,019 and children 1,169,—in all 2,188, or 72·49 per cent, of the Pársi population,—the male adult population (830) was, according to the return prepared by the collector in 1875, engaged in the following professions : (1) persons engaged in government or other service, 48 ; (2) professional persons, 33 ; (3) persons in service or performing personal offices, 172 ; (4) persons engaged in agriculture, 138 ; (5) persons engaged in commerce and trade, 78 ; (6) persons engaged in mechanical arts and manufactures, 301 ; (7) miscellaneous persons, 60.

Europeans.

No separate statistics with regard to the European element in the Broach district are shown in the census returns. But, owing to the spread of steam-factories, the strength of this class has increased considerably of late years, and there is at present, probably, no district in the Bombay presidency where the number of non-official European residents is so large as in Broach.

Religious divisions.

The Hindu population of the district belongs, according to the census of 1872, to the following sects :—

Statement showing the Strength of the different Hindu Sects, 1872.

Waishnavs					Shaivs		Mixed		Jains or Shrávaks	Total
Rámánuj	Walabhácháril	Kabirpanthi	Madhwáchari	Swámi Náráyan	Shankar	Lingáyat	Ascetics, religious mendicants	All who worship simply some god or god dess with out knowing anything of theology		
72,695	12,569	12,687	8,387	3,869	21,903	202	1 938	138,796	3 986	277,032

From this statement it would seem that of the total Hindu population the Waishnavs numbered 110,207, or 39 78 per cent ; the Shaivs 22,105, or 7·97 per cent ; the mixed classes 140,734, or 50 8 per cent ; and the Shrávaks 3,986, or 1·43 per cent. The Musalmán population belongs to two sects, Sunni and Shia ; the former numbered 68,144 souls, or 98·71 per cent, of the total Musalmán population, and the latter, which contained 889 persons, or 1·29 per cent of the total Musalmán population, included the Surat or Dáudi trading Bohorás, some of the Momnás, and the few Khoja families who are settled in the district. The Pársis are divided into two classes, Sháhanshái and Kadmi ; the number of the former was 3,092, or 90·23 per cent, and that of the latter was twenty-four, or 0·77 per cent. In the total of eighty-six Christians, representatives of seven sects were included. Of these, forty-eight were Roman Catholics, sixteen Presbyterians, nine Native Christians, seven Episcopalians, four Wesleyans, one Armenian, and one Baptist. Of the remainder, eight were Jews and fifteen Sikhs ; while under the head 'all others' 1,032 persons, chiefly members of the wandering tribes, were included.

Chapter III.

Population.

Division by residence.

Arranged according to their position as dwellers intowns or in villages, the population of the district forms two classes, the villagers being four times as numerous as the townsmen. Under the latter head come the inhabitants of the towns of Broach 36,932, Jambusar 14,924, Ankleswar 9,414, and A'mod 6,125; or a total town population of 67,395 souls, or 19·24 per cent of the entire inhabitants of the district. Originally these towns were walled, and each of them was provided with a fort. Within the walls lived the richest part of the people, dwelling in well-built houses; without the walls were the poorer classes, lodged chiefly in hovels. Though the fortifications are now allowed to fall into decay, a marked distinction between the town proper and its suburbs still remains. The rural classes, comprising 282,927 souls, or 80·76 per cent of the entire population, live in villages, varying in size from small towns of 4,152 inhabitants and 1,146 houses to hamlets with sixty-four souls and eleven houses. A village of average size contains 190 houses and 688 inhabitants. "The villages of Broach," says Mr. J. M. Davies, "have (1848) in general a thriving appearance, arising from the common use of tiles for the houses in lieu of thatch, and the trees with which the villages are mostly surrounded contribute to produce at a distance a pleasing effect. Occupying a perfectly level country, these clumps of trees, at an average distance of about three miles apart, indicate the sites of these scattered communities, each having its proportion of wells and tanks. Temples and mosques are extremely rare, and but seldom appear in the picture, the inhabitants being, in fact, anything but a priest-ridden people. Setting aside the capitals of Broach and Jambusar and the smaller towns of Ankleswar, A'mod, Gajera, Kávi, and Hánsot, the general average gives to each village 134 houses and 509 inhabitants. The houses throughout the villages are mostly built of unburnt bricks. Those built of burnt bricks do not average more than ten in a hundred. The 406 villages contain 57,007 houses, of which 49,710 are tiled, 7,265 are thatched, and thirty-two have mud-terraced roofs. The respectable inhabitants have their houses together in courts or closes, the entrance to which is by a gateway common to all the families who belong to the same close. These courts are shut at night, and the cattle driven within are thus protected. The poorer and more degraded classes of people inhabit the outskirts of the village, and live in hovels of the most wretched description." Formerly many of the villages were surrounded by walls of mud or burnt bricks as a shelter against the attacks of free-booters; but now, except for the traces of fortifications in some of the towns, only one alienated village, Adol in the Broach sub-division, remains walled, and its fortifications are said in many places to be broken down. In the richer villages the house of the village shop-keeper is generally one of the largest and best built. His wares are not, as a rule, exposed, as they are in town shops, on tiers of wooden steps rising on each side of the door; but on entering the house, the front room is generally found to be set apart for laying out the grain and other articles offered for sale. Exclusive of fourteen hamlets there were 414 inhabited state and alienated villages, giving an average of 0 29 villages to each square mile, and 846 inhabitants to each village. Of the whole number of villages there were fifty-one with less

than 200 inhabitants; 155 with from 200 to 500; 122 with from 500 to 1,000; sixty-six with from 1,000 to 2,000; ten with from 2,000 to 3,000; six with from 3,000 to 5,000; and two from 5,000 to 10,000. Of towns with a population of more than 10,000 souls there were two. As regards the number of houses there was, in 1872, a total of 96,723, or on an average 71·21 houses to each square mile, showing, as compared with 79,932, the corresponding total in 1851, an increase of 21·02 per cent, and 78·46 per cent in excess of 54,197, the number of houses registered in 1818.[1] Of the total number, 26,947 houses, lodging 98,139 persons, or 28·01 per cent of the entire population, at the rate of 3 65 souls to each house, were buildings with walls of stone or fire-baked brick, and with roofs of tile, cement, or sheet iron. The remaining 69,776 houses, accommodating 252,183 persons, or 71·99 per cent, with a population per house of 3·61 souls, included all buildings covered with thatch or leaves, or whose outer walls were of mud, or of bricks dried only by the sun.

Village communities.

Under the head of land tenures some description will be found of the constitution of the two classes of villages, the simple, or *senja*, and the sharehold, or *bhágdár*, village. At the time of the introduction of the first survey (1811-1820), as far as their relations with government were concerned, there would seem to have been but little difference in the system of managing the two classes of villages.[2] In the sharehold villages the sharers had a representative, or *matádár*, with whom the representative of the state, the collector, fixed in each year the amount of the village contribution, leaving the members of the community to settle among themselves how much each should pay. And so, in the simple villages, the collector settled with the village representative, the *patel;* and the *patel*, on his return to the village, arranged with the body of permanent, or *japti*, cultivators how the amount of the total state demand was to be distributed over the lands of the village.

The headman.

The great change in the revenue management introduced in 1836, under which the amount of each cultivator's payment was fixed by government officers, and not left to be adjusted by the community, lowered the position and authority of the *patel*, or head of the village. On the other hand, the position of the heads of villages has been improved, by making them servants of the state, and by paying them for their services. Under the former arrangement the village *patels* in 'the Broach district, with very few exceptions, neither held land nor received any payment or allowances in virtue of their office. Their succession to the office was entirely independent of government. They held no government document conferring or recognizing their appointment: it was purely a village concern.'[3] Village

[1] Colonel Williams's Memoir, 16.

[2] Colonel Williams's Memoir, 37. The greater part of what follows on the subject of village organization has been taken from Colonel Williams's Memoir. The changes required to make his account agree with the present state of the village population have been made in accordance with information supplied by Chunilál Venilál, Esq., district deputy collector of Broach.

[3] Colonel Williams's Memoir, 38.

Chapter III. Population.

Village communities. The headman.

headmen are now appointed by government, and receive pay in cash and land, varying, according to the size of their village, from 5*s.* 1*d.* (Rs. 2-8-8) to £19 1*s.* 5*d.* (Rs. 190-11-4) a year. The power formerly enjoyed by the *patel* as head of the community and president of the village council for deciding disputes among its members, is in some parts of the presidency said to some extent to have passed into the hands of two classes of men, village schoolmasters and pleaders. In Broach it would seem that schoolmasters have not yet gained much influence among the rural population, and are not to any extent employed in writing petitions to government. On the other hand, the district is said to be 'overridden by pleaders,' whose interest it is to stir up and bring into law courts disputes which, under the former system, might have been settled by a committee of the villagers. Still, however, as a leading man in the village, if he is a kindly man and liked by the villagers, the patel has much influence. Disputes regarding divisions of movable and immovable property, cultivation of fields, roadway to fields, water-courses, points of inheritance, and other matters not involving any question of crime, are still decided by the village council. In religious and social matters the headman of the village takes the lead When sacrifices have to be offered, or rites performed to the goddess *Máta*, for rain, or to put a stop to cholera, the village is represented by its headman. On social occasions, when the daughter of the headman is to be married, or when his father or mother has died, the headman is expected to give a feast to the whole village. At these entertainments all the villagers, but such as belong to the 'impure' castes, sit down to dine at the same time, though, if the community includes more than one caste, the members of the different castes sit in separate groups, the men and women eating at the same time in distinct rows. Some food is given to the watchmen and other villagers of the 'impure' castes, which they take away and eat at their own houses. So, too, the village family priest, except in a village of Bráhmans, would have his share of the dinner given to him in an uncooked state. The headmen of villages are also able to maintain their position of importance by acting as money-lenders to the villagers. On a rough calculation the headmen of about one-eighth of the villages of the district lend money. They are said, as a rule, to be considerate to their debtors. In money matters the headman is also sometimes of help to the villagers, by acting as mediator between a debtor and his creditor. By caste the Broach *patels* are, in Hindu villages, Bráhmans, Kanbis, Rajputs, and Talabda Kolis; in Musalmán villages, Bohorás, Maleks, and Molesaláms; and in one or two of the villages of the Ankleswar sub-division the headmen are Pársis.

The accountant.

The village accountant, or *taláti*, is reported by Colonel Walker in 1804 'to have been amenable to the authority of the headman of the village, in whose charges their expenses were included. Their duties were to register the lots of land, their bounds, rents, and all detail matters of expense in their little communities.' Colonel Williams (1820) describes them as being, by the original village constitution, appointed and paid by the village. And, in spite of the attempt which had been made by the Taláti Regulation (II. of 1814) to raise

them into a position in which they might act as a check to the *patel*, Mr. Elphinstone, in 1821, found that the village accountants were much more closely connected with the *patels* than in Ahmedábád and Kaira, and more likely to conceal than to expose any fraud in the village management; that, in fact, the 'Taláti Regulation' could hardly be said to have been introduced into Broach. So much was this the case that, in 1829, Mr. Williamson, the collector, wrote to government: "There were no *talátis* in the Broach district till they were introduced by me in September 1828." Village clerks are now paid entirely in cash, and their position has been improved of late years by an increase in their salaries. Each of them has charge of a group of villages, extending on an average over six square miles, containing 1,492 inhabitants, and representing a revenue of £1,042 19*s.* 10*d.* (Rs. 10,429-14-8).

Village communities.

In addition to the headman and the accountant, the full establishment of village servants comprises the following members: the village family-priest, *ghámot*; the potter, *kumbhár*; the barber, *hajám*; the carpenter, *suthár*; the blacksmith, *luhár*; the tailor, *darji*; the shoemaker, *mochi*; the washerman, *dhobhi*; the tanner, *khálpo*; the sweeper, *dher*; the scavenger, *bhangio*; the watchman, *wartanio*, or *rakha*.

Other servants.

Bráhmans do duty as village priests, teachers, and performers of ceremonies. They were formerly supported by an assignment of land, *pasáita*. Their claims were settled under the summary settlement Act (Bombay Act VII. of 1863), and they were allowed to remain in possession of their land on payment of a quit-rent equal to one-fourth part (four annas in the rupee) of its regular rental. The village Bráhman acts as family priest to all classes of the Hindu villagers, except to the Dhers, Bhangiás, and Khálpás, whose touch to a Hindu is pollution. He is supported by fixed allotments of grain, by special supplies of uncooked food when caste dinners are given, and by gifts of money on occasions of marriage or investiture with the sacred thread.

The priest.

The services due by the carpenter and the blacksmith are confined to the making and mending of agricultural tools. All other work, such as making or repairing carts or building houses, is paid for by the individual requiring the work to be done. There has been little change in the position of villagers of this class during the last fifty years. The land, *pasáita*, formerly held by them, has been continued to them on payment of a quit-rent of one-fourth of the ordinary rental. As in former times, the villagers continue to pay their carpenter and blacksmith in grain, and in return their ploughs and harrows are repaired. When a villager requires other work to be done,—a cart to be made, or a house built,—he pays the village carpenter in cash at the current rates of labour. If he has to build a house, the villager might engage a skilled carpenter from the nearest town; but, as a rule, he would also employ the village carpenter.

The carpenter and blacksmith.

The village potter supplies the villagers with articles of earthenware, and, where there is no regular waterman, the potter brings

The potter.

Chapter III. Population. Village communities.

travellers their supply of water. He keeps a separate water-jar for each caste, and in this way travellers of all castes, even Bráhmans, can take water from him. Besides his duty as a waterman, he has to smear the floor of the *patel's* office, *chora*, and in some other ways acts as his servant. The potter is paid by the villagers in grain, and, besides, was formerly in the enjoyment of rent-free land. On payment of a quit-rent of one-fourth of their ordinary rental, the potter has been allowed to remain in possession of his lands.

The tailor.

The village tailor does all their sewing for men, and makes boddices for women. The villagers generally pay him a regular amount in grain. As the tailor does no service to the state, the quit-rent on his lands was fixed at one-half of the ordinary rent of the lands. There are more villages without than with a tailor.

The washerman.

The washerman cleans the men's clothes. But, like the tailor, is not found in every village establishment. He is paid in grain by the villagers, and his land has been continued to him on payment of a quit-rent equal to one-half of the ordinary rental.

The barber.

The village barber not only shaves and cuts nails, but is the village surgeon, knowing how to bleed, and in a few cases how to set bones. The barber's wife is commonly the midwife. Perhaps because he is at rest almost all the day, the barber is the man chosen at night to act as torch-bearer when a traveller passes through the village, or when the *patel* is on the track of thieves. He is paid by an allotment of grain; and because of the public services he performs as a torch-bearer, he has been continued in possession of his land on payment of a quit-rent of one-fourth part of its ordinary rental.

The shoe-maker.

The shoe-maker repairs the shoes of the community, and makes up what little leather is required in yoking the bullocks. As the shoe-maker performs no public service, his quit-rent has been fixed at one-half of the ordinary rental.

The tanner.

The tanner and leather-dresser prepares the leather from the hides of the cattle, sheep, and goats that die about the village. As the tanner performs no public service the quit-rent he pays has been fixed at one-half of the ordinary rental. As the skins of animals that die in the village are the tanner's perquisite, he gets but little grain from the villagers.

The watchmen.

The watchmen form the village guard. In the northern parts of the district they are for the most part Kolis. South of the Narbada and in the Broach sub-division they are chiefly Bhils. Except some of the Kolis in Jambusar, who have swords and shields, almost all watchmen are armed with bows and arrows. None of them are provided with fire-arms. Sums of money are often escorted by them from the village to the collector's treasury at the head station. In some villages there are fifteen or twenty watchmen, in others not more than four. The largest establishment of men is generally to be found in the villages of the Jambusar sub-division. The watchmen get no allotment of grain from the villagers. They are paid by the state, partly in cash and partly by the grant of rent-free lands.

Though very poor, the trustworthiness of these men when in charge of treasure is remarkable. Not only are they perfectly honest themselves, but will resist to death any attempt to rob them of their charge.

The scavenger. The scavenger, *bhangio*, removes filth of every description, including night-soil. He is ready, at the call of all travellers, to show the road as far as the next village. He carries letters and messages; he attends travellers on their putting up at the village, showing them where to encamp, giving information of the stranger's arrival, and fetching for them whatever may be wanting. He is in a surprising degree intelligent and active; and though his language at home is Gujaráti, he can, as a rule, speak Hindustáni better than any other man in the village. Some of the Bhangiás cultivate. They get but scanty allotments of grain from the villagers, but generally go the rounds of an evening, about seven o'clock, when dinner is over, and collect scraps. As their services are most useful to the public, the Bhangiás have been continued in the enjoyment of their land free from rent.

The sweeper. Like the Bhangio, the Dher acts as a sweeper; but, unlike the Bhangio, he will not remove night-soil. He also carries letters and baggage and shows boundaries. They sometimes get allotments of grain from the villagers, not so much as barbers, but more than Bhangiás. On account of their usefulness as public servants, the Dhers were allowed to retain their land free of rent.

Special servants. Besides the ordinary establishments, special circumstances sometimes lead villages to engage some of the following men: the *kosia*, or water-drawer, who draws the water from the village well by means of a leather bag and a rope made of green hide, supplied at the village expense. The pair of bullocks used by the *kosia* is furnished in turn by the cultivators. The water drawn is chiefly for the use of the cattle, and falls into a large reservoir adjoining the well from which they drink. Some of these wells and reservoirs are handsome structures. As a rule, these men receive no allotment of grain from the villagers. They sometimes cultivate, and have been continued in the enjoyment of their lands on payment of one-half of the ordinary rental. The *parabio*, or water-supplier, who gets his name from *parab*, a place where travellers are supplied with water, takes his station under a tree on the high road, not perhaps near the village, but the place best suited for his purpose. He has by him several pots of clean cold water, which he gives for drink to all passengers who ask for it. The *parabio* is either a man or an elderly woman of high caste, so that the water may be unexceptionable to all. Sometimes the water supplier is a man of low caste—a Koli, Talávia or Bhil; even then travellers of high caste might take water from his hands so long as he had more than one pot for water. High-caste men generally, however, make themselves independent of water-sellers by carrying with them a metal pot tied by a string. Men of this class hold no village land. Travellers and the people of the villages near generally pay them something. Except in large villages the goldsmith seldom forms part of the village establishment. He formerly worked for the *patel*, but was never paid for his

Village communities.

Special servants.

services in grain. When his help is wanted he receives the current rate of wages in money. The land held by the *soni* was assessed at its full value. The *bárot* or *bhát*, singer and genealogist, is seldom met with as a village servant in the Broach district. The practice of employing men of this class as security for the fulfilment of an agreement has not been in force for more than fifty years. The *bhát* registers births and deaths, and for this work receives cash payments. He will also take food in a Kanbi's or Rajput's house, though he will not eat along with his hosts. The lands formerly held by *bháts* were not granted on condition of service. He was allowed to remain in possession on paying a quit-rent under the provisions of the summary settlement Act. The *ákhun*, or teacher, is a Muhammadan, and was formerly found in Bohora villages. The Bohorás now learn less Urdu than they formerly learnt. The *ákhun* enjoys no rent-free land The *waid*, or physician, administers to the village community, but is found only in large villages, perhaps in one village out of every twenty. The practice of these doctors has fallen off of late years. These men hold no service land. By caste they are generally Bráhmans, though some are Hajáms, and one in A'mod is a Shrávak. The *joshi*, astrologer and astronomer, makes almanacs, assigns dates, duration of seasons, divisions and periods of the year. He names days for sowing or beginning the different field works. No one but a Joshi can cast a horoscope. This is a very elaborate piece of work. The paper, from fifty to sixty yards long, is filled with pictures, and takes the astrologer from three to four months to prepare. But few people can understand what has been written. The higher classes of Hindus, Brahmans and Rajputs, generally have horoscopes, but Kanbis and Kolis seldom have them. Again, Molesaláms employ an astrologer, but Bohorás do not. Men of this class hold no service land. The *bhaváyas*, or strolling players, are found in the establishments of only a few villages They go about in parties of from fifteen to twenty under a headman called *náik*. One of the parties prepares the pieces, but none of the plays are written out. They hold no service lands. *Gosái* or *wairági*, Hindu devotees —In almost every village land has been granted as the endowment of the station, or *math*, of one of these devotees. The *math* is commonly a pleasant open building, and travellers are accommodated and hospitably treated there. "The *gosái* or *wairági*," says Colonel Williams, "is respected and looked up to by all castes of the inhabitants, and often contributes, by his impartial influence, to the preservation of harmony and good order in the community" The above remarks apply also to Musalmán devotees, *fakir*. They are not unfrequently maintained in Hindu villages. And a share of the village land is often assigned for the benefit of the tomb of some Musalmán saint. In all Bohora and other Musalmán villages a portion of the land is set apart for the support of a mosque and to maintain an officer, or *mulla*, to keep the place clean and in good order. The *mulla* also receives presents from the people, an allotment of grain, or the gift of some article of dress. In almost every village one or more Hindu temples are endowed with plots of land. There is generally a council of villagers chosen to see that the proceeds of the land are applied to pay the temple priest, *pujári*, and keep the place in order. Fifty

years ago tanks were often endowed with land to pay for their repair; now there are said to be no lands of this class.

Village communities.

Haváldár, peon, and *máljapti*, bailiff.—In Colonel Williams' time these men were appointed annually by government, but were paid from the villages, and their support formed a charge over and above the government demand. At that time it was the custom to bring the whole crops of the village into one threshing-floor, or *khalí*. These men were stationed in the grain-yard to prevent the removal of the produce till the collector should give orders that it might be taken away. Their power was then considerable, and their perquisites were said to border on exaction. "If these appointments," says Colonel Williams, "were not made to villages which pay their revenues punctually, it would no doubt be a great relief to them." When the system of collecting the crops was done away with, the services of the *máljapti* lost much of their consequence The *haváldár* is, however, still retained, and paid in cash about 8*s* 6*d*. (Rs. 4-4) a month. They now act as messengers for the village accountant, collecting the villagers when the time for paying instalments comes round. They wear a belt as a badge that they are in the service of government, and, when in the village, live in the *patel's* office By caste these men are chiefly Musalmáns They belong to the large towns of the district, and, though expected to do so, they do not spend all their time in the village Besides their pay, they receive some presents of grain from the villagers

The bailiff.

The villagers.

Though most of the villages of the district have on their establishments men of different castes, there are many villages of which the great body of the cultivators belong almost all to one class. Thus, some of the village communities are composed almost entirely of Bráhmans, others of Kanbis, others of Rajputs. There are also Koli villages inhabited by Kolis of the Talabda class, and Musalmán communities, some consisting entirely of Bohorás, others of Musalmáns belonging to other classes With regard to the settlement of questions that concern the whole body of villagers, such as common rights to grazing lands or to forests, there would seem to be little difficulty in Broach. The Broach villages have no village forests, and so are free from this cause of difficulty. With regard to the extent to which one man may make use of the common grazing-grounds there would seem to be no limit. *A* may send fifty cattle if he has so many, and *B* only two if he has not more Dhers, Bhangiás, and Khálpás are not allowed to drink from the village well. In works, such as digging a well, or clearing out a tank, the expense or labour is distributed amongst the holders of lands at so much on the half acre, or *bigha*, in the possession of each man.

With regard to the relations among the different classes of cultivators, the superior position of the shareholders in villages held on the sharehold system, and, in simple villages, the existence of a body of men whose share of the total government demand the village head could not in an arbitrary way increase, would seem to correspond to the distinction between original settlers and cultivators who had joined the community at some later time. In many instances cultivators of one village are engaged in tilling the land of another

Chapter III.

Population.

Village communities.

village. These men are styled *uparwária*.[1] But their social position is not affected by the fact that they cultivate in a village in which they do not live, nor are they called upon to make any payment to the village authorities, or in any way to join the community of the village a part of whose lands they till. One of the most noteworthy changes that have taken place of late years is said to be the extent to which the waste lands of villages and the holdings of the poorer class of cultivators have been taken up by townsmen of capital, Pársis, and Hindus of various castes.

[1] That is, cultivators beyond the boundary of the village (*upar*, beyond, and *wád*, a hedge or limit).

CHAPTER IV.

AGRICULTURE.

Agriculture is the most important industry of the district, supporting 185,904 persons, or 44·06 per cent of the entire population.[1]

Soil.

The geological division of the soils of the district is into light soils and black soils. For agricultural purposes each of these two main classes contains several sub-divisions. The light soil, *gorát gorádu*, or *márwa*, varies in character from the tract of consolidated sand-drift in the south of the district known, from its abundance of peafowl, by the name of *morpana*, to the heavier lands in the neighbourhood of the Narbada, almost merging into the richest alluvial loam, or *bhátha*. Again, the soils that come under the general head of black, or *káli*, range from the rich alluvial deposits on the banks of the Narbada through the regular deep cotton mould, *kúnam*, to the shallower and harsher soils nearer the sea, the *bára* lands yielding little but wheat. The different varieties of black soil together occupy about twelve-sixteenths of the whole culturable area of the district. The staple crops grown on the black soils are rice, cotton, wheat, and millet, *juwár*. Of the four-sixteenths remaining for the light soil, three-sixteenths are the ordinary varieties, *gorát* and *gorádu*, yielding cereals, pulses, and garden stuffs; and one-sixteenth is the fresh rich alluvial deposit known as *bhátha*, in which products of all kinds, especially tobacco and castor-oil plants, are raised.

Culturable land.

The state, or *khálsa*, villages of the district contain 933,764 acres, of which 193,886 acres, or 20·76 per cent, are alienated, paying only a quit-rent to the state, and 243,556 acres, or 26·08 per cent, are unarable waste land, including the area of village-sites, roads, rivers, reservoirs, and the tracts of salt land, or *khár*, liable to be flooded at specially high tides. The total area of state arable land is, therefore, 496,322 acres, of which 458,780 acres, or 92·44 per

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[1] This total (185,904) is made up of the following items —

1	Adult males engaged in agriculture as per census of 1872	65,871
2	Wives of ditto calculated on the basis of the proportion the total adult female population of the district bears to the total adult male population	59,958
3	Children of 1 and 2 calculated on a similar basis	60,075
	Total	185,904

This calculation is necessary, because the census returns, including many of the women under VII (miscellaneous), show a total of only 38,613 under the special head adult agricultural females.

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cent, are occupied, and 37,542, or 7·56 per cent, unoccupied. About 2,633 acres of *khár* land have been taken up by private individuals for reclamation. These lands have been leased by government, on special conditions, rent free for the first ten years, and for the twenty following at yearly rents varying from 6*d.* to 1*s* (4 as to 8 as.) an acre. When thirty years have expired, these lands will be subject to the usual survey rates.

Size of a 'plough of land.'

In this district a 'plough of land'—that is, the area that can be tilled by a plough drawn by one pair of oxen—is held to vary from twenty acres in black soil to nine acres in the lighter varieties Careless cultivators who, instead of concentrating their resources on a small farm, prefer to run over a large area, can with a single pair of bullocks till, especially in wheat land, as much as thirty acres of black soil. This cannot, however, be considered the generally approved system. The mean average per plough in Ankleswar is seventeen acres, while in Wágra, where nearly all the soil is black, and much of it poor black, the average area per plough stands as high as twenty-eight acres.

Stock.

According to the collector's administration report for 1874-75, the stock in the possession of the cultivators of state, or *khálsa*, villages amounted during that year to 27,192 ploughs, 20,081 carts, 67,570 bullocks, 58,142 buffaloes, 15,789 cows, 3,211 horses, 33,276 sheep and goats, and 1,809 asses. Agricultural oxen are of two kinds,—the home-bred, or *talabda*, bullock, a small slight-bodied animal, worth from £6 to £12 (Rs. 60 to 120) a pair, and the large-boned muscular ox of northern Gujarát, worth from £15 to £20 (Rs. 150 to 200) a pair.

Details of produce.

From the agricultural returns for the year 1874-75, it would seem that of 457,896 acres,[1] the total rent-yielding area, 63,606 acres, or 13·89 per cent, were fallow or under grass. Of the 394,200 acres under actual cultivation, gram crops occupied 170,060 acres, or 43 14 per cent, of which 78,601 acres were under Indian millet, *juwár* (Sorghum vulgare), 50,837 under wheat, *ghau* (Triticum æstivum); 20,359 under rice, *dángar* (Oryza sativa); 16,087 under millet, *bájri* (Holcus spicatus); and 4,176 under *kodra* (Paspalum scrobiculatum). Pulses occupied 35,780 acres, or 9·07 per cent, of which 14,250 acres were under *tuver* (Cajanus indicus), and 21,530 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); and peas, *watána* (Pisum sativum). Oil-seeds, including castor-seeds, *divela* (Ricinus communis), and *tal* (Sesamum indicum), occupied 936 acres, or 0·22 per cent. Fibres occupied 176,261 acres, or 44·71 per cent, of which 176,233 acres were under cotton, *kapás* (Gossypium indicum), and twenty-eight under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 11,434 acres, or 2·9 per cent, of which 2,421 acres were under tobacco,

[1] These figures are taken from the collector's huzur form No. 17 (H). The discrepancy between 394,200 acres, the whole area shown under actual cultivation, and 394,471, the sum of the totals of the five classes included under this head, is due to the fact that 271 acres were twice cropped.

tambáku (Nicotiana tabacum); 552 under indigo, *gali* (Indigofera tinctoria); 127 under sugar-cane, *serdi* (Saccharum officinarum); and 8,334 under miscellaneous vegetables and fruits.

The following statement[1] shows the area of government assessed land cultivated with crops in 1859-60 and in 1872-73 :—

Contrasted cultivation statement, 1859-60 and 1872-73.

Contrasted Cultivation Statement for the years 1859-60 *and* 1872-73.

Description of Crop.		Acres cropped in 1859-60	Acres cropped in 1872-73	Increase per cent	Decrease per cent
Grain crops	Rice (in husk)	14,240	20,940	47·15	
	Wheat	6,726	63,102		5·99
	Indian millet, *jvári*	81,634	83,015	1·61	
	Common millet, *bájri*	11,416	16,869	47·76	
	Common grain	4,172	8,389	98·68	
Pulses	*Tur* and gram	4,611	6,892	90·03	
	Common pulses	11,704	21,921	86·8	
Oil seeds	Sweet oil seed	7,870	8,746	11·00	
	Castor oil seed	1,977	1,154		41·63
Fibres	Cotton	114,783	1,28,137	9·22	
	Hemp		19		
Dyes	Indigo	79	361		62·13
	Safflower		170		
Miscellaneous crops	Vegetables	6,645	14,46		72·61
	Condiments		144		
	Sugar-cane	580	1,20		79·1
	Tobacco	1,491	1,368		8·24
	Fruit		241		
Fallow and grass land		61,858	67,133	8·2	
	Total	418,554	4[illegible],257	9·96	
Deduct twice cropped land			447		
	Net	418,554	4[illegible],810	1·85	

During the thirteen years between 1859-60 and 1872-73, 41,266 acres of waste land were taken up for cultivation. A detailed comparison of the two years shows a falling off under the following heads: wheat is less by 2,624 acres; oil-seeds by 803 acres; indigo by 398 acres; sugar-cane by 660 acres; and vegetables and condiments by 4,825 acres. On the other hand, there has been a remarkable extension of 17,601 acres in the area devoted to other cereals than wheat, of 13,411 acres under pulses, and of 13,354 acres under cotton; there has been a slight decrease, 123 acres, in the area under tobacco, while in 1872 there were 5,274 more acres returned as fallow and grass land than in 1859.

[1] The produce returns obtained from village officers show, for the year 1872 in government land a value per acre of £1 15*s.* 8½*d* (Rs 17-13-8), calculated at the current market rates. This gives, for the whole produce of the government land of the district, an estimated value of £820,948 (Rs 82,09,480). To ascertain the value of the total outturn of the district, the value of the crops grown on alienated lands must be included. For these lands there is no special return of produce. But on the basis of the proportion that the area of alienated lands bears to the area of government lands, the value of their agricultural produce may be calculated at about £336,589 (Rs. 33,65,890), or, for the whole district, an estimated out turn of £1,157,537 (Rs. 1,15,75,370). These estimates are given in a foot note, as, from the nature of the subject, and the way in which the information is obtained, but little trust can be placed in the accuracy of the returns.

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The following are some of the details of the cultivation of the chief varieties of crops :—

Cotton cultivation.

Cotton.—Among the crops of the district cotton holds the first place. Of 394,200, the total area of state land cultivated in 1874, 176,233 acres, or 44·7 per cent, were devoted to cotton. As compared with 1859-60, the returns for 1874 show an increase of cotton cultivation amounting to 31,450 acres, or 21·72 per cent. Cotton in seed, or raw cotton, is called *kapás*. Two varieties are grown in Broach, the annual of black soils, *lália*, and the triennial of light soils, *jária*.[1] For the cultivation of cotton the black soil is most commonly used. But the plant, when raised in lighter soils, is generally much larger, and its staple equally good with the staple of cotton grown in black soil. It is not sown oftener than once in three years. Cotton of either kind is seldom grown by itself. Rice, or *kodra* (Paspalum scrobiculatum), is usually sown with it in the same field. In black soils, to break through the regular rotation of crops in favour of cotton, and grow cotton more than once in three years, would be attended with certain prospective loss.[2] A second year's crop of cotton taken from the same field does not yield more than one-half the first.

In preparing them for sowing, cotton seeds are rubbed on a frame over which cocoanut-fibre cords are tightly stretched. The seeds are then wetted in muddy water, and immediately afterwards plunged into wood ashes. These ashes separate the seeds from each other, and so they are more easily dropped one by one into the ground. Before the seed is sown the land is ploughed, if possible, twice, once on the first rain-fall, and a second time a fortnight after. Manure is not generally used, as the native cultivators believe that, unless put into the soil in the preceding year, manure does not increase the outturn of cotton. When the land is ready, the seed is sown, at the rate of ten pounds to the acre, from a drill plough furnished with three tubes or feeders.[3]

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[1] In addition to the varieties of cotton mentioned in the text are two others, the *roji* and the *narma*. The *roji* is said to be an inferior variety of the plant, grown chiefly in the Baroda territory, and brought into the Broach district with the view of being mixed with the regular Broach cotton. This mixing with *roji* is said to be of late years one of the most prevalent forms of adulterating Broach cotton. The other variety, *narma* or *dev kapas* (Gossypium religiosum), would seem to be grown only to a small extent, chiefly near temples and the dwellings of ascetics. It is used in making the caste thread (*janoi*). "The *narma* cotton," says Mr. A. Burn, "is a perennial plant, lasting for four or five years or more. It grows in every kind of soil; but attains perfection only in the light sandy, *gorát*, lands. The wool is fine, silky, of considerable strength, and fully an inch long. Hedgerows, gardens, and groves of trees about the abodes of devotees and temples, are the places where the plant is found. Muslins and turbans are made from it. Since the introduction of European cloth, the culture of this cotton has almost entirely ceased. Its yield per acre is estimated at one hundred pounds of clean cotton in the first year, and in the second at from three to four hundred pounds. The great hindrance to its cultivation is the fact that it requires protection throughout the year. The price of this cotton in the market at Broach is always double that of the common country article. But there are never more than a few pounds procurable."—Jour. R. A. Soc., Ben., Vol XI., 290.

[2] Colonel Williams's Memoir, 42.

[3] Mr. Davies's Answers to Mr. Willoughby's Questions, 1850.—East India Cotton. Blue Book, Vol. III. (1857).

Though irrigation is now never made use of in growing cotton, this would not seem to have been the case in former times.[1] In 1788, Dr. Hové, a Polish traveller, in some fields near A'mod, came across certain large basins filled with water. These he at first supposed to be natural, hollowed out by the force of the stream in time of flood, and of such a depth that, it seemed to him, the planters did not find it worth their while to level and cultivate them. Afterwards he found that the waters of the Dhádhar were during the time of the floods led by narrow channels into these basins, which were artificial, and made with great labour. In January there were still fresh marks on the plantations that they had lately been watered, "which convinced me," he adds, "that all these varieties of tanks, pools, basins, and ditches, that I have met with, were designed for the nourishment of cotton at the time required." It does not seem clear why the practice of irrigating cotton has been given up. In 1855, Mr. Inverarity, then collector of Broach, wrote that, in his opinion, water supplied artificially weakened the fibre of the cotton and reduced its value. He does not state on what experience this opinion was founded.[2]

The time when a crop of cotton ripens varies according to the season. After a light fall of rain the cotton harvest is early; after a heavy fall it is late. If the rain-fall has been light, picking begins about the 20th of December, and is over by the 10th of February. If the rain-fall has been heavy, the pods do not burst till the middle of February, and the cotton is not all housed till the last week in April. In an average season the picking begins about the close of January and ends in March. Before all the cotton is secured, the field has generally been thrice picked, with a fortnight's interval between each picking. The average proportion in weight of seed, *kapásia*, to cleaned cotton, *ru*, is one-third of cleaned cotton to two-thirds of seed. The proportion, however, varies. In the best soils, and in the most favourable years, forty-eight pounds (a *dhadi*) of raw cotton will yield eighteen pounds of clean cotton, or wool, to thirty pounds of seed, while the raw cotton of inferior soils will yield only fifteen pounds of wool to thirty-three pounds of seed. Before the time of picking some of the cotton grows overripe, and, falling to the ground, takes up dust and leaf. In this way a portion of the cotton is damaged before it leaves the grower's hands. But the intentional mixture of dirt and earth to add weight to the cotton is not the work of the cultivator, but of the dealer, *wakhário*. Cleaned cotton is divided into two classes,—the better, *tumel*, and the inferior, *rási*, or poor. What amount of cotton an acre will produce is a question which has been answered in many ways with no apparent uniformity. A field may in ten different years yield ten different quantities, each most carefully tested and the results honestly given. An acre of superior black soil, *kánam*, tilled by a Kanbi or Bohora in his own way, will, according to the season, yield from 128 to 192 pounds of clean cotton. The same field handed over to a Koli or Rajput might,

[1] Tours for Scientific Research.—Bom. Govt. Sel., XVI. New Series, 44 and 90.

[2] Collector of Broach to Revenue Commissioner, N.D., 346, dated 11th June 1855.

C Cotton cultivation.

perhaps, not yield more than half this amount; to a Musulmán (Bohora excepted) the return would be still less. Mr. Stormont, the superintendent of cotton experiments in Broach, wrote in 1869: "A good fair crop, in good Broach soil, means 400 pounds of seed-cotton per acre, two-thirds of which will be seed and the remaining third (133 pounds) clean cotton. As special cultivation, coupled with application of manure, will give results superior to the above, so the outturn from bad and careless farming will fall much short of it. The finest crop of cotton I ever saw was in 1869-70, in the Jambusar sub-division, not far from the village of Dehegám. It covered only half an acre; and the owner afterwards told me that the produce weighed about 360 pounds (nine Broach *mans*), and that the seed-cotton yielded 140 pounds of clean cotton, or at the rate of 280 pounds of clean cotton to the acre." But this was an unusual crop. Mr. J. M. Davies, when collector of Broach in 1848, estimated the average produce of the district, in good, bad, and indifferent seasons, at eighty pounds of clean cotton per acre. Considering the extent of inferior black soil, and that the area of poor and rich lands tilled by peasants of little skill exceeds that of superior soils in the hands of good cultivators, this estimate may, in the opinion of the present superintendent of survey, be accepted as a fair average of the district, as a whole, for a series of years.

Profits.

The following statement of the cost and profit of cotton cultivation shows the results of a good and of a bad season in a superior and in an average field:—

Statement showing the results of Cotton cultivation.

Character of crop.		Produce in pounds per acre		Value of crop per acre	Cost of cultivation in rupees.							Net profit			
Land.	Season	Raw cotton.	Clean cotton		Labour	Manure	Seed.	Rental	Total						
		Lbs.	Lbs	Rs a	Rs	Rs	Rs.	Rs	Rs a.	£ s d		Rs.	a	£ s.	d.
Superior field .	Good .	560	192	40 3½	9	5	3/16	7	21 3	2 2 4½		19	1/3	1 18	0½
	Bad ..	360	128	26 4	9	5	1/16	7	21 3	2 2 4½		5	1	0 10	1½
Average field ...	Good .	240	80	17 8	6		1/16	3	9 3	0 18 4½		8	5	0 16	7½
	Bad	150	40	10 15	6		8/16	3	9 3	0 18 4½		1	12	0 3	6

Cotton improvement.

The attempts, on the part of government, to improve Broach cotton have been of two distinct kinds. Government has tried to add to the value of the cotton by improving the process of tillage, and it has tried, by preventing adulteration, to secure that the cotton should realize its proper price. Though raw cotton was sent to England from India as far back as 1783,[1] it was not till the rupture between England and

[1] Dr. Royle's Culture of Cotton, 9. The average export of raw cotton from Broach between 1773-1783 was 20,000 bales, at Rs. 35 a bale. The whole of this cotton went by Surat and Bombay to Bengal and China.—Forbes' Oriental Memoirs, II., 223.

America in 1803 that India became important in Europe as a producer of the raw material.

Cotton improvement. In 1812.

Ordinary Indian cotton in 1812 was worth only 9*d.* a pound in London, while Bourbon fetched 2*s.* a pound, and the high rates of freight[1]—at that time £22 per ton (1,375 pounds), that is, equal to a charge of 4*d.* a pound—was an additional inducement to introduce a better class of cotton into India. Under these circumstances, in 1811 a supply of Bourbon seed was sent from England to Bombay, and in the next year (1812) a second consignment was forwarded. This Bourbon seed was distributed to the collectors of Broach and Surat, with instructions to sow a portion of it on account of the honourable company, and hand over the rest to cultivators likely to give the seed a fair trial. But before the close of the year 1812, American trade with England was renewed, and 'Indian cotton remained a ruinous and unproductive burden both upon the company and the private importers.' The sowing of Bourbon seed in 1812 would seem to have failed, and no further steps to improve the system of cotton tillage appear to have been taken for several years.

The efforts that government have since made extend over three periods. The first series of attempts lasted seven years, from 1829 to 1836; the second nine years, from 1840 to 1849; and the third, begun in 1868, has now been in progress for seven years. The objects of these experiments have been three-fold: i, to promote the growth of foreign varieties of cotton; ii, to improve the mode of growing and picking the native cotton; and iii, to introduce new machinery for separating the cotton from its seed. The sequel shows how far each of these objects has been attained.[2]

1829-1836.

The first set of experiments was begun in 1829 by starting a cotton plantation in Broach. In charge of this farm was Mr. Finney, a gentleman chosen for his knowledge and experience in indigo planting. Mr. Finney did not reach Broach in time to grow any cotton in 1829. Some of the ordinary local variety was carefully but expensively cleaned, and though in England it fetched 6½*d.* a pound when the best Broach was at 5¼*d.* a pound, the consignment was sold at a loss. Before he had been at Broach for a year Mr. Finney died, and was succeeded by Mr. Martin. This gentleman, for the season 1831-32, took a farm of 1,500 acres at Dánda, in the A'mod sub-division. He induced cultivators to till a part of this land by contract, in the hope that they would adopt in their own fields any improvements they might notice on the land of the farm. The result disappointed the superintendent. He found that, in spite of greater care and heavier cost, his crop was no better than the crops of his neighbours. He thought that the existing method

[1] Chapman's Cotton and Commerce of India, 63.

[2] The greater part of this summary of the government efforts to improve Broach cotton has been taken from Mr. Cassels' work, 'Cotton in the Bombay Presidency.'

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of cultivating could not be improved upon. "The implements used," he wrote, "are well adapted to the purpose, and each peasant, on account of having but a small plot of land to look after, can give it more care and attention than any hired servant would be likely to pay." At the same time, Mr. Martin was of opinion that much good might be done by paying more attention to clean picking. And during the succeeding season (1832-33) he was allowed, at his own request, to let out 1,100 acres of his farm and take the rent in the finest uncleaned cotton. This cotton he was to clear of seed by using the saw-gin. He was authorized to experiment with foreign seed on the remaining 100 acres of the farm, and to purchase and clean with saw-gins £1,000 (Rs. 10,000) worth of the best local cotton. To carry out these plans warehouses were built, and small advances granted to the cultivators for current expenses. So far (1832) the attempt to grow exotic varieties had failed. The plants that came up were destroyed by an insect, and the cultivators would not sow the American seed offered to them. The establishment was reduced, and the superintendent wrote (1832): "All our attempts to grow exotic cotton only proved that the foreign varieties will grow, but not that they will afford a reasonable profit to the cultivator." "The whole," adds Mr Cassels, "had been mere costly garden experiments, producing small results at large expense." There was also a gradual deterioration in the quality of the growth of the foreign cotton in each successive year. As the other objects for which the farm was established had equally failed, it was in 1836 decided to maintain it no longer. Little had been done, it was said, in the way of introducing the foreign plant, nor any progress made in inducing the cultivators to adopt a more careful method of picking the cotton and preparing it for market. Though the farm was closed, some attempt was made to improve the modes of cleaning and packing the cotton. A large house and garden, the Amjad Bág near Broach, was in 1834 granted rent-free to Merwánji Hormasji,[1] 'who had served for several years, with distinguished credit, as native agent for the provision of the company's China and British cotton investments.' Mr. Merwánji engaged to establish screws and warehouses for packing and storing cotton, and is said to have, to some extent, secured greater care in the operations of picking and cleaning. This was, however, a hard task, as at that time the state of the market was such that dirty cotton, relatively to the cost of producing it, gave a better return than clean. Before five years were over Mr. Merwánji would seem to have abandoned his attempts. One or two other measures were about this time taken with the view of helping the Broach cotton trade. The cess on native 'cleaners,' *charka*, was removed in 1836, and in 1839 government ordered the local authorities to take steps for putting a stop to the cotton pit system of storage. It appears, however, that it was not found possible to carry out the wishes of government in this matter. The first series of attempts to improve the position of Broach cotton would, therefore, seem to have ended in failure.

[1] Royle, page 31.

Two years later, in 1838, 'the periodical cry' from public commercial bodies was again raised that some further steps should be taken to improve cotton culture in India. Accordingly, in spite of the result of the first experiments, the court of directors in 1839 made arrangements to engage the services of twelve American planters to come to India to show the natives an improved way of growing and cleaning cotton. Three of these gentlemen arrived in Bombay in September 1840, and all went to Broach. Here the planters were placed under the superintendence of Dr. Peart, and the Amjad Bág, the building granted in 1834 to Mr. Merwánji Hormasji, was hired as a factory. The objects of these experiments were the same as those proposed in 1829; but as the planters did not arrive till September, the first year of cultivation passed without anything being done in the way of growing foreign varieties. When the crops were ripe, and picking was begun, the planters found that the natives had nothing to learn from them in the matter of picking, and that the stimulus of a small additional price was all that was required to make them produce well-cleaned seed-cotton. Towards the third object of the experiment, the introduction of the saw-gin, in the first season (1841) nothing could be done, as the machinery had not arrived from England Before the next rains (1841) 175 acres of land, approved by the planters, were secured. Of the whole area, 125 acres were of light soil in the villages of Aldharwa and Asuria, and fifty acres of the best and most productive black soil at Kukarwára, about four miles west of the town of Broach. The planters tried to plough before the rain fell, but failed. They then took to the native way of cleaning and preparing the land. Almost the whole of the fields were sown with New Orleans seed. The plants vegetated well; but when the first rain ceased, they were blighted both in light and black soils, though alongside the local cotton was unhurt. An irrigated plot of Sea Island cotton looked well for a time, but before harvest it was destroyed by insects. The local cotton was grown in American fashion on high and broad ridges thrown up by the plough The outturn was not, however, superior to cotton grown in the ordinary Broach way. At the end of 1841 the three American planters left Broach. The place of those who had left was in 1842 supplied by one of the band of planters, Mr. Hawley, who, originally appointed to Madras, volunteered to come to Broach. Mr. Hawley was put in charge of the experimental farm at Broach under Dr. Burn, who had by this time succeeded Dr. Peart as superintendent of experiments in Gujarát. On his arrival, Mr. Hawley is reported to have been much struck by the native drill husbandry of Broach.' The saw-gins at last (1842) arrived, and seventy-one bales of cotton were ginned. The first work of the saw-gins would seem to have been, on the whole, favourable. Dr. Burn thought the cotton cleaner than if it had passed through the ordinary machine. And in England the verdict of the spinners was, that, though much cut in ginning, the improvement in cleanness more than made up for the injury to the staple.

In this season (1842-43) another attempt was made to rear exotic cotton. Five plots of land in different parts of the district, aggregating about forty acres, were sown with New Orleans, Sea Island, and

Chapter IV. Agriculture. Cotton improvement. 1840-1849.

Bourbon seed. There is no detailed statement of the result of this year's experiments; but they were not very successful, as the produce only amounted to 457 pounds, or 11¼ pounds per acre. Disappointing as this out turn must have been, it was a less complete failure than the results of the next season (1843-44), when, except the Bourbon, which produced one bale, the foreign varieties appear to have entirely failed. It was by this time again admitted that the climate and soil of Broach were not suited to the growth of American cotton. So in the next year (1844-45) Mr. Hawley devoted himself to trying to improve the native way of growing their own cotton. In this, again, he was disappointed. At the end of the season, he wrote, "the crops now standing in the Kukarwára farm will not be better in any respect than some of the cotton on the fields near, which has not cost half the labour." In 1845-46, eighty-five acres were cultivated with native cotton, but only yielded at the rate of forty-two pounds of cleaned cotton per acre (70½ pounds *kapás* per *bigha)*. This sold at from 4¾*d.* to 5¼*d.* a pound, but left a loss. In the same year (1845) the land at Karod was given up, and in the following season (1846) Dr. Burn, disappointed with the results of his experiments, resigned his appointment. In the January following (1847), Mr. Mercer, one of the American planters who had introduced hand saw-gins in the Southern Maratha Country, was put in charge of the experiments at Broach. Under Mr. Mercer's advice the farm at Kukarwára was given up, and the efforts of the superintendent limited to overcoming the cultivators' objections to the introduction of saw-gins. Shortly after this Mr. Mercer left the country, and was succeeded by a Mr. Simpson from Khándesh. But Mr. Simpson's attempts to bring the saw-gin into favour would seem also to have failed. During the next year (1848) the gins appear to have been idle, and an offer to take over the machinery, made by Mr. Landon, 'a gentleman well acquainted with the cotton cultivation of the southern states of America,' was accepted. Mr. Landon was allowed the use of the hand gins; but his efforts were no more successful than those made before, chiefly, it is said, because the hand gins required harder work than the native cleaner. "No native of the district," wrote Mr. Landon in 1849, "has shown the slightest wish to own a gin; they are lying idle and unnoticed, useless and unprofitable." In this year (1849) one more attempt was made by Mr. Landon to introduce Georgian and New Orleans seed acclimatized in Dhárwár. The fields looked well at first, but the rains were very heavy, and though the native plant picked up afterwards and yielded a good crop, the foreign variety failed. One patch of New Orleans grown in one-fourth of an acre of garden land, a small favoured spot, yielded thirty-three pounds of clean cotton. Unsuccessful on all sides, government thought 'it would be a waste of public money any longer to continue the expensive experiments.' The establishment, accordingly, was broken up, and the free use of the machinery granted to Mr. Landon. Mr. Cassels[1] thus sums up the results of the second series of experiments:

[1] Cotton in the Bombay Presidency, 59.

"Some kinds of exotic cotton, such as New Orleans and Bourbon, yielded occasionally a small crop when cultivated as garden plants with great care and at great expense, but they never escaped partial damage from the effects of the season. When the same kinds were cultivated on a larger scale, the crop invariably failed. That it is possible to raise garden samples is not doubted, but that foreign kinds can be raised at prices that will repay the cultivator has not been shown. It was proved that, by double the care and attention, and more than double the expense of the native cultivation, a larger yield and better and cleaner quality might be obtained from the indigenous cotton than the cultivators can produce, but not sufficiently so to repay the additional outlay. And, finally, that the native cotton, when cleaned by the American saw-gin, was generally injured in its staple."

1849-1874.

Though, for the next nineteen years, there was no systematic attempt on the part of government to improve Broach cotton, experiments in the growth of foreign varieties were from time to time undertaken by local officers. After the regular operations came to an end in 1849, small sowings of New Orleans cotton were continued for two or three years. These ended in 1852-53, when five acres were sown without, apparently, any return. In 1858 some packets of New Orleans seed were presented to the collector of Broach by a Pársi merchant. With some difficulty cultivators were persuaded to sow this seed. No plants, however, came up, and two years later, with this failure fresh in their minds, the collector could not find any cultivators willing to sow New Orleans cotton seed received from the Manchester cotton-supply association. The appointment, under the Cotton Frauds Act (No. IX. of 1863), of officials specially interested in the state of cotton, naturally led to fresh attempts once again to naturalize foreign varieties of the staple. In 1866-67 a few experiments were tried on a limited scale, and in the following year (1867-68) Egyptian cotton was grown with some success. Mr. Hope, then collector of Surat, obtained sanction for the expenditure of £1,000 (Rs. 10,000) on the culture of foreign cotton, and a special officer, Mr. Carrel, an inspector in the cotton frauds department, was appointed to supervise the experiments.[1] The season proved unfavourable, and the attempts would seem to have failed.[2] In the same year, 1868, Dr. Forbes, then cotton commissioner, in a letter to government, stated that those experiments had in his opinion failed, because the work of cultivating had been attempted by persons without the necessary practical knowledge of agriculture.[3] He suggested, therefore, that government should obtain skilled gardeners who had received a scientific training in England. Government in 1868 approved [4] of this proposal, and arrangements were

[1] No. 37 of 1868, dated the 9th January 1868.—Government Resolution No. 295, dated 24th January 1868.

[2] Mr. Hope's No. 2003 of 1869, dated 9th September 1869.

[3] Cotton Commissioner's No. 49, dated 14th March 1868.

[4] Government Resolution No. 1296, dated 2nd April 1868.

Chapter IV. Agriculture. Cotton improvement. 1849-1874.

made for engaging skilled gardeners in England. Mr. Shearer, the superintendent of experiments in Dhárwár, was sent to Broach, and about eighteen acres of land were taken up in different parts of the district. This land was rented from the occupants, who engaged to cultivate their fields under the direction of the superintendent. In July 1868 Mr. Stormont arrived from England, and came to Broach to take Mr. Shearer's place. The attempts to grow foreign varieties did not, however, succeed. "They proved beyond question," wrote Mr. Stormont, "that exotic cotton is not suited for cultivation in Broach."[1] In the following year (1870-71) only a trifling quantity of foreign seed was sown, enough to yield a few flowers for the purposes of hybridization. The operations of this season were chiefly confined to improved cultivation and selection of native varieties of seed. The result was so far successful that the cultivators 'bought up every pound of spare seed, and sowed it in their own fields' In the monsoon of 1871 thirty acres were put under cotton near Broach. Three kinds of manure were experimented with, but, except in the case of town-sweepings, which are said to have made the cotton plants run too much to wood, with no immediate result. In 1872 some fields were again taken up and sown with selected indigenous seed. Small patches of exotic varieties were also grown for botanical purposes. One-sixth of an acre devoted to Georgian seed did well, yielding at the rate of 120 pounds of clean cotton per acre Of the fields sown with seed of native varieties one fertilized with nitrate of soda, and, sown on the ridge system, yielded over 200 pounds of clean cotton. The cost of cultivation was, however, very heavy, weeding alone coming to £1 3*s.* (Rs. 11-8) per acre[2] Since 1873 no further experiments have been made in growing cotton in Broach.

Results.

So far it would seem that, of the three objects for which experiments were undertaken, the first two—the introduction of foreign seed, and the improvement of the native system of growing and picking cotton—have failed. With regard to the introduction of foreign seed, the experiments would seem to have shown that, except for purposes of hybridization, there is little chance that future efforts to cultivate foreign varieties will succeed in Broach The latest experiments would seem to bear out Dr. Royle's opinion,[3] that the cause of failure is the great heat, accompanied with drought, that succeeds the moisture of the rainy season. The improvements attempted in the culture of the native cotton were of two kinds, better tillage and more careful picking. As to tillage, though the planters soon gave up using their own implements and peculiar modes of cultivation,[4] it is now admitted that the land in Kukarwára, ploughed and ridged by them after the American fashion, for many years after the planters gave it up, yielded better crops than it had done under the ordinary native cultivation. As to the picking of the cotton

[1] Mr. Stormont's No. 90, dated 28th July 1871.

[2] Mr. Stormont's report No. 91 of 1873.

[3] Dr. Royle's Cultivation of Cotton, 235.

[4] Survey report of the Broach sub-division, 1871, 38.

there would seem to have been from the first but little to teach the Broach cultivators, who, when clean cotton has been at a premium, have always been able to offer the staple carefully picked and well cleaned.[1] In the matter of ginning, on the other hand, a complete change has taken place. The saw-gins that succeeded so well in Dhárwár, proved a failure in Broach; but a gin, known as the Platt Macarthy roller-gin, introduced in 1864, has during the past ten years entirely supplanted the old native 'cleaner.'

Cotton adulteration.

The adulteration of cotton in Broach, and the efforts made by government for its suppression, should, perhaps, strictly come under the head of trade; but as the adulteration of the raw material is closely mixed up with its production, it seems better to give in one place the details on both subjects.[2]

That adulteration of cotton was practised in Broach nearly a century ago, appears from the following extract from Mr. Forbes' Oriental Memoirs (II., 154): "I had (1773-1783) generally large commissions annually to purchase cotton at Broach for the Bombay merchants, to be sent from thence to Bengal and China. For this purpose, the English gentlemen at Broach made their contracts with the cotton-dealers, who received the cotton from the villages every evening, and early on the ensuing morning weighed the cotton gathered on the preceding day to the brokers, by whom it was immediately packed in bales for foreign markets. As these brokers and native cotton-dealers of every description play into each other's hands, and use all possible means to cheat a European, we found it very difficult to counteract their cunning. One of their principal frauds was that of exposing the cotton spread out on cow-dung floors to the nightly dews, and then weighing it early next morning in a moist state to the receivers. This occasioned great loss in weight, a *khándi* containing, when the cotton dried, 560 instead of 784 pounds. To prevent this loss, I often, at daybreak, paid unexpected visits to at least 100 of these small cotton-merchants, when, by placing a handful of the cotton taken up indiscriminately from the floor upon the cheek, it was easy to discover whether it had been exposed to the dew to increase its weight. Like Gideon's fleece, spread on the floor with an honest dealer, the cotton was perfectly dry; if in the hands of a rogue, you might wring out a bowlful of water." In spite of Mr. Forbes' efforts, it would seem that in 1777 Broach cotton reached Bombay in so bad a state that the government of Bombay agreed that it was very necessary to make some regulations to prevent all abuse, and to restore

[1] On three occasions, when it was cleaned and prepared with special care, Broach cotton is reported to have been classed equal to middling American cotton In 1810 one consignment was in England said to answer well as a substitute for the bowed upland Georgia cotton; in 1849 another parcel was declared by Liverpool brokers to be quite equal in staple and fibre to good middling boweds; and in 1869 the award of the committee of the local exhibition was that the best samples of indigenous cotton 'valued (equal) to middling New Orleans in every respect.'

[2] The greater part of this section is compiled from Major Moore's report on East India Cotton, 1872.

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Cotton adulteration.

the cotton to its former standing;[1] but the business 'requiring much consideration, was deferred till a future day.' No improvement would seem to have taken place in the character of the cotton sent from Broach, for in 1803, and again in 1810,[2] the directors complain of the 'foulness, dirt, and seed mixed with the cotton.' A few years later private European traders began to have dealings with the Broach merchants,[3] and, as the new class of traders generally sent orders from Bombay, the local dealers had more chance of escaping detection in fraudulent practices than was the case when the purchasers bought through a European commercial agent resident at Broach. So Mr. Vaupell,[4] who knew Gujarát well from 1818 to 1826, states that during that period the quality of the produce had deteriorated considerably, more particularly in respect of cleanliness.

Regulation III., 1829.

In 1829 an Act was passed[5] to provide for the punishment of frauds committed in the packing and sale of cotton. The frauds specified in this regulation were: i, false packing, that is, mixing good and bad descriptions of cotton in one bale; and ii, mixing other substances with cotton. For some years after the passing of this Act, there would seem to have been little complaint of adulteration; but in practice the Act failed. It left the work of prosecuting offenders to the parties injured by the fraud. This, however, was a course which 'even European merchants did not dare to take.'[6] The Act, therefore, fell into disuse, and within the next ten years adulteration had again become general. The different modes of fraud then practised at Broach are thus described in the report of the Bombay chamber of commerce for 1840[7]: "The village dealer damps the cotton and mixes it with seed; and the town dealer, or merchant, takes out the fine Broach and puts in its stead short-stapled Málwa cotton; lastly, on their way to Bombay, the boatmen break open the bales, cut out as much cotton as they can with safety, and make up the weight by putting in stones and salt water."[8] Nothing, however, would seem to have been done to check those frauds till, in 1849, Mr. J. M. Davies, then collector of Broach, seized several thousand bales of cotton. Ten of the bales, on examination, were found to contain seed in quantities varying from twenty-five to forty-six per cent of the whole weight of the bale. The manner of adulterating was so uniform that Mr. Davies was satisfied that it was 'the result of a deliberate combi-

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[1] Consultation dated 24th October 1777. In this year the Broach commission drew the attention of the government to the great frauds in the package of cotton, by not only wetting it and putting it into the dew previous to its being embaled, but likewise in mixing seed with it "For the present," they write, "we have only issued a proclamation threatening any one convicted thereof with the severest penalties."—Despatch of the Commission dated 10th April 1777

[2] Royle, 28.

[3] The trading monopoly of the East India Company was partly abolished in 1813.

[4] Royle, 29.

[5] Regulation III. of 1829.

[6] Letter from the Acting Joint Magistrate of Broach, No. 252 of 1862.

[7] Major Moore's report, 8-10.

[8] See also report of Bombay Chamber of Commerce, 1850, quoted at p. 24 of Major Moore's report as above.

nation amongst the whole body of dealers, and not the secret fraud of a few individuals.' The effect of this wholesale fraud in Broach was to reduce in six years (1844-1850) the relative value of Broach cotton, as compared with Dholera cotton, by seventeen per cent. The evidence taken at the trial would seem to show that excessive speculation was the cause of this fraud. The merchants and local dealers expecting a rise, bought the uncleaned cotton at rates representing £12 (Rs. 120) per *khándi*. A fall came before the dealers got rid of their interest in this cotton, and the value of a *khándi* fell to £9 2*s* (Rs. 91). In 'self-defence' they had to make good their loss by mixing with the cotton from twenty-five to forty-six per cent of cotton seed. After the detection of this fraud, government agencies[1] for examining and stamping cotton bales were established at Surat and Broach. This state supervision lasted for ten years, and during that time 'fair Broach,' from being ¾*d.* a pound less in value than saw-ginned Dhárwár, became worth ¼*d.* a pound more.[2] In 1861, on account of its cost, government decided to give up the scrutiny of cotton at Broach. In the following terms the Bombay chamber of commerce petitioned government against the withdrawal of the establishment. "Its supervision," they said, "has continued to produce the most marked and salutary effect in raising the character of Broach cotton, which, from being the most adulterated, has become the most pure of the native seeded cotton."[3] In spite of the remonstrances of the chamber of commerce, the establishment at Broach would seem to have been withdrawn, and in 1862 the chamber of commerce noticed that, since the discontinuance of government supervision, adulteration with seed had increased at Broach, and 'Broach cotton that formerly ranked above saw-ginned Dhárwár was now of less value than Dholera.' The respective values in 1862 were, for a Bombay *khándi* of saw-ginned Dhárwár, £61 (Rs. 610); of Dholera, £42 10*s.* (Rs. 425); and of Broach, £40 (Rs. 400). In consequence of these representations government in 1862 appointed a commission to visit the different cotton-producing districts of the presidency, and make inquiries into the alleged frauds in the packing of cotton. The members of the commission, who went to Gujarát, found that at Broach[4] adulteration was 'open, systematic, and universal.' The excessive adulteration in 1862 has been attributed to the opposite cause to that assigned in 1849. In 1849 it was a falling market, and in 1862 it was a rising market. The rise in prices

Cotton adulteration.

Police supervision, 1850-1861.

Cotton commission, 1863.

[1] This supervision would seem to have been carried on by the ordinary district police.

[2] Report of Chamber of Commerce, 1860-61.—Major Moore's Report, 4, 5.

[3] Chamber of Commerce, 3 of 1862. The marginal table taken from the report of the Chamber of Commerce would not, however, seem to prove a rise of value in Broach cotton as compared with fair Kumpta.

Date	Middling Orleans	Fair Dhárwár, saw-ginned	Fair Broach.	Fair Kumpta
	d.	*d.*	*d*	*d*
1st August 1850	8	7	6¾	5¾
,, 1861 ..	4¾	4¾	3¾	3¾
,, 1868 .	7¼	5¾	5¾	5¾
,, 1869 ...	7¾	5¾	5¾	5¾

[4] Major Moore's report, 58.

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Cotton adulteration.

in 1862 is said to have been so rapid, that what *A* rejected as bad, *B* took, knowing that, bad though it was, the cotton would in a few days become valuable.[1] The commission of 1862 were of opinion that the existing law[2] had failed to check adulteration. At the same time, the commission offered certain suggestions, which ultimately were embodied in Act IX. of 1863. The framers of this Act hoped to succeed where the former measure (Reg. III. of 1829) had failed, by appointing officials to act the part of prosecutors. The presses were to be licensed, and the prosecutors, under the name of inspectors, were to 'suppress the use of unlicensed presses, and to examine cotton offered for compression, or exposed, or intended for sale.' For the first year after the passing of Act IX. of 1863, the Bombay chamber of commerce reported that, 'as a rule, cotton had come forward free from seed.'[3] In 1869 the adulteration of cotton was again on the increase, and a bill was passed by the local legislative council making the provisions of Act IX. of 1863 more stringent. This bill did not, however, become law. The old Act (IX. of 1863) continues to be worked; and at Broach the balance of the opinions of the European merchants would seem (1875) to be, that, though the provisions of the Act are not sufficiently stringent, the scrutiny of the inspectors 'prevents the practice of the grosser forms of adulteration.'

Indian millet.

Among the crops of the district, Indian millet, *juwár* (Holcus sorghum), holds the second place. Of 394,200 acres, the total area of state land cultivated in 1874, 78,601 acres, or 19·93 per cent, were devoted to *juwár*. As compared with 1859-60, the returns for 1874 show a decrease of *juwár* cultivation amounting to 3,093 acres, or 3·78 per cent. *Juwár* is the staple grain crop, and the food of the people of black-soil villages. In ordinary land it is sown alone; but in rich tracts pulses are grown with it. This crop is never grown in the same field in two successive seasons. There are two varieties of *juwár* (Holcus sorghum), locally called *rátadio*, producing a reddish grain, and *sundio* (Sorghum cernuum), a white grain. Except in the Ankleswar sub-division, south of the Narbada, the chief crop, or what is called the cold-weather, *shiálu juwár*, is sown in August, and gathered during February; the minor crop, called the *juwár* of the rainy months, *chomásu*, is sown in June, and reaped about the end of October. *Juwár* succeeds best after cotton. After *juwár*, if the field has not been manured, a season of fallow, or *wásal*, should follow; or else a crop of gram, *tal*, *tuver*, or wheat. The following statement gives the results of five experiments to ascertain the cost of cultivation and the value of the out-turn of an acre of *juwár*. The values quoted are twenty-five per cent below market prices:—

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[1] Letter from Mr. Cotton, of Broach.—Major Moore's report, 207.

[2] Reg. III. of 1829. Act XV. of 1861 extended the provisions of Reg. III. of 1829 to the Islands of Bombay and Kolába.

[3] Major Moore's report, 75.

Statement showing the results of Juwár cultivation.

	Cost of Cultivation in Rupees.				Outturn per acre in Pounds.		Value of Crop per acre.		Net profit.	
	Seed.	Manure	Ploughing to harvesting.	Rent.	Total	Grain.	Straw.			
	As.	Rs.	Rs.	Rs	Rs a			Rs a p	£ s. d.	Rs. a p	£ s d
Kharif.	6	Fallow	8½	12(a)	20 14	1,600	1,000	39 8 11	3 19 1⅞	18 10 11	1 17 4¾
	6	6	8½	4	18 14	340	2,000	36 10 8	3 13 4	17 12 8	1 15 7
	6	.	6½	4	10 14	480	3,000	22 10 8	2 5 4	11 12 8	1 3 7
Ravi.	3	6	8½	4	18 11	1,400	1,000	35 1 9	3 10 2⅝	16 6 9	1 12 10½
	3	.	6½	3	11 11	400	2,000	16 14 3	1 13 9⅜	5 3 3	0 10 4⅞

(a) This total (Rs 12) is the rent for two years (one fallow), at Rs. 6 per acre.

An acre of *juwár* in the inferior black-soil villages will not yield more than 160 to 280 pounds of grain. On the other hand, as the supply of grass in those villages is very scanty, the straw is more valuable than that grown in the richer soils. When *juwár* is grown more for the sake of its straw than for its grain, the seed is thickly sown, and in this case 500 bundles of straw would be an average crop. When the grain is ripening it is much exposed to the attacks of flocks of birds, and the most constant watch has then to be kept. A few days' neglect, and nothing will be left to the reaper but straw.

Wheat.

Among the crops of the district, wheat, *ghau*, holds the third place. Of 394,200 acres, the total area of state land cultivated in 1874, 50,837 acres, or 12·89 per cent, were devoted to wheat. As compared with 1859-60, the returns for 1874 show a decrease of wheat cultivation amounting to 14,889 acres, or 22·64 per cent. This falling off in wheat would seem to be partly due to the extension of the growth of cotton, stimulated by the high prices which cotton still fetched. Crops of wheat suffer in the same way as fields of *juwár*, the open plains on which it grows abounding with herds of antelope and flocks of crane. Two kinds of wheat are raised in this district,—the *hánsia*, a white grain, and the *kátha*, which has a reddish tinge, and is less valuable by about twenty per cent. The wheat most commonly grown is bearded. It reaches a height of eighteen inches. Sown late in September, or early in October, it ripens in March, when it is pulled up by the roots, carted to the village thrashing-floor, and trodden out by cattle driven round a post. Wheat is, perhaps, the most uncertain of all crops. If there has been too little rain, it is eaten up by a small locust, *khafedi*. If the rains have been excessive, the crop is blighted. Another objection to the culture of wheat is the large quantity of seed required. This is not less than forty pounds an acre, and has generally to be borrowed from the village grain-dealer at about twice its value. In 1872 several experiments were made to test the average yield of wheat. In six of those made in good and average soils, it was found that, without irrigation or manure, an acre will yield from 420 to 1,476 pounds. This outturn, calculated at prices about

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twenty-five per cent below current market quotation at the time of the experiment, gives the following results :—

Wheat.

Statement showing the results of Wheat cultivation.

Cost of Cultivation in Rupees				Outturn per acre in Pounds		Value of Crop per acre.		Net profit.	
Seed.	Ploughing to harvesting	Rental	Total.	Grain.	Straw				
Rs.	Rs.	Rs a p	Rs. a p			Rs a. p	£ s. d.	Rs a. p.	£ s d.
2	6½	4 0 6	12 4 6	432	368	20 11 4	2 1 5	8 6 10	0 16 10½
2	6½	3 2 6	11 6 6	416	336	16 7 0	1 12 10½	5 0 6	0 10 0½
2	6½	3 11 0	11 15 0	1,476	1,846	59 15 4	5 19 11	48 0 4	4 16 0½
2	6½	5 12 6	14 0 6	620	1,104	30 2 0	3 0 3	16 1 6	1 12 2½
2	6½	4 1 0	12 5 0	420	560	19 4 0	1 18 6	6 15 0	0 13 10½
2	6½	5 14 6	14 2 6	684	880	31 2 8	3 2 4	17 0 2	1 14 0½

Export of wheat.

The following are the details of an attempt to start an export trade in Broach wheat. In 1844 the honourable court of directors ordered that 233 bags, containing 11,152 pounds of *hánsia*, wheat, equal to 160 bushels English measure, should be exported for the English market. The wheat, in the first instance, cost £17 (Rs. 170), at £1 (Rs. 10) per *halsi* of 656 pounds, and £9 16*s.* 10*d.* (Rs. 98-6-8) additional before reaching Bombay, made up of the following charges: carting from village, 3*s.* (Rs. 1-8); sifting free of earth, 2*s.* 1*d.* (Rs. 1-0-8); cost of putting up in 133 gunny bags, £5 5*s.* (Rs. 52-8); duty at Broach, £1 7*s.* 3*d.* (Rs. 13-10); freight to Bombay, £2 19*s.* 6*d.* (Rs. 29-12). Three bags were damaged in transit, and only 230 shipped from Bombay. The charge for these amounted, under the agency of the chamber of commerce, to 19*s.* (Rs. 9½), making the cost of 160 bushels at this stage Rs. 277-14-8, or, in English money, at 1*s* 11*d.* exchange, £26 12*s.* 8*d.* From the account rendered by the Liverpool consignee in detail, it appears that the total expenses from Bombay to warehousing in Liverpool, amounted to £28 1*s.* 11*d.* On the passage to England some of the wheat became bad; fifty-three bags were thrown overboard, and three had to be emptied into the others to fill up, so that only 176 bags remained saleable. These realized £35 7*s.* 9*d.*, at prices from 3*s.* 6*d.* to 5*s.* per bushel, the market rate for home wheat being then 6*s.* 10*d.* per bushel. The wheat was said to be unfit for making into bread, though well suited for the manufacture of size. The result of the experiment was a loss of £19 6*s.* 10*d.* to the shippers. A second experiment was made in 1845; but weevils attacked the wheat, and this consignment also showed a loss.

Rice.

Among the crops of the district, rice, *dangar*, holds the fourth place. Of 394,200 acres, the total area of state land cultivated in 1874, 20,359 acres, or 5·16 per cent, were devoted to rice. As compared with 1859-60, the returns for 1874 show an increase of rice cultivation amounting to 6,129 acres, or 43·07 per cent. Three varieties of rice are grown, a fine kind, *sukhvel*, raised under tanks in a few villages of the Ankleswar sub-division; *sutarsál*, the rice of medium quality most generally eaten, is common in Jambusar; and

dhudni, the coarse rice, drilled in dry-crop land as in ordinary cereal cultivation. Only the first variety is transplanted from nurseries; the second is sown broadcast in semi-flooded beds, or drilled direct into the moist soil. The following is a statement of the expenses and profits of rice cultivation :— Rice.

Statement showing the results of Rice cultivation.

Description of Rice.	Cost of Cultivation in Rupees					Outturn per acre in Pounds		Value of Crop per acre.				Net profit			
	Manure	Seed.	Ploughing to harvesting	Rental.	Total	Grain	Straw.		£	s	d		£	s	d
	Rs	Rs. a	Rs	Rs.	Rs a			Rs. a				Rs a			
Best variety, *sukhvel* .	16	5 3½	17½	13	51 11½	2,400	3,200	74 10⅜	7	9	4	22 15½	2	5	11½
Medium, *sutarsál*	9	1 6⅝	6¼	6½	23 2⅜	1,200	240	39 4½	3	18	6½	16 1½	1	12	2½
Coarse rice, *Dhudni* ..	..	1 0	6¼	4½	11 12	600	1,600	17 10⅝	1	15	3½	5 14½	0	11	9½

The best rice-lands are situated in the Hánsot villages of the Ankleswar sub-division. As a rule, forty pounds of rice in husk yield twenty-seven pounds of clean rice. The husk, *kushi*, is given to milch buffaloes with oil-cake.

Among the crops of the district, millet, *bájri* (Holcus spicatus), holds the fifth place. Of 394,200 acres, the total area of state land cultivated in 1874, 16,087 acres, or 4·08 per cent, were devoted to *bájri*. As compared with 1859-60, the returns for 1874 show an increase of *bájri* cultivation amounting to 4,671 acres, or 40·91 per cent. *Bájri* is the staple grain crop, and is the principal article of food in light soil villages. It is never raised by itself, but always with a mixture of pulses, which gives this kind of cultivation the general name of *kathol*. Millet.

In 1787 Dr. Hové gave the following account of the cultivation of indigo in some villages of the Jambusar sub-division : "The indigo was partly inter-sown with cotton and on some plantations with millet and other grains. The lines were divided about sixteen inches from each other, in which the cotton shrubs stood pretty thick. The above-mentioned grains were scattered between without the least regularity. I understood from the planters that they suffer the indigo to grow for two seasons, and commonly have three crops a year. The first crop was already (November 25th) removed, and on the lower plantations the second was just being cut. The third is inferior, and is not ready before the hot season sets in."[1] But even then indigo had long ceased to be a product of any importance, and before 1820 its cultivation would seem to have been entirely given up. In 1847-48, 434⅓ acres in Jambusar were under indigo, and 538 acres in 1873-74. Indigo.

[1] Bom. Govt. Sel. No. XVI., 49.

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Of the total area of 10,256 acres classed as garden land, a considerable portion consists of the fresh alluvial, *bhátha*, soils, yielding vegetables and tobacco without irrigation.

Sugar-cane.

In 1872 only 120 acres of sugar-cane were cultivated. Formerly there was a tract of sugar-cane land that gave its name to the village of Sakarpur on the left bank of the Narbada, a few miles below the town of Broach. But this has been most of it washed away. The cultivation of this crop, mixed with oil-seeds and condiments, such as ginger and turmeric, scarcely repays the ryot for the risk he incurs.

Tobacco.

Grown without irrigation in fresh alluvial deposits, tobacco is one of the most profitable crops of the district. It is cultivated to some extent in the light soils, but more commonly in river lands, where the surface is generally so sandy as to make it appear that nothing could possibly grow on it. The method of cultivation[1] adopted in such cases is to bore through the sand with a scoop attached to a long handle until the loam is reached, sometimes six feet below the surface. These holes are then filled up with earth gathered from the banks of the river, and receive the tobacco seedling previously raised in a nursery in ordinary soil. The process is laborious, but it has its reward in magnificent crops. The average cost of raising an acre of tobacco may be estimated at £4 (Rs. 40); the rent of the land representing an additional charge of £1 10*s.* (Rs. 15). The produce per acre will vary from 800 to 1,200 pounds, valued at £19 to £28 10*s.* (Rs. 190 to 285), leaving a net profit of from £13 10*s* to £23 (Rs. 135 to 230). There are, however, special risks attending the cultivation of tobacco. The crop may be destroyed by floods, or injured by the parasitic growth, called *thuntha*, which sprouts out from the roots of the plant, and robs the leaf of its bitterness.

Hemp.

The only kind of hemp grown in the district is the Bombay hemp, *san* (Crotalaria juncea), and of it only 28 acres were cultivated in 1874. From details furnished in 1855, it appears that hemp is raised only in a few villages on the banks of the Mahi and Narbada rivers.[2] The plant would grow freely in other parts of the district, but the regular cultivators dislike to grow it. The cultivation is left to fishermen, who afterwards extract the fibre and work it up into string and ropes. In 1855 there was an export of 64,640 pounds (808 Bengal *mans*) of hemp, but since then this export would seem to have ceased.

Mulberry trees.

In 1848 the Dhanturia island, in the Narbada, about six miles below Broach, was leased to a Pársi gentleman for the growth of mulberry trees.[3] Hundreds of mulberry trees were planted; worms were brought from Kaira, and silk produced equal, if not superior, to Chinese stuffs; but the enterprise was not a commercial success,

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[1] Castor-oil seeds planted in this way grow to the size of a tree.

[2] Collector of Broach to Revenue Commissioner, N. D., 24th April 1855.

[3] Govt Resolution No. 2585, dated 6th May 1848.

as Mr. Pestonji ultimately found himself compelled to resign the trade under the burden of a debt of some hundred pounds sterling.[1]

Garden cultivation.

An instance of what ordinary land is capable of yielding by irrigation and an intelligent mode of high culture came under observation in 1874 in the town of A'mod. A field four and a half acres in extent, the freehold of a religious mendicant, formerly used as a common grazing-ground, was, at the instance of a market-gardener, *káchhia*, converted into garden land by the sinking of a well. This well, which cost £40 (Rs. 400), instead of watering the whole field, supplied only one and a half acres of it. For the use of these one and a half acres, the market-gardener agreed to pay an annual rent of £3 (Rs. 30). The land was ploughed and manured as in ordinary dry-crop cultivation, and was permitted to lie fallow until after the close of the rainy season. The field was then sub-divided into 800 plots, each plot eight cubits long by four broad, ridged and worked with the hoe, *kodáli*, on the principle of spade husbandry. The only labourers employed on the field were the members of three families of market-gardeners. Having previously prepared nurseries of onions, garlic, ginger, and a great variety of vegetables and herbs, the gardeners moved the young plants into the larger beds, irrigating each day at the rate of 100 beds, so as to water the entire field once in eight days. After a few days, when the plants were well settled in their new beds, women brought baskets of well-pounded snuff-like oil-cake, *khol*, and scattered about ten pounds of this preparation evenly and carefully over each bed The land was immediately flooded, and in a few days more the plants had made the most marked progress. These gardeners weed and thin with great care, and keep the beds a picture of neatness. The water-channels and ridges are planted with mustard, fennel, and other herbs, so that not an inch of ground is left waste. When its crop has been gathered from a bed, the soil is immediately turned over, worked with fresh manure, and replanted on the principle that tap-roots succeed fibrous roots, and leaf crop succeeds bulbs. In this way a single bed yields three crops in the season, valued at 2*s.* (Re. 1) per bed, the common rate at which the retail vendor purchases the crop. By this simple computation, the produce is worth £80 (Rs. 800) to the cultivators, and affords additional profits to the vendor. The cost of cultivating this field may be thus summed up: rent, £3 (Rs. 30); irrigation, £5 14*s.* (Rs. 57) per acre, but in this case a pair of bullocks and two men were employed on one and a half acres for eight months in the year, so the field is liable to the full charge of £17 2*s.* (Rs. 171); farm-yard manure, £2 10*s.* (Rs. 25); oil-seed manure, 8,000 pounds, at thirty pounds for a shilling = £13 6*s.* (Rs. 133); seed, £3 (Rs. 30); the wages of three families, three men at 4½*d.* (3 annas), and three women at 3¾*d.* (2½ annas) a day, for eight months, at the rate of labourer's wages only, £24 15*s.* (Rs. 247½); in all, cost of cultivation £63 13*s.* (Rs. 636½); net profit £16 7*s.* (Rs. 163½). Thus five men and three women were provided with the full wages of agricultural labour

[1] Silk in India, 40.

Chapter IV. Agriculture.

during eight months of the year, and divided between them £16 7s. (Rs. 163½) out of the proceeds of one and a half acres of garden land.

Natural calamities.

As far as has been ascertained, Broach would not seem to have seriously suffered from fires or from floods. In ordinary years the Narbada overflows a portion of the lands on its banks. But such freshes do no harm, and even in the great flood of 1837, when the waters of the Narbada and of the Tápti are said to have joined, no damage would seem to have been caused either to the district or to the city of Broach.[1] The natural calamities from which the district has been known to suffer are storms, famines, and smaller losses such as those caused by locusts, boll-worm, and mildew.

Storm of 1781.

In the year 1781 a storm passed over the district of Broach, of which Mr. Forbes has left an account in his Oriental Memoirs[2]: "Two years before I left India, some weeks previous to the setting in of the south-west monsoon (May), we had the most dreadful storm ever remembered in Gujarát. Its ravages by sea and land were terrible; the damage at Broach was very great, and the loss of life considerable. The storm came on so suddenly, that a Hindu wedding party passing in procession through the streets by torch-light with the usual pageantry of palanquins, led-horses, and a numerous train of attendants, were overtaken by the tempest, and fled for shelter into an old structure, which had for ages withstood the rage of the elements. On that fatal night, from the violence of the winds and rain, both roof and foundation gave way, and seventy-two of the company were crushed to death. At our villa every door and window was blown away; the elements rushed in from all directions, and spoiled furniture, pictures, books, and clothes. The roof of the stable giving way, the main beam killed a fine Arabian horse, and maimed several others. The garden next morning presented a scene of desolation, strewed with large trees torn up by the roots, broken pillars, seats and ornaments, sea and land birds, wild and tame animals, porcupines, guanas, serpents, and reptiles, all crushed together. Large fish from the ocean, together with those of the river, were left upon the banks, and covered the adjacent fields. One of the company's armed vessels, lately come from Bombay, was lost in the river, together with a great number of large cotton boats and other craft richly laden."

Years of scarcity.

The years 1630 and 1631 are said to have been seasons of famine, in which large remissions were granted, and supplies of grain distributed in charity by the Musalmán rulers. In 1755, owing to failure of crops, half the land revenue had to be remitted through almost the whole district. 1760, 1761, 1773, 1786, and 1787 were years in which one or more parts of the district verged upon famine, and the revenue had to be very largely remitted. The great famine

[1] In 1834 about 866 houses in the town of Broach are said to have fallen down in consequence of the rising of water in the Narbada river, which caused a damage of 5,940 (Rs 59,400).—Secretariat, Judicial Volume 340 of 1850.

[2] Forbes' Oriental Memoirs, Vol. III., 53.

Years of scarcity.

of 1790, locally known as the 'forty-seven,' *sudtálo*, because it took place in the Samvat year 1847, was caused by the entire failure of the ordinary rain-fall. This famine lasted for one year. During the distress, which was very great, numbers of people dying of hunger, the Majmudárs, Lallubhái and A'shárám, who had large quantities of grain stored in their warehouses, distributed it in charity to the poor. Since the beginning of the present century six years of scarcity, amounting almost to famine, are recorded. Of these, one in 1812, was due to the ravages of locusts; one, in 1819, to excessive rain; one, in 1835, to frost; and three, in 1838, 1840, and 1868, to either total or partial failure of the usual supply of rain The famine of 1812, locally known as the 'sixty-nine' famine, from having happened in the Samvat year 1869, was caused by a visitation of locusts, which, driven out of Márwár by the failure of the rains of 1811, spread over Káthiáwár and northern Gujarát. The district of Broach would seem to have been the limit of their progress southwards.[1] During the time of this famine strict orders are said to have been issued to the Wániás, forbidding them to sell more grain to the people than was actually required to maintain life. The sales of grain were superintended by government officers. Many deaths are reported to have occurred, but the victims of the famine would seem to have been immigrants from northern Gujarát. Of the regular inhabitants of the district comparatively few are said to have perished. In 1819 two heavy rainy seasons succeeding each other destroyed the major portion of the crops. But though distress was general, few, if any, lives are said to have been lost. In 1835 the cold, following on a season of excessive rain-fall, was so severe that the crops were destroyed, and the country reduced to a state of distress, bordering on famine. The failures of rain in 1838, 1840, and so late as 1868, were serious enough to force the cultivators to drive their cattle to graze in the hills, and many villages were for the time deserted. Years of partial drought have been numerous.

Boll-worm.

With regard to the boll-worm, by which the cotton crop in all seasons is liable to be injured, Mr. Stormont[2] says that, "in his opinion, it is the larva of a hymenopterous insect, a beautiful fly, about three-fourths of an inch long, having the anterior pair of wings of a yellowish colour marked with small round spots of dark red. On opening a pod damaged by the boll-worm, a number of very small black flies, and sometimes several small beetles, are found. These insects have probably made use of the hole bored by the boll-worm."

Mildew.

As to mildew, another of the minor causes of loss to the cultivator, Mr. Stormont writes: "Mildew is the only destructive disease I know, and that does not seem, as a rule, to do much harm. Mildew is, no doubt, due to some peculiar state of the atmoshpere, but I am not quite clear what conditions are most favourable to its formation. The heavy dews that fell about the beginning of the year cleared it off considerably."

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[1] Trans. Bom Lit. Soc (1819), 297

[2] Report of the Superintendent of Agricultural Experiments, 1870-71.

CHAPTER V.

TRADE.

Chapter V. Trade.

In Broach there are three means of communication,—by road, by sea, and by rail. Till 1863, when the tax known as the local fund cess was first levied, the district was without made roads. At that time cart traffic was confined to the fair-weather months. During the rains, those forced to travel were carried in palanquins by men of the Bhoi caste, or rode from village to village upon oxen.

Roads.

Since 1863, in spite of the special difficulties of road making in the Broach district, with its want of metal, and the numerous inlets of the sea that intersect so much of its surface, considerable progress has been made. Thirteen lines of road extend (1875) over a total distance of 143½ miles. Of these roads some have been made at the joint expense of government and of the local funds, while the expense of others has been met entirely from the latter source. All are at present kept in repair out of local funds. The roads of the district form two groups—one to the north, and the other to the south of the Narbada. The northern group contains: 1. A road, twenty-eight miles in length, running from Jambusar in the north of the district through A'mod south to Broach. This line is partly bridged and gravelled. 2. A line, thirteen and a half miles long, running north-west from the Pálej railway station to the town of A'mod. 3. A road, seven miles long and partly bridged, joining the town of Wágra with the main line from Jambusar to Broach. These roads unite at the village of Derol, eight miles north of Broach. 4. A road, twenty-five miles long, running west, joins the town of Broach with Dehej. 5. A road, five miles long, runs along the right bank of the Narbada from Broach west to Dasan. 6. A road, ten and a half miles long, runs east from Broach and joins it with Sukaltirth, the famous place of pilgrimage. South of the Narbada a group of four roads centres in the town of Hánsot. These are: 1. A road, nine miles long, running from Hánsot south-west to the village of Katpor. 2. A road, eleven miles long, from Hánsot to Sáhol on the right bank of the Kim river. This road, in connection with which is a bridge over the Kim, is the highway for the passage of the produce of the lands of the Ankleswar sub-division southwards to Surat. 3. A road, nine miles long, running south-east from Hánsot to the Pánoli railway station. 4. A road, metalled and partly bridged, twelve miles long, running east from Hánsot to Ankleswar. Besides the group that centres at Hánsot, there is a

road, three miles long, running north from the town of Ankleswar to Borbhátha; a short line of one and a half miles running north-west from Sáhol to Iláv; and a line, nine miles long, running east from Ankleswar to the frontier of the Rájpipla territory.

Rest-houses.

Of six buildings provided by government for the accommodation of district officers, three—at Broach, Mehegám, and Sitpon Tankária—are in the Broach sub-division; two, at the port of Tankári and Jambusar, are in the Jambusar sub-division; one, at Hánsot, is in Ankleswar. For the convenience of travellers three rest-houses, or *dharamsháls*, have been built, one at each of the Broach, Chamárgám, and Pálej railway stations; each of these rest-houses is provided with separate quarters for Europeans and for natives.

Ferries.

There are eleven ferries kept up throughout the year. Of these, one, at Kávi, in the Jambusar sub-division, is across the Mahi; the rest are over the Narbada. Of those on the right bank of the Narbada, two start from the town of Broach, one from the custom-house to the west of the town, and the other from Mojampor on its eastern side. About two miles further up a ferry plies at Jáhádeshvar, and another at Tavra three miles beyond. Ten miles more, above Sukaltirth, at a village called Nikora, there is another ferry, and one six miles further at Janor. On the left bank of the Narbada ferries start from Borbhátha nearly opposite the town of Broach, and from Sakarpur, about five miles further down the river. There is also a ferry to the island of Dhanturia, in the bed of the Narbada, about nine miles below Broach. Of these, the first four ferries were in the year 1874-75 farmed, yielding a revenue of £315 6s. (Rs. 3,153). The rest are maintained by the local funds for the convenience of passengers, who are carried free of charge. Besides the permanent ferries, during the rainy season, in the following villages, either rafts, *tarápa*, or boats, are kept up at the expense of the local funds: in the Jambusar sub-division, at Islámpor, Khánpor, Dospor, and Bojádra; in the A'mod sub-division, at Sarbhán and Dhádhar; and in the Wágra sub-division, at Viláyet and Argáma.

Vessels.

Till within the last fifteen years the highway of the trade of the district, as well as of the trade of a large section of Gujarát and of western Málwa, was through the ports of Broach and Tankári down the estuaries of the Narbada and the Dhádhar. Since the opening of the railway the trade by sea has fallen off. It is still, however, large enough to support a fleet of small coasting vessels, and occasionally to bring into the Narbada foreign ships of larger size.

The following details show the character of the shipping and the general arrangements under which the trade of the ports of Broach and Tankári is at present (1875) [illegible] on. Besides the flat-bottomed ferry-boat, *thápdo*, [illegible] either hollowed tree trunks or plank-built skiffs, an [illegible] ng-boats, *hodi*, three kinds of craft carry on the sea [illegible] ict. These are the *machhvo*, the *padáv*, and the *bat*[illegible]

The *machhvo*.

Of these the *machhvo* is the s[illegible] rying from one and a quarter to eight tons burden (3½ to 22½ *khándis*). The *machhvo* has one mast and one triangular, or lateen sail, made of cotton cloth.

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Vessels.

It is also supplied with oars. *Machhvás* are generally built at Broach of teak brought from the Rájpipla forests, and cost from £5 to £50 (Rs. 50 to 500). As a rule, vessels of this class belong to the captain, a Musalmán or a Hindu Khárwa, probably a native of Surat. Exclusive of the captain, the crew of a *machhvo* varies, according to the size of the boat, from two to five men. The rates paid to the sailors are: to Dehej, 4*s.* to 8*s.* (Rs. 2 to 4); to Gogo, 10*s.* to 12*s.* (Rs. 5 to 6); to Tankári, 8*s.* to 12*s.* (Rs. 4 to 6); and to Surat, 10*s* to 14*s.* (Rs. 5 to 7). Besides this money payment the owner provides each of the crew daily with two pounds of *khichdi*, that is, rice and split peas, or *dál*. A trip in a *machhvo* to Dehej takes from twenty-four to thirty hours; to Gogo about four days; about six days to Tankári, and eight days to Surat. The trade carried on by *machhvás* is almost entirely local, in such articles as grass, timber, and bamboos. These boats seldom leave the Narbada, though occasionally they carry grain as far as Dehegám at the mouth of the Mahi, Gogo, and Surat. They also sometimes take part in the trade up the Narbada, carrying grain from Nándod to Broach.

The *padáv*.

The second class of vessels, the *padáv*, vary in size from ten to thirty tons (28 to 84 *khándis*). A *padáv* has two masts and three sails. *Padávs* are generally built by Pársi or Hindu carpenters at Daman, Balsár, and Bilimora, in the Surat district, and occasionally at Broach, Surat, Gogo, and Bháunagar. Their masts, as a rule, are made of teak. A *padáv* lasts from ten to twenty years. The expense of building a vessel of this class varies from £35 to £225 (Rs. 350 to 2,250) according to the size of the boat. The sails cost from £15 to £25 (Rs. 150 to 250). Sails are generally shaped by the sailors out of cotton cloth, *doti*, bought in Broach, or made to order by Dhers. Better kinds of cloth are woven at Balsár. European canvas is held to be the best material for sails, but is too expensive for general use. Country sails are never dyed. Once a year, in May, when the trading season is over, the sails are washed. *Padávs* are employed in the coasting trade, north to the Gulf of Cutch, and to Balsár, Máhim, Bandora, and Bombay. They sometimes venture as far as the coast of Malabar. The *padávs* generally belong to Hindu sailors, of the Khárwa caste, residing in the Surat district. Exclusive of the captain, the crew varies from five to nine men.

The *batelo*.

The *batelo*, a larger edition of the *padáv*, varies from sixty-six to 106 tons burden (185 to 297 *khándis*). The *batelo*,[1] says Mr. Vaupell, may be described as the *dav* (mentioned below) in miniature. It has, he says, invariably a flat square stern, a long grab-like head, two masts, and is rigged in lateen fashion. There are generally three sails,—the jib in front, the main lateen sail on the foremast, and on the second mast, near the stern, a smaller lateen sail called *kalmi*. The following are the dimensions of a *batelo* of fifty tons (140 *khándis*): length from stem to stern sixty feet; breadth of beam fifteen feet; depth of hold ten feet; length of keel forty-five feet. The head and stern-posts both diverge from the perpendicular with reference to the keel; the stern-posts at an angle of about 10°, and the

[1] Trans. Bom. Geo. Soc., Vol. VII., 100.

head posts at an average angle of 45°. From their flat build, these vessels make much leeway on a wind, especially if in ballast or with a cotton cargo. They are usually built of teak, chiefly at Surat, Bilimora, Balsár, Daman, and Dáhánu, in the Tanna district. When new a *batelo* costs, according to its size, from £150 to £500 (Rs. 1,500 to 5,000). They last for about forty years. The sails for a boat of from fifty to eighty tons (140 to 224 *khándis*) cost altogether about £35 (Rs. 350). Of this total, the price of the jib is from £4 to £5 (Rs. 40 to 50), of the main-sail about £20 (Rs. 200), and of the smaller lateen sail, *kalmi*, £5 to £15 (Rs. 50 to 150) These sails are made in Broach, Balsár, Bilimora, and Surat. The vessels engaged in this coasting trade, during the first two months of the rains, remain in shelter at Broach, Balsár, Bilimora, Surat, and Bháunagar. They put to sea again soon after cocoanut-day (August). The chief part of the trade is now to the Malabar coast. An ordinary voyage to Malabar at the beginning of the fair season, in the end of August, takes from ten to twenty days. The return passage requires from twenty-five to thirty days, according to the strength of the north-east wind. About fifty per cent of the larger class of *batelás* are the property of their captains; the rest belong to Hindu or Pársi capitalists. Exclusive of the captain, *tandel*, the crew of a *batelo* of sixty tons consists usually of from twelve to thirteen men. For a trip from Broach to Bombay and back, taking on an average from one to two weeks, the amount usually (1874) paid to a common sailor is 11*s.* (Rs. 5-8), and £1 2*s.* (Rs. 11) to the captain. Before the railway was opened the pay of the men for a trip from Broach to Bombay and back is said to have been 16*s.* (Rs. 8), and for the captain £1 10*s.* (Rs. 15). In April, when strong winds may be expected, the rates of freight are increased and the pay of the sailors advanced by 2*s* (Rs. 1), and of the captain by 4*s.* (Rs. 2). To Malabar and back, on an average from eight to ten weeks' sailing, each of the crew gets about £1 10*s.* (Rs 15), and the captain £3 (Rs. 30) To Karáchi and back, a voyage lasting from five to seven weeks, the rates are, for the sailor £1 10*s.* (Rs. 15), and for the captain £3 (Rs. 30). To Cutch, a passage of five to six weeks, £1 to £1 4*s.* (Rs 10 to 12), and £2 to £2 8*s.* (Rs. 20 to 24) respectively. Sometimes, though such arrangements are not often made, a merchant agrees with a captain and crew to make a circular voyage, calling at several ports before returning to Broach. The different ports are generally visited in this order: from Broach to the Malabar coast, thence to Cutch, from that to some port in Káthiáwár, and so back to Broach. Such a voyage takes from three to four months. The captain would be paid £5 to £6 (Rs. 50 to 60), and the seamen about half that amount. During the voyage the *batelás*, as a rule, come to an anchor at night. If they sail all night, the captain steers, sometimes by the stars, at other times by the compass, *hoka*, of which each captain is said to have one on board.[1]

The *batelo*.

[1] The use of the compass in navigating vessels of this class would seem to have been introduced during the last fifty years, as Mr Williams says (Memoir 58): "No compass is used, or reckoning kept in this navigation, but sounding is much attended to." Mr. Vaupell, however, (1819) says of the *kotias* most of these vessels have a compass on board, though it is seldom used, except in rough weather, when the coast is invisible.

Chapter V. Trade. Vessels.

The *dav.*

Of the foreign vessels that are said formerly to have visited the Narbada, the *dav*[1] or *baglo*, a greater *batelo*, is the largest ship that carries the lateen sail, varying in size from 100 to 300 tons (280 to 840 *khándis*). Ships of this kind, belonging to the Persian Gulf or the Red Sea, are called *davs*, and those trading to Káthiáwár, Cutch, and Karáchi, *baglás*.[2] Their rigging usually consists of one large mast formed of a single spar, to which is hoisted a huge lateen sail fixed to a long tapering yard hung in slings. Of this yard two-thirds remain behind and one-third projects in front of the mast. These ships have high square sterns and low grab-shaped bows, and are decked Sometimes they are provided with guns. They seldom carry jibs or mizen-sails. The tack of the main-sail is made fast to the bow, and the main-sheet to the quarter abaft the beam. These vessels belong chiefly to, and are navigated by, Arabs. They have a crew of from ten to 100 or 150 men, and are common to the Red Sea, Persian Gulf, and the Western Coast of India.

The *dingi.*

The craft next in size to the *dav* is the *dingi*, of from seventeen to 170 tons (forty-eight to 476 *khándis*) burden. The *dingi* differs from the *dav* in having either a round or square stern, generally very lofty, and a mizen-mast. Unlike the *dav*, the *dingi* is not decked. Instead of a deck it is furnished with an open hatchwork, consisting of loose beams fitting into sockets, and laid lengthwise and across the vessel. These beams, when the vessel is loading or unloading, can be taken out and put to one side. During the voyage they are again fastened down into their sockets, and over them a matting of flat-split bamboos is drawn. Besides the main-yard, the *dingi* has a moveable boom, to the outer end of which the foot or tack of the sail is fastened The boom is then pushed forward several feet beyond the line of the vessel's bow This boom is a clumsy arrangement, for each time the vessel tacks, the end of the boom has to be drawn in and again pushed forward. The rudder is also hung from the stern-post in a peculiar way, leaving a considerable opening between it and the vessel. This craft is peculiar to the coasts of Makran, Sind, and Cutch. The crew number from ten to twenty-five. *Dingis* usually carry two flagstaffs on the stern, each staff from four to six feet high. To the top of each a weather-cock is fixed, and the head is turned up involute

The *kotia.*

Next in order come the vessels of the Káthiáwár coast and of the Gulf of Cutch. They are named either *kotia*, *padáv*,[3] or *gallat*, according as they are built with angular, square, or round sterns. Boats of this class vary in size from ten to fifty tons (twenty-eight to 140 *khándis*) burden. They have two masts, a main and a mizen

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[1] *Davs*, it is said, do not now visit Broach.

[2] The description of the boats brought under the head foreign vessels is extracted from Mr Vaupell's account—Trans. Bom. Geo. Soc., Vol. VII., 98.

[3] The term *padáv* is not restricted to the small *batelás* mentioned above. The same name is applied to the cargo-boats plying in Bombay harbour, to the smaller sized coasting craft in the Konkan, and to the large sized sea-going vessels noticed in the text capable of sailing across to Zanzibar. These latter are foreign vessels, and in carrying capacity are equal to, if not much greater than, *kotiás*.—Note by Mr. Faulkner, assistant collector, salt department

mast, and on each, as a rule, they carry a lateen sail. Occasionally they hoist a trysail or jib, and, being of a sharp build, they usually sail well. These *kotiás* and *galbats* are the pirate ships of former days. In 1819 they were said to be still occasionally, but very rarely, so used. According to the size of the vessel, its crew numbers from six to fifteen seamen. Besides the seamen there are the master, *tandel*, and the pilot, *dongi*. Most of these vessels are furnished with a compass. The compass is seldom or never used except during rainy, cloudy, or boisterous weather, when the coast is invisible. As a rule, these boats, though a few are bold enough to trade across to Africa, rarely venture beyond soundings, and still seldomer sail out of sight of land.

The *patimár*.

The patimár, *patemár*, comes from the coast south of Bombay. This, says Mr. Vaupell, is by far the best built, best found, and best navigated native vessel on the whole coast of the Indian Ocean from the Straits of Babel-Mandeb to the Gulf of Manar. *Patemárs* vary from thirty-five to 100 tons (ninety-eight to 280 *khándis*) burden. In shape they are sharp and narrow, and built of the strongest and best timber. These vessels sail admirably, particularly on a wind. They have a main-mast, a mizen-mast, and a jib-boom, to which they hoist a large and small lateen sail and a jib. The masts of these *patemárs* rake considerably forward. The sails are stout and well made, and large in proportion to the size of the vessel. About one-fourth part of the length of the yard to which each of the lateen sails is attached projects in a long sharp point in front of the head of the mast. The chief peculiarity of the *patemár's* build is its keel. In other vessels the keel is generally a straight piece of timber nearly equal on all four sides, and of sufficient strength to raise the superstructure upon, but in these *patemárs* it consists sometimes of three, often of two distinct pieces of timber. The first stretches in a straight line for about one-third of the length of the vessel; the second, whether of one or two pieces, is curved downwards, the lower part, or what is technically called the forefoot, terminating considerably below the line of the hinder or stern-post end. By this arrangement a considerable space is left below the level of the keel. This space, when planked up, is useful in two ways: it enables the vessel to sail close to the wind, and, when near rocky ground, by touching the bottom, the forefoot gives warning sufficient to shove off the vessel before she has grounded over all the length of her keel. The crews of these *patemárs* are composed principally of Roman Catholic Christians, though not unfrequently Hindu fishermen both own and man these vessels. The order, cleanliness, subordination, and even decorum shown in the arrangements of these vessels were in 1819 said to be remarkable. Every rope was in its proper place duly coiled and ready for use, and every article was of the most sea-worthy description. The crew consists of a master, *tandel*, with from ten to twenty men under him. The master has frequently a pilot to assist him in navigating the vessel, a leadsman, and several steersmen.

The *dohodia*.

Besides those foreign vessels, Mr. Vaupell mentions three local varieties of boats,—the *dohodia*, *oria*, [illegible]*it*,—which would seem

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The *dohodia.*

to be no longer in use The *dohodia* was a craft peculiar to Surat. It was built on the model of an English ketch, and is said to have been called *dohodia*, or one and a half, because it had a long and a short mast. The *dohodia* had yards and shrouds like an English ship, with square-sails and top-sails and top-gallant sails, a driver and mizen-top sail, with try-sail and jib. The only thing remarkable in these imitations of ketches was a long, narrow strip of stern extending several yards from the stern-post, and on a level with the poop or upper deck, having a parapet railing, two feet high, running on each side, and closed with plank at the stern. Seldom more than two or three feet broad, and planked below, this gangway formed a sort of projecting gallery from which the whole vessel, when under sail, could be viewed. These vessels will soon, it was said in 1819, be extinct; for when one is decayed or lost, it is never replaced by a new one of the same construction, *batelás* or other vessel being preferred. The *oria* was peculiar to Broach. It is described as differing from a *batelo* only, in having a bluff round head like an English ship, and resembling precisely in model a ship's long-boat The vessels called *galbats* belong to the ports on the western shore of the Gulf of Cambay, and were in design like the *batelo*, except that the *galbat* was sharper built and had a rounded or angular stern.[1]

Harbours.

Strictly speaking, there are no harbours along the coast line of the Broach district. The estuaries of its rivers offer shelter to the coasting vessels during the stormy months of the rainy season.

In 1820 there were five sea-ports, *bandar*,—Dehegám, at the mouth of the Mahi, on the right bank of the Dhádhar river, about six miles from its mouth, Tankári; and on the left bank across from Tankári, about three miles further down the river, Gandhár; on the right bank of the Narbada, Dehej, near the mouth of the river, and Broach, about thirty miles inland. Only at two of these ports, Broach and Tankári, was the trade of any importance. In 1820 the traffic from these ports employed thirty *batelás* of from thirty to eighty tons burden (eighty-five to 225 *khándis*)[2] In 1849 the shipping had increased to seventy-nine vessels of an aggregate burden of 3,125½ tons (9,591 *khándis*), or an average to each vessel of about 43½ tons (121½ *khándis*). In 1873-74 the corresponding returns show forty boats registered, with an aggregate burden of 210 tons (588 *khándis*), or, on an average to each vessel, a capacity of five and a quarter tons (14¾ *khándis*)

Steamers.

In 1849 its trade in Málwa opium occasionally tempted steamers to visit Tankári. But this trade does not now exist, as, since the

[1] The following are particulars of boats sometimes mentioned in books of travel: The grab, Arabic *ghurab*, Maráthi *guráb*, had rarely more than two masts, and was generally about 150 tons burden. Some of the grabs, however, had three masts, and weighed 300 tons. These ships carried broadsides of six to nine guns, and on their main-decks were mounted two, nine, or twelve pounders, pointed forward through port-holes cut in the bulk-heads, and designed to be fired over the bow. The *shybár*, *shebár*, or *sibád*, was a large vessel, and the 'balloon,' or *balanv*, a state barge —Bom Quar. Rev, III, 56 See also The English in Western India, 167.

[2] Colonel Williams's Memoir, 57

opening of the railway (1861), opium is no longer carried by sea. In 1869 an attempt was made to establish a line of steam ferry-boats from Broach to Gogo; but the venture was not successful, and the steam-boats have been (1875) withdrawn.

Freight.

The average rates of freight are now (1875) to Bombay 2*s.* 6*d.* (Rs. 1-4) a bale This would represent, on the amoun tof cotton exported in 1874, a return of £2,728 (Rs. 27,280) The freight obtained from other produce cannot be directly calculated. But, following Mr. Davies' estimate that other produce yields half as much more as cotton, the annual return for the capital and labour employed in the sea-carrying trade would be £4,092 (Rs. 40,920) in 1874, as compared with £10,000 (Rs 1,00,000) in 1850

The railway.

The portion of the Bombay, Baroda, and Central India railway that lies within the limits of the Broach district was opened for traffic in 1861. The Broach section of the line, twenty-eight miles in length, is provided with the five following stations: Pánoli, 191 miles distant from Bombay; Ankleswar, 198 miles; Broach, 203 miles; Chamárgám, 211 miles; and Pálej, 219 miles.

Narbada bridge.

[1] The chief engineering difficulties in constructing this part of the railway line were caused by the broad bed of the Narbada. The design originally adopted for spanning this, as well as other large rivers, consisted of piers composed of three cylindrical vertical cast-iron columns connected together with horizontal and diagonal wrought-iron bracings, with the addition of a pair of raking struts of the same dimensions and constructions as the columns, making angles of 30° with the vertical. The columns are cast in lengths of nine feet, and are 2′ 6″ in external diameter and one inch thick, the lengths being connected together with flanges and bolts. The diameter of the piles has been adopted as the least which will allow of a workman going inside to fasten the bolts and clean out the 'core.' The lower lengths of these columns are terminated with a screw 4′ 6″ diameter on 'Mitchell's' principle, by means of which the columns are screwed into the ground to the required depth. The three vertical piles stand at a distance of fourteen feet centre to centre; the horizontal bracings are 'T'; the diagonal bracings are of angle iron, each bracing being fastened to lugs on the columns, secured at one end by a bolt, and tightened at the other [illegible] gib and cotter. The piers are spanned by sixty-feet girde[illegible]n's' principle. The bridge over the Narbada at first co[illegible]one spans, resting on piers of three vertical columns v[illegible]'up' and 'down' stream. The height of the bridge [illegible]r screw to rail, in mid-channel, was eighty-four feet, a[illegible]ds of the columns were sunk from fifteen to eighteen fe[illegible]ed of the river. In July 1864, a flood, rising within twenty [illegible]eet of rail-level, carried away six spans in the deep-water channel From the experience gained from this flood it was decided to do away with the strut piles as being a source of weakness, and to substitute in their place two extra vertical columns, making in all five vertical columns to the

[1] Extract from a paper on the B. B. and C. I. Railway kindly drawn up by Mr. Bayley, the present resident engineer (1877).

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Narbada bridge.

pier, and connecting them at top by a covering girder of sufficient strength to carry the bridge and load in the event of the failure of an intermediate column. It was also suggested that cluster piers should be introduced at every sixth span, and that the joints of the pile columns should be strengthened by the addition of steel clamps attached to the lugs of the piles. These improvements were being gradually carried out, but were not completed when, in August 1868, a flood, rising to within eighteen feet of rail-level, carried away four spans. After the subsidence of this flood it was found that these piers had been carried away from the effects of under-scour, their screws not being bedded in the clay. It was therefore decided that, in addition to the other improvements, it would be necessary to screw the columns of the pier in every case well into the clay These alterations on the original design of the bridge were carried out without a single interruption to the traffic of the line, and completed before the rainy season of 1871. The bridge, although severely tested by several high floods, stood well till the rainy season of 1876. The structure, as completed in 1871, consisted of sixty-eight spans, or a total length of 4,250 feet, with a maximum height of 120 feet from screw to rail-level, of which sixty feet were sunk below the bed of the river. The cost of the Narbada bridge up to 1871 was, according to the information furnished by the consulting engineer, £469,340 (Rs. 46,93,400).

At the time when the original bridge was built (1860), the heavy current of the stream lay on the right or Broach bank. Since then the main channel of the river has so entirely shifted towards the left bank, that, during the last seven or eight years (1870-77), the southern bank has been gradually washed away, and driven back upwards of 1,000 feet. The effect of this change in the direction of the current became apparent in the flood of the 6th September 1876. Then the water, rising suddenly to the unprecedented height of thirty-five feet above high-water mark, or within 13′ 6″ of rail-level, washed away twenty-six spans, or upwards of 1,600 feet of the southern portion of the bridge. Across this gap a fair-weather bridge, 1,578 feet long, was thrown. As this could not stand the floods of the rainy season, a high-level bridge, on the same design as the old one, completed at a cost of about £15,000 (Rs. 1,50,000), was opened for traffic on the 27th April 1877. But this reconstruction is only a temporary measure. It has been determined, at a site about a hundred yards above the present crossing, to build an entirely new bridge. This structure will consist of twenty-five spans of wrought-iron girders, resting on piers composed of two cast-iron columns, fourteen feet in diameter below, and ten feet in diameter above ground. Each column will be one and a half inches thick, and will be sunk to a depth of 123 feet below rail-level. The estimated cost of the whole work is £375,000 (Rs. 37,50,000.)

Post offices, 1875.

For postal purposes the Broach district forms a part of the Gujarát postal division, and contains nine post offices, located at the following stations : Broach, Wágra, A'mod, Jambusar, Páloj, Ankleswar, Iláv, and Hánsot. These stations are supervised by the inspector of post-offices in the Gujarát division, assisted by the sub-inspector of the

Surat and Broach districts. The officials in charge of the post offices, except at Broach, are styled deputy post-masters, with salaries varying from £16 16*s.* to £48 (Rs. 168 to Rs. 480) per annum, and averaging £29 17*s.* (Rs. 298-8) As Broach is the disbursing office of the district, the officer in charge of that station is styled post-master, and draws a yearly salary of £90 (Rs. 900), rising to £114 (Rs. 1,140). Post offices, 1875.

At the stations mentioned above, letters are distributed by delivery peons or by postal-runners. For this additional work, the latter are paid a trifling gratuity. The correspondence for surrounding villages is delivered by rural messengers, who also bring in to the station letters posted in letter-boxes placed at most of the villages. The rural messengers carry with them a stock of postage stamps for sale at the villages they visit. In the Broach district there are in all twelve delivery peons, and their salaries, ranging from £9 12*s.* to £12 (Rs. 96 to Rs. 120) a year, average £10 (Rs 100) a year. The pay of the rural messengers, of whom there are eighteen, varies from £10 16*s.* to £12 (Rs. 108 to Rs. 120) a year, and averages £11 6*s* 7½*d.* (Rs. 113-5). This staff of men is distributed according to requirements—letters being delivered in some places daily, and in others only once a week. Before railway times, the Bombay post used to be brought to Broach by runners, accompanied from village to village by a Bhil watchman. During the rains it sometimes took as much as eight days for the post to reach Broach.

According to a statement furnished by the post-master general, Bombay, in 1870-71, the latest year for which information is available, 164,260 paid letters, 71,310 unpaid, 28,372 service, and 1,906 registered letters, or in all 265,848, were received; 178,597 paid letters, 104,870 unpaid, 38,809 service, and 2,630 registered, or in all 324,906, were despatched. Under the new post office manual similar details are not registered.

In 1870-71 the receipts amounted to £453 (Rs. 4,530), and the expenditure to £650 (Rs 6,500), showing a balance against the district service of £197 (Rs. 1,970); the corresponding figures for 1873-74 are—receipts, £651 (Rs. 6,510); expenditure, £1,146 (Rs. 11,460); balance against the district, £495 (Rs. 4,950).

Besides the railway telegraph office, there is one government telegraph office in the town of Broach. The amount of work that has of late years passed through this office will be seen from the following statement:— Telegraph.

Statement showing the working of the Broach Telegraph Office, 1861-1874.

Year.	State Messages		Private Messages		Receipts.	Expenditure.
	No	Value.	No	Value.		
		£ *s.* *d.*		£ *s.* *d.*	£ *s* *d.*	
1861-62	34	8 12 1½	2,493	42	7½	No information
1864-65	29	5 1 10½	4,418	7	1½	available.
						£ *s.* *d.*
1870-71	22	6 4 0	1,561	·	6	505 19 0
1873-74	65	17 8 0	2,292	3.	9	546 11 9¾

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The falling off in the number of private messages since 1864-65 is said to be chiefly due to the depression of trade.

Articles of Trade.—Broach is one of the oldest ports in Western India. Eighteen hundred years ago it was one of the chief seats of the trade then carried on between India and the marts of Western Asia.[1]

Ancient trade, 64-200.

In the time of the author of the Periplus (A.D. 64-200) five distinct trade routes would seem to have centered at Broach, or, as it was then called, Barugáza. Of these routes, two were by sea and three were by land. Of the sea routes, that of most consequence was to Southern Arabia and Egypt The other, a less important line of trade, was with the ports of the Persian Gulf. By land, merchandize went and came northwards through Minnagara in Sind; eastwards, through Ujain, then the capital of Málwa; and southwards, as far as Daulatábád (Tagara) and Paithan (Plithana), the chief towns of the Deccan.

Imports.

The following is the list of articles imported from Arabia and Egypt: of metallic substances and precious stones—gold and silver, brass, tin, lead, cinnabar (ore of quicksilver), stibium (sulphuret of antimony for tinging the eyes), white glass, topazes, and coral; of vegetable products—wine, of which Italian wines are said to have been the favourite, though wine from Asia Minor and Arabia was also imported, sweet lotus, storax (an aromatic resin), and other perfumes; of manufactured articles—*cloth, plain and mixed*, and variegated sashes half a yard wide. The imports by sea from the Persian Gulf were 'slaves, gold, and pearls in large quantities, but of an inferior sort, purple dates in great numbers, wine, and cloth of native manufacture.' The imports by land are said to have been from the north: of precious stones—the onyx, of vegetable products—box, thorn, cotton of all sorts, long pepper; of perfumes—spikenard, costus (the root of an Himalayan thistle, Aucklandia), bedellium (a fragrant gum), and myrrh; and of animal products—ivory and silk From the east and south came onyx stones; and of manufactured articles—porcelain, muslins, and cotton, both fine and for ordinary wear.

Exports.

The exports from Broach by sea are said to have been to southern Arabia and Egypt: of vegetable products—rice, clarified butter, oil of sesamum, cotton and sugar; and of manufactured articles—muslin and sashes. To Oman, in the Persian Gulf, the ships are said to have taken from Broach, of metals—brass; and of animal and vegetable products—horn, sandal-wood, and ebony[2] in round sticks Besides these regular trade routes, Dr. Vincent alludes (II., 366) to a traffic from Broach to Africa for gold, and 'probably to Malabar and Ceylon for pepper and cinnamon.'

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[1] This account of the early trade of Broach is condensed from Vincent's Periplus of the Erythrean Sea, Vol II, 366.

[2] Vincent, II, 342. The *φαλάγγων σησαμίνων* which, from their apparent connection with sesamum, puzzled Dr. Vincent, were perhaps sticks of ebony, *sisam* (Dalbregia acuminata).

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Modern trade, 1638-1875.

In modern times, though the trade of Gujarát has never again centred in the ports of the Broach district, Broach had so far maintained its position as a mart, that from it, in the seventeenth century, ships sailed eastward to Java and Sumatra, and to the west as far as Aden and the ports of the Red Sea. No details as to the extent of the Broach trade at that time have been obtained; but the course of trade and the nature of the articles of import and of export are thus described[1] by a traveller who visited Broach in 1638: "In their trade with Arabia the vessels start from Broach in the beginning of March, and return in September. The imports from the Aden coast are chiefly gold and silver; besides these, coral, amber, *misseit* (a red dye), coffee and opium 'considered to be the best in all the east.' From Broach the exports to the Arabian coast are cotton, cloth, indigo, camphor, tobacco, alum, sulphur, benzoin, or benjamin (a gum, the resin of the Styrax benzoin), pepper, and other spices, myrobalans, and preserved fruits." With regard to the trade with the Persian Gulf, the same traveller says: "Small vessels from Surat, Cambay, and Broach, leaving Gujarát in January and February, and returning in April and the beginning of May, trade with the Persian Gulf. From Persia these ships bring brocades, silk-cloths, velvets, camelots, pearls, dried fruits, such as almonds, raisins, nuts, and dates; but especially they bring rose-water, ofwhich they make a very great trade."

The vessels that went to Sumatra (Achin) were of 120, 200, or 300 tons burden. To avoid the Portuguese, they were forced to start from Gujarát in May, and come back in October before the close of the stormy months. From Sumatra these ships brought sulphur, benzoin (or benjamin), camphor, porcelain, carded wool, and pepper. They exported from Broach 'every sort of country-ware.' With the Malabar coast there was a great trade. The ships reached Gujarát in December and left in April. From Malabar the imports were coir (cocoanut fibre); *copra* (dried cocoanut kernels); brown sugar; areca or betel-nut; '*patang*' (sappan-wood, Cæsalpinia sappan (?)); '*harpus*,' used for caulking ships; rice and other provisions. The exports to Malabar were opium, saffron, coral, cotton, thread, sail-cloth, and fabrics of many other kinds. Those who traded to Europe took to Goa—stuffs, cotton, indigo, saltpetre, lac, sugar, myrobalans, dried fruits, cabinets, and lacquered work. The trade of which, before the Dutch and English came, the Portuguese had the monopoly, was, of imports into Gujarát—lead, tin, vermilion, quicksilver, all kinds of cloth, ivory, sandal-wood, pepper, cardamoms, cloves, porcelain, china-ware, cocoanuts, coir, and European vases of gold and silver gilt. The exports from Gujarát were, for Europe—cloths of different kinds, indigo, saltpetre, lac, sugar, myrobalans, preserved fruits, bedsteads, cabinets, and other lacquered work; for China and Japan the exports were—butter, assafœtida, opium, cumin seed, cotton, and thread.

Later on, the foreign trade of Gujarát centred more and more in Surat, and from Surat was transferred to Bombay. The cotton

[1] Mandelslo's Voyages, 210-213.

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exported from Broach to China and Bengal was sent through Surat[1] and Bombay, and as far back as 1815[2] the Broach ports had ceased to have any foreign commerce. The whole was a coasting trade south to Bombay and all the intermediate ports, and north as far as Mándvi in Cutch. The imports were sugar, unwrought metals, woollens, cocoanuts, spices, and all kinds of Europe and China goods in use among the natives, with a small portion of teak, timber, bamboo, and rafters from Daman and the other ports in that neighbourhood, and government stores. The exports were cotton, grain, other products of the soil, and a few manufactures.

Since 1837 the chief articles of trade from the Broach ports towards the south of Gujarát and the ports of the northern Konkan are, of exports—the flower of the *mahura* tree (Bassia latifolia) and wheat; of imports—molasses, rice in husk, betel-nut, plantains, bamboo, and teak. To Bombay the exports are cotton and grain; the imports—iron, coal, ropes, and miscellaneous articles. To Malabar and other ports south of Bombay there are no exports; the imports are cocoanuts, coir-rope, betel-nut, pepper, sandal-wood, teak, and other kinds of timber. Towards the west and north to the Káthiáwár ports, and to Cutch, the exports are grain, cotton-seed, *mahura* flowers, tiles, and firewood; the imports, chiefly stones for building. The traffic with Karáchi is almost the same as that with Cutch. It is carried on only to a very limited extent. A vessel occasionally sails to Zanzibar and brings back white dates; but this rarely happens.

River traffic.

Under the head of navigation of the Narbada (p. 345), some account is given of the trade formerly (1820) carried on during the rains up the Narbada to Talakwára. This traffic is still maintained, though to a limited extent; much of the produce, which at that time found its way to Broach by water is now taken to the different railway stations. The value of the goods conveyed by this route in 1874 is estimated at about £15,000 (Rs. 1,50,000), of which £14,700 (Rs. 1,47,000) were imports into Broach, and £300 (Rs. 3,000) represented the value of the exports. The imports were chiefly grain, carnelian stones, timber, and firewood; the exports salt and cocoanuts.

Sea trade, 1815-1874.

From a statement[3] furnished by Colonel Williams, of the extent of the sea trade carried on in his time, it appears that in 1815-16 the imports into the city of Broach were valued at £147,772 12*s.* (Rs. 14,77,726), and the exports at £38,959 18*s.* (Rs. 3,89,599). These returns do not include the export of raw cotton, which, if taken at about £80,000, (Rs. 8,00,000),[4] would give, for the entire

[1] The trade of Broach in 1805 was chiefly centred at Surat. 'The produce of the country round Broach, consisting of cotton, cotton-yarn, and piece-goods, is generally shipped to Surat'—Milburn's Oriental Commerce, 136.

[2] Colonel Williams' Memoir, 57.

[3] Colonel Williams' Memoir, 58.

[4] Forbes' Oriental Memoirs, Vol. II., 23.—No estimate of the amount exported from Broach has been traced except that given in the text. Mr. Forbes states that for the years during which he was in Broach (1776-1783) the average export of raw cotton to China and Bengal was 20,000 bales, at £3 10*s.* (Rs. 35) a bale = £70,000 (Rs. 7,00,000).

export and import trade, a total value of £266,732 10s. (Rs. 26,67,325). During the ten years ending with 1847, the earliest period for which regular trade returns are available, the average yearly value of both imports and exports was £1,150,091 (Rs. 1,15,00,910). From that time the sea traffic would seem steadily to have declined. From 1856 to 1862 the average yearly returns were only £970,339 (Rs. 97,03,390). Between 1865 and 1870 the average was reduced to £634,369 (Rs. 63,43,690), while in 1874 the returns had fallen as low as £391,297 (Rs. 39,12,970), or about one-third part of the value of the corresponding returns twenty-five years before.

Cart traffic.

In 1820 Colonel Williams wrote that the goods imported from Bombay and Surat were 'passed into the interior in large two-wheeled carts drawn by eight and ten yoke of oxen, which came to Broach and Jambusar for the purpose.' In 1849 this traffic was so considerable that every year about 2,000 carts left Broach for the inland parts of Gujarát and the west of Málwa.[1] At that time this cartage supported the special class of Musalmán cart-men, called in Broach *Nágoris*, who are said to have emigrated from Nágor in Málwa. At present no returns are available to show to what extent cart traffic with the inland parts of the province is still maintained; but that this branch of trade has of late years greatly fallen off there would seem to be no doubt.

Railway traffic, 1868-1874.

The chief cause of the decline of the sea trade and of the cart traffic of the district is to be found in the competition of the railway. The line of rail passes between the inland districts and the ports, and so draws off the traffic, which, under former arrangements, found its way in carts to the sea-board, and thence in boats to Bombay. As the railway traffic returns are kept in tons, and do not show the values of the goods carried, no direct comparison of the total returns of the district of late years with the totals for former years is available; but it would seem, according to the tables of values adopted by the appraisers of the Bombay custom-house, that in 1874 the total values of the exports by rail from the five stations of the Broach district amounted to a sum of £1,355,190 (Rs 1,35,54,900), while the value of imports for the same year was £507,355 (Rs. 50,73,550). The total value of the district trade by sea and rail in 1874 was, according to this calculation, £2,254,142 (Rs 2,25,41,120); an increase of 96·17 per cent as compared with £1,150,091 (Rs. 1,15,00,910), the average total value of the sea traffic for the ten years ending with 1847. Statistics of the railway traffic are available since 1868. From these returns it would seem that though, as compared with the earliest years, there is a considerable advance during the past four years, the totals have varied but little. In 1868 the returns for the five stations show that 296,468 passengers were carried, as compared with 404,017 in 1874, while the traffic in goods has risen during the same period from 53,261 tons to 71,584 tons. The highest total of passengers during this term of seven years was 440,485 in 1870, and of goods 71,584 tons in 1874. The effect of the railway on the trade of the

[1] Mr. Davies's Statistical Account, 1849.

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Railway traffic, 1868-1874.

town of Broach has been to reduce its importance as a provincial mart. In former years Broach was the head-quarters of trade for the whole area between the rivers Mahi and Narbada, and for a large tract of land inwards as far as Ratlám in western Málwa. By the opening of the railway this through traffic from the inland districts to the sea-board has to a large extent been diverted to the different stations along the line of rail, the merchandize being conveyed from thence direct to Bombay. The details for the Broach station show an increase in the total number of passengers from 184,782 in 1868 to 216,210 in 1874, and in the quantity of goods from 37,620 in 1868 to 42,913 tons in 1874. During the term of seven years ending in 1874, the greatest total number of passengers was 242,328 in 1870, and of goods 42,913 tons in 1874. Of the smaller stations, trade has most increased in Páléj, where passenger traffic has advanced from 37,733 in 1868 to 73,120 in 1874, and the carriage of goods from 2,689 tons in 1868 to 11,305 tons in 1874. The remaining stations show the following increase during the same term of years: in passenger traffic—Ankleswar, from 47,262 in 1868 to 71,340 in 1874; Pánoli, from 9,704 in 1868 to 11,345 in 1871, and Chamárgám, from 16,987 in 1868 to 31,502 in 1874. In goods traffic—Ankleswar, from 9,976 tons in 1868 to 12,373 tons in 1874; Pánoli, from 248 in 1868 to 1,362 in 1874, and Chamárgám, from 2,728 in 1868 to 3,631 in 1874.

Cotton.

The most important branch of the Broach trade is its export of cotton. To the total of 65,348 tons, valued at £1,637,965 (Rs. 1,63,79,650), exported during the year 1874, cotton contributed £1,376,508 (Rs. 1,37,65,080), or 84·03 per cent. Of the entire quantity of cotton exported in 1874, 20,914 tons, or 84·56 per cent, were sent to Bombay by rail, and 3,820 tons, or 15·43 per cent, by sea. Besides the capital invested in its direct export, the preparation of this cotton for the market furnishes employment to a large amount of capital and to a considerable body of labour

Factories.

In 1874 thirty-one steam factories were employed in connection with this trade. Of these, nineteen were situated in Broach, four in Páléj, three in Ankleswar, three in Jambusar, one in Chamárgám, and one in Iláv The rapid development of the different branches of the cotton industry in the Broach district is shown by the fact that all of these factories have been established within the last fifteen years: two in 1861, two in 1862, one in 1864, three in 1866, one in 1867, one in 1868, one in 1869, four in 1870, thirteen in 1871, one in 1872, and two in 1873. Of the whole number, two are spinning-mills, with a total of 25,640 spindles; six are pressing-houses, with a total of ten full-presses; and twenty-three are ginning-factories, with 1,264 gins The twenty-eight factories, for which statistics are available, employed in 1874 3,519 hands, of whom 3,283 were temporary and 236 permanent; and distributed as wages, in the slack season (June to January), a daily sum of £24 14*s.* (Rs. 247), and in the busy time (January to June) a corresponding total of £176 12*s.* (Rs. 1,766).

This export trade in cotton at Broach has the special interest that it is the only industry that has to any considerable degree succeeded

in drawing European capital and European labour beyond the limits of the presidency town. The materials for a somewhat detailed comparison of the course of the export trade in cotton at Broach before and after the introduction of steam power are fortunately available.

Development, 1773-1850.

[1] It would seem that about a century ago (1773-1783), when Broach first came under British management, the cotton trade was in the hands of a large number of petty dealers. In the extract from his Memoirs, quoted above (p 101), on the subject of cotton adulteration, Mr. Forbes talks of visiting, in one morning, as many as a hundred yards belonging to different owners, where, apparently, the cotton wool was separated from the seed. The greater part of the cotton trade of those times consisted of supplying the hand-loom weavers of the district, and could be carried on with success by a class of small traders When, however, twenty years afterwards, cotton became an important article of export, more capital was required to carry on the trade, and so, by degrees, business was tended to centre in the hands of a smaller number of large capitalists.

1850-1861.

In 1850, before the introduction of railways, there were in the larger towns wholesale dealers, *wakhária*, men of some property, by whom the export trade in cotton was managed. In the villages there was another set of traders, men with but little capital of their own, who, also called *wakhária*, carried on business as retail cotton-dealers. The country dealers lived in a village, where they owned a yard, or space of ground, enclosed by a fence, generally of matting. Here, in the season (March to May), the cultivators brought their cotton and piled it in the middle of the dealers' yard. Along the sides of the yard there were commonly sheds, where the local 'cleaners,' or gins, were worked About the middle of the rains the village dealer, when his last season's stock was disposed of, paid a visit to his banker in the nearest town, consulted him as to the chance of a rise in prices, and borrowed from him a sum of money. Taking this cash with him, the small dealer, on his return, would start on a tour through the parts of the district where he was known. In one village he would pass a few days with the headman, stopping in another with some cultivator, whose cotton he generally bought. In this way the dealer found out who, among the villagers, were in want of an advance, and at what rates each would agree to mortgage his crop of growing cotton. These advances were generally required by the peasants in November and December, when picking time was still two or three months off, and when the first part of their rent fell due. The transactions of the dealer were chiefly with the poorer class of villagers. His agreement with them varied according to circumstances. To some the advance was made on condition that the dealer was to dispose of the crop on commission, and repay himself out of the proceeds. With others the arrangement was that the crop, when ready, should be sold to the dealer at the ruling rate of

[1] The details that follow are, for the most part, compiled from Government Blue Book III. of 1857 (East India Cotton); from Mackay's Western India; and from a paper kindly prepared by Mr. Cotton, of Broach.

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THE COTTON TRADE.

Development, 1850-1861.

the day, the proceeds to be retained and placed to the credit of the borrower. Very often the crop was sold before it was sown, and sometimes the cultivator sold part of his crop, receiving half or one-quarter of its value in advance months before it was ready. The large landholders and careful well-to-do villagers obtained advances direct from the town middleman, who in his turn, in many cases, had to borrow from the town banker. At that time (1840-50) about one-half of the whole cotton crop of the district is said to have been partly or wholly mortgaged before it was brought to market. When the cotton was picked, it was generally for some weeks stored in the village farm-yard, *khali*. This storing was done in one of two ways, either in pits or in sheds. The pits were on an average eight feet long, four feet wide, and five feet deep. There were sheds in a few villages only These sheds were built of slight bamboo-stakes, interwoven with palm or millet leaves. Under either form of storing the cotton was liable to be stained by dust and damp. When the whole crop was housed, the cultivator carted his cotton to the dealers' cleaning store Here the interest of the cultivator in the crop ceased. The seed remained a perquisite in the hands of the cleaner, and was valuable enough to repay him for the cost both of cleaning and of pressing the cotton After the wool was separated from the seed, the cotton was carried to the press, a primitive-looking affair, the condensing power lying in two parallel wooden screws, cut not by machinery, but by hand The quantity of cotton pressed into one package was about 392 pounds (half a Bombay *khándi*). These machines, of which each village dealer had generally one, were for the most part imperfect, leaving the bales so rough and loose that any form of trickery might afterwards be practised upon them. Before it left the district the cotton of the village dealer generally passed into the hands of a town dealer. Besides these two classes of dealers, with whom the chance of profit or loss lay, there was the broker, *dalál*, paid by a commission, through whose hands all cotton sold to Bombay merchants had to pass Sometimes the interest of the town dealer did not cease in Broach. He had a native agent, *dalál*, in Bombay, and occasionally forwarded a supply of cotton to him for sale. Between the dealers' premises and Bombay, the cotton, from its imperfect packing and other causes, was exposed to injury either from accident or design. Finally at Bombay, before it was shipped, the cotton had to be again pressed. Perhaps from not making sufficient allowance for the effect of the very low prices that ruled for many years previous to 1850, it has been usual to charge the local dealers of that time with impoverishing the Broach peasants and making their cotton unsaleable. Mr Davies did not, however, share this opinion. He wrote, in 1847, "the local dealers have been losing of late years. They do not make a profit of more than Rs. 5 per *khándi*, or, at the rates then reigning, above 5½ or 6½ per cent. Of late years these dealers have been too much abused. In hard times they may be put to dishonest shifts, but they are not grasping middlemen. It should be borne in mind that they befriend the cultivator, and, in a manner, become security for the public revenue by their jointly extensive transactions, and that, by their frugal management and moderate profits, they occupy the place of the more

extensive merchants whom the temptation of employing their capital to better purposes has withdrawn from the district."

THE COTTON TRADE.

Development, 1861-1874.

Since the introduction of the railway (1861), and since Broach has become a field for the investment of European capital, the course of its cotton trade has considerably changed. Cotton is now bought in one of two ways, either by the local agents of Bombay firms, or by the owners of ginning-factories in Broach. The local agents, when ordered to buy, sometimes send out their own broker to the villages to purchase direct from the grower. But they generally do business through the dealer, who, as in former times, gets the cotton into his hands by making advances to the cultivators The sum advanced varies, it is said, from the full value of the cotton to a nominal amount of 10s. to £1 (Rs 5 to Rs. 10). The nature of the dealings between the cultivator and the *wahháría* would seem to have somewhat changed since 1850. The advance is now said to be earnest-money, to bind the cultivator to his bargain rather than the mortgage of his crop by the cultivator to tide over the hard months on to harvest. The extent to which the dealer is inclined in any season to make advances will depend on the view he takes of the future prices of cotton. If he is of opinion that the price of cotton is likely to rise, he will buy in July and August while the crop is still young , but, as a rule, the dealer seldom makes large advances before October. Of this branch of trade, the local dealer has still almost a monopoly. The owners of factories or outside traders seldom make advances to cultivators. Formerly the owners of ginning-factories in Broach also bought their cotton from local dealers. Competition, however, grew keener, and, finding but a small margin of profit left to them, the owners of gins are said, of late years, to have, to a considerable extent, taken to dealing direct with the cultivator. In January and February they send out their broker, *dalál*, to the villages to bargain with the cultivators to sell their cotton to them, or, at least, to bring it to be ginned at their factory. Some of the cultivators, especially well-to-do men of the Bohora class, are said to have become independent enough to prefer to bring their cotton into the town, and deal direct with the ginner. In Broach these men sometimes go from one factory to another, trying to have their cotton ginned at specially low rates. A few cultivators are said to trade in cotton ; and, after having it ginned, get it pressed and sent to Bombay. This, however, is unusual. The interest of the cultivator generally ceases when he hands over the cotton to the ginner.

Ginning.

In the matter of ginning and pressing, a very great change has taken place in the last twenty-five years. The old native cleaner, *charko*, is no longer used. All the cotton of the district is now cleaned in steam ginning-factories by gins known as the Platt Macarthy roller-gins. In the case of pressing, the change is not so complete. The speed and safety of the railway journey, the freedom from the need of insuring, and from the chance of robbery and adulteration, have, it is true, induced merchants to send almost all their purchases of cotton by rail, while the importance of small packages has led them to have their cotton baled in the steam press-houses. But as the steam presses at work in Bombay make much smaller

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bales than the presses used in Broach, and as, under this arrangement, the Bombay merchant has the opportunity of personally ascertaining the quality of the cotton he buys, it still is sometimes for the benefit of the exporter to buy cotton brought down from the Broach district in half-pressed bales, and full-press it in Bombay. So much is this the case that during the year 1874, 8,385 tons, or 40·92 per cent, of the cotton sent by rail, were half-pressed bales. And as almost all the cotton brought by boat—15·43 per cent of the total supply—is shipped in a half-pressed state, it would seem that less than one-half of its export of cotton leaves the Broach district in full-pressed bales.

Cost of production, 1847-1875.

Since the American war the price of cotton has not again fallen so low as it ruled for a long term of years previous to 1850. The average value of good fair Broach cotton in Bombay has during the past five years (1870-1875) been £22 5*s* (Rs. 222½) a Bombay *khándi* (784 lbs.), or 6$\frac{13}{16}$*d.* a pound, as compared with £9 (Rs 90) a *khándi*, or 2¾*d.* a pound during the eighteen years ending with 1850 There is, therefore, at present a larger margin of profit to be divided among the producers and traders in Broach cotton than was formerly the case. The question, however, remains whether, if America was again able, as she was in the years from 1838 to 1850, to sell cotton in Liverpool at rates varying from 4⅞*d.* to 6½*d.* a pound, Broach cotton would now be in a better position than it then was to compete with the American produce. As detailed estimates of the items that go to form the cost of laying down Broach cotton in Bombay were prepared in 1847 by Mr. Davies, and in 1850 by Mr. Mackay, and are also, through the kindness of Mr. Cotton, of Broach, available for the year 1875, a comparison of these different statements may be useful.

The elements of the price of Broach cotton ready for export in Bombay may be brought under two heads. I, the cost of raising the raw produce; II, the charges incurred in bringing the raw produce to the Bombay market Under the head cost of raising the raw produce, two items are included: (*a*) the state charge on the land cultivated, and (*b*) the actual cost of tillage. Precise information on these points cannot be looked for. The following estimates, framed by gentlemen who have made those questions their special study, are perhaps tolerably trustworthy guides. To ascertain the portion of the cost of production due to the pressure of the state demand, Mr. Davies, in 1847, estimated[1] that in Broach the average yield of clean cotton per acre was about eighty pounds, or but slightly more than one-tenth part of a Bombay *khándi* of 784 pounds of clean cotton. At the rate of assessment then in force, the government demand on those ten acres would, Mr. Davies calculated, amount to £4 17*s* 3*d.* (Rs. 48-10). Mr. Mackay, in 1850, estimated[2] the average outturn of clean cotton per acre at about 100 pounds, or

[1] Statement forwarded with his report of 28th January 1847 to the Committee of Inquiry into the decline of the Bombay cotton trade, 1846.—Return East India Cotton, III, 33 (1857)

[2] Mackay's Western India, 159.

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Cost of production, 1847-1875.

about one-eighth part of a Bombay *khándi*. The total state demand on an area of eight acres amounts, according to Mr. Mackay's calculations, to £1 1*s*. 6*d*. (Rs. 40-12). In his article on the cultivation of cotton, Mr. Beyts has accepted Mr. Davies's estimate of eighty pounds of clean cotton per acre, or about one-tenth of a Bombay *khándi*, as an average outturn for a series of years for the whole land of the district. As the average government assessment was in 1873-74 estimated to be 8*s*. 6*d*. (Rs 4-4) per acre,[1] this latest estimate would fix at £4 5*s* (Rs 42-8) the state demand from the land required to produce a Bombay *khándi* of cotton. The following are the estimates of the cost incurred by the cultivator in growing a Bombay *khándi* of clean cotton. In the statement quoted above, Mr. Davies does not go into the details of the question of cost of cultivation. His estimate shows a total charge under this head of £1 12*s*. 4½*d*. (Rs. 16-3).[2]

Mr. Mackay considers the average cost of cultivation to be about 6*s* 6*d* (Rs. 3-4) per acre, or, on the eight acres required, according to his calculation, to produce a Bombay *khándi* of cotton, a total outlay of £2 12*s* (Rs 26). To this he adds an item of 6*s* interest on money borrowed, making the total cost of tillage £2 18*s*. (Rs. 29).[3] Mr. Beyts estimates the average cost of cultivation at 14*s* (Rs 7) per acre, or, on the ten acres required, a total outlay of £7 (Rs. 70). The cost of producing the raw material is, therefore, according to Mr. Davies (1847)—government land cess, £4 17*s*. 3*d*. (Rs 48-10); cost of tillage, £1 12*s* 4½*d* (Rs. 16-3); total cost of production, £6 9*s*. 7½*d*. (Rs. 64-13). According to Mr. Mackay (1850)—government cess, £1 1*s* 6*d* (Rs 40-12); cost of tillage, £2 18*s* (Rs 29); total cost of production, £6 19*s* 6*d* (Rs 69-12). And according to Mr Beyts (1875)—government cess, £4 5*s*. (Rs 42-8), cost of tillage, £7 (Rs 70); total cost of production, £11 5*s*. (Rs. 112-8).

Forwarding charges, 1847-1875.

The charges incurred in preparing and forwarding the cotton to market can be more accurately ascertained than the cost of producing the raw material. Mr Davies (1847) estimated that of a total cost of £7 11*s* 7½*d* (Rs 75-13) on a Bombay *khándi* of clean Broach cotton in Bombay, £1 2*s*. (Rs. 11), or 14½ per cent of the whole amount, consisted of preparing and forwarding charges. This sum of £1 2*s*. (Rs. 11) was made up of the following items —

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[1] Government Resolution at p. 134 of the Broach settlement report, 9*s*. 11*d*. (Rs. 4-15-3) is the average assessment for Broach sub-division, the most highly assessed portion of the district.

[2] Mr. Davies's statement, Blue Book III, 32.—See, however, Mr. Davies's answers to a set of questions proposed by the Hon. Mr. Willoughby (1850), Blue Book III, 98 (1857), where he gives an average cost of cultivation at 7*s* (Rs 3-8) per acre, 3*s* 7*d*. (Rs. 1-12-8) per *bigha*, considerably different from the estimate quoted above.

[3] Mackay's Western India, 159.

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Forwarding charges, 1847-1875.

Statement showing the Forwarding Charges on 784 pounds of clean Cotton, 1847.

Mr. Davies' estimate.	£ s. d	Rs. a. p.
Dealer's profit	0 10 0	5 0 0
Broach broker's commission ..	0 3 0	1 8 0
Shipping to Bombay ...	0 8 0	4 0 0
Cartage .	0 1 0	0 8 0
Additional charges.[1]		
Bombay native agents	0 3 6	1 12 0
Miscellaneous charges	0 0 9	0 6 0
Repressing for export, and shipping charges	0 14 0	7 0 0
	2 0 3	20 2 0
Add—		
Cost of producing the raw materials as first estimated	6 9 7½	64 13 0
Total cost on a Bombay *khandi* of Broach cotton ready for export	8 9 10½	84 15 0
Bombay charges at 5½ per cent on £8 10s (Rs 85)	0 9 4½	4 11 0
	8 19 3	89 10 0

1 The remaining charges, not taken into account by Mr Davies, are added from Mr Mackay's (1850) and Mr Cotton's (1875) estimates.

That is, in 1847, of £8 19*s.* 3*d.* (Rs. 89-10), the total cost of laying down the cotton at the place of export, £6 9*s.* 7½*d.* (Rs 64-13), or about 72 32 per cent, represented the cost of producing the raw material, and £2 9*s.* 7½*d.* (Rs. 24-13), or 27 68 per cent, were spent in preparing and bringing the raw produce to market.

Mr. Mackay (1850) estimated that of a total cost of £9 9*s.* 10½*d.* (Rs. 94-15) on a Bombay *khándi* of Broach cotton ready for export at Bombay, £2 10*s.* 4½*d.* (Rs 25-3), or 26 53 per cent, of the whole amount consisted of preparing and forwarding charges. This sum of £2 10*s* 4½*d.* (Rs. 25-3) was made up of these items .—

Statement showing the Forwarding Charges on 784 pounds of clean Cotton, 1850.

	£ s. d	*Rs. a p.*
Dealer's profit ...	0 14 0	7 0 0
Transport to place of shipment	0 2 3	1 2 0
Freight to Bombay .	0 6 0	3 0 0
Bombay native agent's commission	0 3 6	1 12 0
Minor charges in Bombay	0 0 9	0 6 0
Repressing and shipping charges ..	0 14 0	7 0 0
Bombay charges, at 5½ per cent, on £9 (Rs. 90) .	0 9 10½	4 15 0
Total.	2 10 4½	25 3 0

That is, in 1850, of £9 9*s.* 10½*d.* (Rs. 94-15), the total amount realized at the place of export, £6 19*s.* 6*d.* (Rs. 69-12), or 73 47 per cent, went to the cultivator, and £2 10*s.* 4½*d.* (Rs. 25-3), or 26·53 per cent, were spent in preparing and bringing the raw produce to market. It will be noticed that neither Mr. Davies nor Mr. Mackay has made

any allowance for cleaning or pressing charges. Under the system in force before the introduction into Broach of steam-ginning machinery, cotton-seed was considered to belong to the dealer, who was also the cleaner and presser. As this seed was a valued article of food for milch cows, its price repaid the dealer, not only for the cost of cleaning, but for pressing and local storage as well. Sometimes, even after meeting these charges, the seed left a margin of profit. As Mr Davies wrote in 1847, "occasionally, in these hard times, the dealer makes more profit out of the seed than out of the cotton."

Mr. Cotton (1875) estimates that, under the present system, of £14 0*s.* 6*d.* (Rs. 140-4), the total charges of preparing and laying down a Bombay *khándi* of Broach cotton in Bombay ready for export, £2 15*s.* 6*d.* (Rs. 27-12), or 19 78 per cent, represent forwarding charges. The total sum of £2 15*s.* 6*d.* (Rs. 27-12) is made up of the following items:—

Statement of Forwarding Charges on 784 pounds of clean Cotton, 1875.

	£	*s*	*d.*	Rs.	a.	p.
Cartage from village to ginning-factory ...	0	6	0	3	0	0
Ginning at £1 7*s* 6*d.* (Rs 13-12) on a Broach *khándi* of 860 lbs, on a Bombay *khándi* of 784 lbs.	1	5	0	12	8	0
Pressing at 9*s.* (Rs 4-8) per bale—two bales ..	0	18	0	9	0	0
Other charges at Broach	1	0	0	10	0	0
Bombay charges, 5½ per cent, on £20 (Rs. 200)	1	2	0	11	0	0
Shipping charges, at 1*s.* 6*d* (12 as) a bale	0	3	0	1	8	0
	4	14	0	47	0	0
From this total of £4 14*s.* (Rs 47) has to be taken the value of cotton seed under existing arrangements returned by the ginner to the owner of the cotton This seed is worth 14*s.* (Rs 7) per *bhár*, or £1 18*s* 6*d* (Rs. 19-4) per Bombay *khandi* ...	1	18	6	19	4	0
Total	2	15	6	27	12	0

On the present average price of £20 (Rs. 200) for a *khándi* of good fair Broach cotton, this sum of £2 15*s.* 6*d.* (Rs. 27-12) forms a charge of about 13·87 per cent, leaving 86·13 per cent to the cultivator.

This estimate would seem to show that, though actually heavier, the preparing and forwarding charges are, relatively to the present rates realized by Broach cotton, lighter than they were before the introduction of steam power into Broach. If, however, the price of good fair Broach cotton were to fall to £10 (Rs. 100) per *khándi*,—and this is an estimate ten per cent higher than the average actual prices during the eighteen years ending with 1850,—the present charges for bringing it to market would seem to form a heavier burden on the cotton than the corresponding cost under the former system. A few of the items are percentage charges, and those would be reduced. But, according to Mr. Cotton's estimate, it would seem that, after all deductions have been made, the forwarding charges on a *khándi* of cotton worth £10 (Rs. 100), would not, at present rates, fall below twenty per cent. The following statement shows, in tabular form, the estimates of the comparative cost of the present and of the former arrangements for exporting cotton from Broach:—

THE COTTON TRADE.

Statement of the cost in Bombay of 784 pounds of clean Broach Cotton, 1847-1875.

		Cost of producing the raw material			Forwarding charges.			Total.		
		Rs. a.	£ s.	d	Rs. a	£ s.	d	Rs. a.	£ s.	d.
1847	Mr. Davies	64 13	6 9	7½	24 13	2 9	7½	89 10	8 19	3
1850	Mr. Mackay	69 12	6 19	6	25 3	2 10	4¼	94 15	9 9	10½
1875	Messrs Beyts and Cotton	112 8	11 5	0	27 12	2 15	6	140 4	14 0	6

Value of Broach cotton, 1840-1875.

With regard to the second point, whether, under existing arrangements, Broach cotton comes to market in a cleaner state than it formerly came, it would seem that, although its condition varies considerably from year to year, the character of machine-ginned Broach cotton shows on the whole, since 1871, a marked improvement. Contrasted with the other chief varieties of Indian cotton, the returns in the margin show that since 1871 the value of machine-ginned Broach has risen 9·87 per cent as compared with Dholera, 9·40 per cent as compared with Umráwati, and 11·92 per cent as compared with saw-ginned Dhárwár. Again, when contrasted with American cotton, the marginal statement would seem to show that, as compared with the ten years before 1850, the excess value of American cotton over Broach has for the ten years ending with 1875 fallen from 34·62 to 17·41, a decrease of 17·21 per cent.

Statement showing the average values per Bombay khándi of the undermentioned varieties of East India Cotton, 1871-1875.

Year	Dholera	Umráwati.	Machine ginned Broach	Saw-ginned Dhárwár
	£ s. d	£ s. d	£ s. d	£ s. d
1871	20 10 0	20 12 0	21 15 0	21 6 0
1872	23 10 6	24 16 0	25 16 0	25 3 6
1873	20 5 6	20 15 6	22 10 6	20 13 6
1874	17 11 0	18 3 6	19 13 6	18 4 0
1875	18 2 0	18 6 0	21 9 0	18 9 0

Statement showing the relative Liverpool values in pence per pound of Broach and American Cotton, 1840-1875

Ten years' average.	Broach cotton (Surat).	American cotton (Uplands)	Percentage excess in value of American cotton
1840-49	3 87	5 21	34 62
1866-75	8 73	10 25	17 41

Grain.

Among exports, grain stands next in importance to cotton. The articles exported under the head of grain are wheat to Bombay, and Indian millet to Káthiáwár and Cutch. The amounts under each of these heads are not shown separately. From the sea traffic returns, it would seem that between 1837 and 1847 the annual total quantity of grain exported by sea was valued at £13,902 (Rs. 1,39,020), rising from that to £34,914 (Rs. 3,49,140) between 1856 and 1862 till, between 1865 and 1870, it reached £48,709 (Rs. 4,87,090). In 1874 it had again fallen to £25,245 (Rs. 2,52,450). From the railway returns, it appears that during the years from 1870 to 1874 there was an average export of grain by land from all the five stations of the district of 2,799 tons, valued at £20,992 (Rs. 2,09,920). The

stations from which the greatest export of grain takes place are Broach and Ankleswar.

Mahura flower.

The export next in value to grain is the flower of the *mahura* (Bassia latifolia), a forest tree which abounds in the Baroda and Rájpipla territories. The flower is gathered in the hot weather, and purchased principally by Pársis of Broach, who consign it in large quantities to the Bombay arrack distillers. Its transmission from the interior to the place of export gives employment to a considerable number of carriers belonging to Broach. The average annual value of the export of *mahura* from the Broach ports between 1837 and 1847 was £23,978 (Rs. 239,780). Since then it has fallen off till, in 1874, it was only £15,258 (Rs 1,52,580). The railway returns show a total export in 1874 of thirty tons, valued at £114 (Rs. 1,140). The falling off in the export of *mahura* flowers is said to be due to the exportation by rail direct from Baroda and other stations to Bombay. The present exports by sea are shipments to Cutch and Káthiáwár.

Opium.

Between 1837 and 1847 the average yearly value of Málwa opium shipped to Bombay from Tankári was £551,267 (Rs. 55,12,670). This export has now ceased, as the Málwa opium is taken by rail to Bombay.

Piece-goods.

"The value of the piece-goods exported from Broach," wrote Mr. Davies in 1849, "has during the last few years declined very greatly." "These exports," he adds, "represent the last remnant of the coarse fabrics, the produce of Broach, Baroda, and of a few other towns in the interior, which are fast yielding to English cottons." In the ten years ending with 1847 the average annual value of the piece-goods exported from Broach by sea was £15,152 (Rs. 1,51,520); between 1856 and 1862 the total fell to £4,640 (Rs. 46,400); and from 1865 to 1870 was further reduced to £1,121 (Rs. 11,210.) In the sea traffic returns for 1874 piece-goods no longer appear as an article of export. The railway returns would seem to show, for the five years ending 1874, an average yearly export of piece-goods from Broach of sixty-six tons, valued at £7,392 (Rs. 73,920). The exports under this head would seem, on the whole, to have increased slightly within the last few years, the return in 1874 showing sixty-four tons as compared with forty-eight tons in 1870.

The following gives some of the fluctuations in the chief articles of import:—

Yarn.

Under the head of cotton-tape, twist, and yarn, the sea traffic returns show that before 1850 yarn was a somewhat considerable import. For the ten years ending with 1847 the average annual amount imported was valued at £31,570 (Rs. 3,15,700). Between 1865 and 1870 the corresponding figures would seem to have fallen to £891 (Rs. 8,910), since which time the import of yarn has again risen to £4,299 (Rs. 42,990) in 1874. The railway returns of 1874 show a total import of sixty-one tons of yarn, valued at £7,602 (Rs. 76,020.)

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The grain imported into Broach is chiefly rice from Dáhánu, Bassein, and other ports of the northern Konkan. The returns for the different varieties of grain are not shown separately. But it would seem that the annual value of the grain imported by sea has gradually fallen from £22,828 (Rs. 2,28,280) for the ten years ending with 1847, to £3,355 (Rs. 33,550) in 1874. On the other hand, a land import trade in grain has been developed by the railway, which in 1874 amounted to 7,241 tons, valued at £43,446 (Rs. 4,34,460).

Metals.

The import of metals by sea has passed through the following fluctuations. From 1837 to 1847 the average annual import was valued at £15,902 (Rs 159,020), an amount which, between 1856 and 1862, rose to £39,291 (Rs. 3,92,910), and has again fallen to £11,200 (Rs. 1,12,000) in 1874. On the other hand, the railway returns show an advance under the head of metals from £45,600 (456 tons) in 1868 to £117,800 (1,178 tons) in 1874. The total imports for 1874 are, therefore, £129,000 (Rs. 12,90,000). The marked increase under this head is probably chiefly due to the machinery brought into the district for the different steam cotton-factories lately completed, or still under construction.

Sugar.

The import of sugar was, according to the returns of the sea traffic from 1837 to 1847, valued on a yearly average at £20,774 (Rs. 2,07,740); from 1856 to 1862 at £31,767 (Rs. 3,17,670); from 1865 to 1870 at £30,872 (Rs. 3,08,720); and in 1874 at £1,129 (Rs. 11,290). The railway returns show, for the five years ending with 1874, an average import of sugar and molasses of 3,557 tons, valued at £71,140 (Rs. 7,11,400).

Piece-goods.

Before 1862 the average yearly value of the piece-goods imported by sea into Broach would seem to have remained pretty nearly constant at about £61,250 (Rs. 6,12,500). Since 1862 there has been a rapid falling off till, in 1874, no piece-goods at all would seem to have been sent to Broach by sea. The railway returns show, for the five years ending with 1874, an average yearly import of 428 tons of piece-goods, valued at £47,936 (Rs. 4,79,360).

Timber.

Timber is brought into the Broach district from two sides,—by sea from Balsár and from the Malabar coast, and by land from the forests of the Rájpipla state. Before the opening of the railway (1861) the returns would seem to show that at Broach there was no import of timber, and a considerable export, valued on an average, between 1837 and 1847, at £1,597 (Rs. 15,970), and rising to £16,372 (Rs. 1,63,720) between 1856 and 1862. This export was probably timber that had come from Rájpipla and was sent up the coast to Cambay, or shipped for the ports of Káthiáwár and Cutch. By the opening of the railway the course of the trade in timber was changed. Wood was brought from Rájpipla to Ankleswar, and despatched by rail to northern Gujarát. At the same time increased demand for fuel for the cotton-factories in Broach, and, perhaps, the greater ease with which timber could be sent northwards by rail, has of late years increased the import by sea, and diminished the export. The following statement shows, in tabular form, the changes in the course of the timber trade that followed the opening of the railway:—

Statement showing the quantity and value of the Timber exported and imported before and after the opening of the line of Railway.

Timber.

Year	By Sea				Year.	By Rail			
	Import.		Export.			Inward.		Outward.	
	Quantity in tons.	Value in £	Quantity in tons	Value in £		Quantity in tons	Value in £ at £7 per ton	Quantity in tons.	Value in £ at £7 per ton
1837-1847	..		.	1,597	1868	1,464	10,248	4,012	28,084
					1869	4 800	33,600	3,897	27,279
1856-1862	.	71		16,372	1870	515	2,205	3,541	24,717
					1871	122	854	3 204	22,428
1865-1870	.	14,828		13,356	1872	239	1,673	3,862	27,034
					1873	292	2,044	3,902	27,314
1874-1875	...	15,122	161	256	1874	808	5,656	3,227	22,589

Internal trade.

The internal trade of the district is centred in the towns of Broach, Jambusar, and Ankleswar, and to a less extent in A'mod and Hánsot. The wholesale traders of Broach and Jambusar deal direct with Bombay merchants in cotton, piece-goods, cocoanuts, *mahura*, sugar, and spices. From the Broach and Jambusar dealers, the traders of Ankleswar, A'mod, and Hánsot, as a rule, get their supplies. Almost every village has a shop-keeper, generally a Hindu, by caste a Wánio or a Ghánchi (oil-presser). In a few villages he is a Musalmán of the Bohora class of cultivators. He keeps for sale grain, clarified butter, oils, molasses, dates, and dry spices. He has no direct dealings with Bombay or other non-local capitalists, but gets the articles he wants from a trader in his district town. Townspeople, as a rule, buy from the different shop-keepers in their town. Except when large purchases have to be made, as on the occasion of a marriage or a death, villagers buy grain, clarified butter, oil, and molasses in the village shop. For sugar and other spices, and for such articles as combs, hair-oil, glass-bracelets, and spangles, they go to the chief town of the sub-division. The village shop-keeper does not generally keep cloth for sale. The villagers, who have clothes to buy, purchase coarse cloth from the Dhers, by whom this kind of cloth is woven, or go into the nearest town to buy. In towns cloth is bought either from the cloth-shops or from pedlars. These pedlars are of two classes, *chhipás*, or calico-printers, who sell prints, *sállás*, and dyed cloths, *chhidris*, worn by women, and Musalmán hawkers from Bombay, generally of the Meman class. These men go about in towns from house to house offering cloth for sale. They also attend fairs; but, except on such special occasions, they do not go into the rural parts of the district. There is no custom in Broach of holding village markets on certain days.

Consumption.

With regard to the consumption of imported articles, it would seem that the total imports have risen in value from £246,235 (Rs. 24,62,350), the average of the ten years ending with 1847, to £616,177 (Rs. 61,61,770) in 1874. Besides this increase in the value of the total amount brought into the district, it would seem that at present a larger share of the imports is consumed within the district than was formerly the case. In 1849 the bulk of the imports found

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Consumption.

their way to Baroda, Sindia's territory, and Málwá.[1] At present, of £616,177 (Rs. 61,61,770) the whole amount imported, £280,089 (Rs. 28,00,890), or 45·46 per cent, are re-exported; £204,944 (Rs. 20,49,440) leaving the district by land, and £75,145 (Rs. 7,51,450) by sea These and other deductions reduce the total value of imports consumed in the district to £255,330 (Rs. 25,53,300).[2]

In 1849.

In 1849 Mr. Davies was of opinion that in the Broach district the consumption of foreign produce was extremely small, and was confined almost entirely to the larger towns and to the non-agricultural classes. "The common cultivators," he wrote, "everywhere dress in home-spun cloth, and none but the wealthier Hindus, Muhammadans, and Pársis ever wear English piece-goods. Sugar and spices are known to the mass of the people not as necessaries, but as delicate luxuries, to be indulged in only on festive occasions Iron is used to a very limited extent, as the carts and implements of husbandry are constructed with a view to save its expense. Copper serves principally to supply household culinary utensils." The yearly consumption of imported articles by the large mass of the non-manufacturing classes, Mr. Davies in another place calculates at 'the small sum of five shillings per head.'

In 1874.

At present (1874) the imports for private consumption in the district represent, as estimated above, a consumption of about 14*s.* 6¼*d.* (Rs. 7-4-7) per head of the total population. In 1874 the imports of cloth and sugar alone amounted to £86,064 (Rs. 8,60,640): that is an average expenditure per head of about five shillings (Rs. 2-7-2). Besides, in the matter of cloth and sugar, an increase in the quantity imported is observable, chiefly in the case of vegetables, fruits from all parts of Gujarát, and Bombay furniture. The increase in fruits and vegetables would seem to be due to the ease with which such articles can now be brought from distances fresh to market. The larger consumption of cloth and furniture is said to be the result of the change that has of late years taken place in the habits of the town and city people.

Cloth manufacture.

Manufactures.—In ancient times (A D 200) cloth is mentioned as one of the chief articles of export from Broach, and in the beginning of the seventeenth century, when the English and Dutch settled in Surat, it was the fame of its manufactures of cloth that led them to establish factories in Broach. The kinds of cloth for which Broach was specially known at that time would seem to have been *báftás*, broad and narrow dimities, and 'other fine calicuts.' The gain to the European trader of having a factory at Broach was that he might oversee the weavers 'buying up the cotton-yarn to employ them all the rains, when he sets on foot his investments that they may be

[1] Mr. Davies' Statistical Account, 1849.

[2] The difference between this amount and £336,088, (£616,177—£280,082), the net value of imports, arises from subtracting the greater part of the values of such articles as metal and bagging, which are not used for private consumption. A further sum of five per cent has also been subtracted to represent the goods finally consumed in Rájpipla.

Cloth manufacture.

ready against the season for the ships.'[1] About the middle of the seventeenth century (1660) Broach is said to have produced 'more manufactures and those of the finest fabrics than the same extent of country in any other part of the world, not excepting Bengal.'[2] A hundred years later (1778-1783),[3] Mr. Forbes writes: "These manufactures, from the finest muslin to the coarsest sail-cloths, employ thousands of men, women, and children in the metropolis and adjacent villages. The cotton-cleaners and spinners generally reside in the extensive suburbs of the chief town. The weavers' houses are mostly near the shade of tamarind or mango trees, under which, at sunrise, they fix their looms and weave a variety of cotton-cloth with very fine *báftás* and muslins. Surat is more famous for its coloured chintzes and piece-goods. The Broach muslins are inferior to those of Bengal and Madras, nor do the painted chintzes of Gujarát equal those of the Coromandel coast"[4] The following varieties of cloth, now no longer in use, were, according to a letter in one of the Broach diaries for 1777, at that time manufactured in Broach: *Nekáni*, made of cotton fine yarn and used for shirts; *jinghin*, made of cotton thick yarn, used by Europeans and others for pantaloons; *adadhia*, used by poor people for shirts; *káli chokdi* and *lál chokdi*, used by females for petticoats, drawers, and bodices; *chároli, fofli, laliári, bhotra*, were made of cotton coarse yarn, and used for pantaloons and bed coverlets; *dodhgaji*, used for *dupatás*; *doria, dúsar, báfta*, or *básta* and *chárkháni*, used for *angarkhás* (coats) and *jáma* (long coats); *párákuni*, made of very fine yarn, and used by rich men for coats; *kúran*, made of white and black yarn; *dhingáli* and *loghi*, used by females for aprons; *asávli*, made of very fine yarn, and used for *jáma* (long coats); *máti* and *móra báfta*, used for clothing; *musáfi, rakbun*, made chiefly for exportation to Persia, Arabia, and to other places. Of the other kinds of cloth mentioned in this list, *sádi* (females' robes), *rumál* (handkerchiefs), *chhit pághdi* (turbans), *dupata* (plaids), *towál* (table cloths), *kámli* (blankets), are still manufactured.

The chief varieties of cloth woven in 1820 were the coloured cottons, generally known by the term piece-goods; coarse white cotton cloth, called *doti*, as well as coarse chintzes, turbans, and other articles of native wear. Besides these, the Pársi weavers made fine *dhotis, báftás*, and *doriás*, much esteemed throughout the country; they also made fine checkered cloths, and imitated any pattern of Scotch plaid or doylees. The best *dhotis* and *báftás* resembled English cambric muslin, but did not come near it in regularity of texture, and as, even on the spot where they were made, English cloth of superior quality could be obtained at about half the price of

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[1] Anderson's English in India, 86 (1672-1681).

[2] Milburn's Oriental Commerce, II., 156.

[3] Forbes' Oriental Memoirs, II., 222.

[4] The following are the details of the investment for England provided at Broach, 1683. 17,000 pieces broad *báftás*, viz., 9,000 white, 4,000 blue, and 4,000 black, such as the Dutch provided for the European markets; 4,000 pieces *sawágajis*, white; 9,000 *báftás*, narrow, white; 4,000 taffers, broad, 6,000 niccanneers, 13 yards long, 15,000 gani stuffs; total pieces 55,000.—Orme's Fragments, 287.

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Cloth manufacture.

the *dhotis* and *báftás*, this manufacture was going rapidly to decay. The average annual value of the cloth of all descriptions manufactured at Broach for exportation amounted, at that time, to about £42,500 (Rs. 4,25,000).[1]

Writing in 1849, Mr. Davies says[2]: "Nothing can be more widely different than the state of Broach as depicted by Colonel Williams, and its present (1849) condition. The contrast is, indeed, a most melancholy one. The cloth manufacture, valued at upwards of £40,000 (Rs 4,00,000) per annum, is now estimated to employ a capital of barely £1,000 (Rs. 10,000). The Pársi weavers have long since emigrated to more promising markets, and all that Broach can now boast of is a manufacture of table-linen to order, and of a few *dhotis* and *doriás* of a fancy description. The whole of the yarn used in weaving these articles is imported from England. Of the coarse coloured cloths in Colonel Williams's time exported to Arabia by the Surat pilgrim vessels, not one-thousandth part is now produced; dyed coarse long-cloths, Turkey-reds, and sheetings, the outturn of the Manchester looms, having entirely superseded them in the Arabian and Persian markets."

In spite of the increased competition of the produce of steam factories in Bombay, Surat, and Ahmedábád, the hand-loom weaving in Broach is said, within the last year or two, to show signs of reviving. Mr. White, the collector of Broach, says in his administration report for 1874-75, "*dhotars, súllás, sáris,* and *rajáis* are still woven. The last-named article is sometimes partly of silk and partly of cotton. At the Broach exhibition (1868) some good specimens were exhibited, and since then the manufacture, which was on the decline, seems to have begun to revive." Cotton *rajáis* cost from 6*s.* to 10*s.* (Rs. 3 to 5), and silk and cotton ones from £1 10*s.* to £2 10*s.* (Rs. 15 to 25). The cause of the slight increase of manufactures of this class may, perhaps, be found in the low prices at which yarn may at present be bought, and, as compared with ten years ago, the much diminished cost of living to a weaver and his family.

Weavers.

The weavers of Broach belong to two classes,—in the villages the Dhers, who manufacture *doti* cloth; and in the larger towns Musalmáns, who, to a small extent, still keep up the old manufacture of fine cotton cloth. There are no returns to show the extent to which cloth is produced and consumed in the district. Roughly it has been calculated that, of total local yearly consumption of about 400 tons of cloth, fifty per cent are imported from Europe, twenty per cent are the produce of Indian steam factories, and thirty per cent are woven in local hand-looms. Though among villagers the old hand-made *doti* cloth is still, to a large extent, the regular wear, in towns the consumption of the finer classes of cotton goods is said of late years to have much increased. The demand for sail cloth consumes a considerable quantity of *doti*. In many cases the sailors or their wives spin the thread, and hand it over to Dhers to be

[1] Colonel Williams' Memoir, 57.

[2] Mr. Davies' Statistical Account, 1849.

Weavers.

woven. To the weavers the sailors pay at the rate of ¾*d.* a foot (one anna a *gaj*), or 4*s.* for a piece about forty feet long (Rs. 2 for 20 *gaj*). A clever worker can in a day weave thirty feet (fifteen *gaj*), and an average worker twenty feet (ten *gaj*). The trade returns would seem to show that, though there is no longer any export of cloth by sea, the export by land has during the past five years increased from forty-eight tons in 1868 to sixty-four tons in 1874. No information has been obtained to show whether this export is of coarse or of fine cloth. Of other workers in cloth there were in 1872, according to the census returns, 715 souls. Of these, 241 were dyers, and 474 calico-printers. These industries are confined to the larger towns of Broach and Jambusar There is said to be no local peculiarity in the work of the Broach dyers and calico-printers.

Other craftsmen.

Among other artizans, Mr. Forbes (1780) would seem to have found considerable intelligence and skill. "The silversmith," he says,[1] "works in a style of strength and neatness that answers every useful purpose; and the carpenters, except the heavy parts of the iron work, built a chariot in the English style." In 1820 Colonel Williams wrote: "For the internal consumption of the city and the surrounding country, articles of iron, copper, brass, wood, and leather are manufactured at as low a rate, and with as much skill, as in any of the great towns on this side of India The blacksmiths, carpenters, builders, turners, shoe-makers, and tailors, are as clever as any native tradesmen of the same description. The shoe-makers, in particular, are very extensively employed in making boots, shoes, and saddlery for European officers and soldiers in the northern parts of Gujarát, and the articles they produce are uncommonly cheap and good. Tents are also made by the tailors quite as well, and, perhaps, cheaper than they are made at Surat; the cloth, chintz, cotton-ropes, poles, and all the materials being manufactured on the spot." Before 1849, these skilled workers would seem to have deserted Broach. "As for artizans there is scarcely," Mr. Davies says, "a good smith or carpenter to be found in Broach; and the withdrawal of the European cavalry from Kaira did away with the manufacture of boots, shoes, and saddlery." Except knives, tools, and some other articles of hardware manufactured at A'mod, the work of no class of local artizans would seem at present (1875) to be held in any special esteem. At the same time the introduction of European machinery has, by the offer of highly-paid employment, discovered, especially among carpenters and blacksmiths, a high order of capacity and intelligence. "Many of the blacksmiths and other artizans," says Mr. Cotton, "are excellent workmen. Naturally of a keen intelligence, they quickly gain a knowledge of machinery, and learn to use English tools. With the same training the Broach blacksmith would, in fine work, equal, if not surpass, the average European workman."

Trade Guilds.

Trade Guilds.—Though less developed than in the richer city of Ahmedábád, there is, among the traders and craftsmen of Broach, an important trade organization of guilds distinct from the social

[1] Forbes' Oriental Memoirs, II., 223.

Chapter V. Trade. Guilds.

organization, of caste. Among these trade clubs, or societies, the merchants' guild, or *máhájan*, holds a specially high position. Among its members are the bankers, money-changers, agents, insurance-brokers, and cotton-dealers, the commercial *máhájan*, or city 'magnates.' Among the trades and callings whose members form distinct craft-guilds, are the grain-dealers, the grocers, the tobacco-dealers, the bricklayers, the dealers in ornaments, the oilmen, the rice-huskers, the palanquin-bearers, the weavers, the calico-printers, the coppersmiths, the indigo-dyers, the sizers, the Musalmán weavers, the fishermen, and the potters.

At meetings of the guild all members have a right to be present and express an opinion on any matter under discussion. Each craft has its headman, or *patel*, who gives the final decision. This position in the merchant guild was formerly held by the headman of the city, or *nagarseth*; but in Broach, though the hereditary title is still preserved, the duties of the office have, since 1817, been discontinued. Besides settling rates of insurance and exchange, the merchant guild, or *máhájan*, is the ordinary referee in disputes among the 'Lesser Arts.' The craft-guilds, or *panchs*, meet to settle disputes among their members, and to enforce the observance of certain trade holidays and rules.

In addition to trade matters, meetings are held to arrange for the guild feasts and for the expenditure of a part of the common funds on religious objects. One of the main sources of the revenue of the merchant guild, or *máhájan*, is a tax of from 6*d*. to 1*s*. on every bale of cotton. Except on cotton bills there is also a charge of ¾*d* on every bill of exchange negotiated. The receipts from these sources are applied to objects of charity and religion. The amount is paid to one of the native bankers of Broach, and is credited in his books to the guild fund. When the levy of these trade cesses was first agreed to most of the traders were Hindus, and so the greater part of the proceeds of the tax are spent on Hindu objects of religion and charity. The managers of different temples receive from the fund a yearly allowance, and from this source the committee, who superintend the hospital for animals, draw the greater part of their supplies. The objects do not always remain the same. Among the Hindus there are conflicting interests. One class of traders are followers of the Waishnav Maháráj*á*s, and another are Shrávaks. The fortune of trade varies. At one time the Waishnavs, at another time the Shrávaks, are in the ascendant. The cess on raw cotton was first levied not more than sixty years ago. The payment was at that time, perhaps, transferred from the declining trade in cloth to the rising export of raw cotton. At that time the Waishnavs were in power, and it was only about fifteen years ago that Premchand Ráichand, then the most powerful man in Gujarát, induced the cotton merchants of Broach to agree, for the benefit of his co-religionists the Shrávaks, to the imposition of an additional tax of two annas a bale. Europeans at first tried to free themselves from the tax, and refused to pay. But the local interests were too strong. The Europeans found that, until they paid, neither cultivators nor dealers would sell them cotton, and so, in the end, they were forced to yield. Subscriptions,

self-imposed cesses, and fines, are the ordinary sources of the income of the lesser companies. Besides these are some special devices for raising funds. Bricklayers, money-changers, and a few other classes charge new members an entrance fee of from £2 to £3 (Rs. 20 to Rs. 30), and grocers, grain-dealers, and tobacco-merchants, on certain holidays, allow only one shop to remain open, and, putting the monopoly to auction, credit the guild funds with the highest amount that is bid. As each family is supposed to support its own poor or helpless, the trade guild does not supply the place of a provident club. The chief part of its funds are spent on religious objects, or go to meet the cost of the guild feasts.

Guilds.

In December 1868 an industrial exhibition was held in the city of Broach.[1] Of live-stock the show was disappointing. The only really good collection of animals was the show of goats from the southern parts of the district of Surat. Of machinery there was a fair collection. Several articles had been specially chosen in England as likely to suit the wants of the cultivators and artizans of Gujarát. These attracted much attention from the native public. Numbers crowded round the different machines, scrutinized them acutely, and volunteered orders and cash for such articles as secured their confidence. Of produce and raw materials there was a good show. The grains, dyes, and seeds were particularly complete, as also the display of substances for food and manufacture. There was also a valuable collection of Gujarát woods, and a complete array of the cottons, silks, and embroidery of Ahmedábád, Broach, Surat, Sind, and Káthiáwár.

Exhibition, 1868.

[1] Report on the Broach Exhibition, 1868-69, by T. C. Hope, Esq., Bom. C.S.

CHAPTER VI.

CAPITAL.[1]

Chapter VI. Capital. Bankers.

In 1820 the Broach dealers are said to have been representatives of mercantile houses in Bombay, Surat, and Ujain, and now (1875), in the majority of cases, they are agents of Bombay firms. The census returns would seem to show that in 1872 there were in the district seventy-six persons engaged as professional bankers. Of these, fifty are entered as bankers proper other than money-changers, and twenty-six as bankers and bullion-dealers. These establishments of bankers are found only in the towns of Broach and Jambusar. By caste the Broach capitalists are almost all Wániás or Bráhmans. In the town of Broach a few are Pársis and Bohorás. The principal Wánia is said to have a capital of about £30,000 (Rs. 3,00,000), and there are two or three other merchants of the same caste worth, it is said, from £10,000 to £20,000 (Rs 1,00,000 to 2,00,000).[2] Wánia capitalists are, as a rule, professional money-lenders or cotton-dealers, *wakháría*, though some Wánia firms confine their business to banking proper and negotiating bills of exchange. Among the Pársis there are said to be one or two capitalists with property valued at about £10,000 (Rs 1,00,000) Men of this class have generally their money invested in cotton-presses and ginning-factories. The Bohorás are chiefly shop-keepers of the Dávdi class, with property of from £50 to £500 (Rs 500 to 5,000). In 1872-73, under the income-tax returns, 578 persons paid on incomes of from £100 to £200 (Rs. 1,000 to 2,000) ; 193 persons on incomes of from £200 to £1,000 (Rs. 2,000 to 10,000); and nine on incomes of from £1,000 to £10,000 (Rs. 10,000 to 1,00,000). The Broach banker keeps the same account books as the banker of Surat : (1) The cash book, *rojmel*, containing daily transactions of cash received and cash paid, with opening and closing balances. From this book items are transferred to the several accounts in the ledger, and its ledger page marked opposite each entry. (2) The bill register, *hundini nondh*, showing all bills of exchange issued and discharged. (3) The goods register, *málni nondh*, giving particulars of articles received and issued. (4) The journal, *ávaro*, bringing together for each day from the cash book, from the register of bills, and from other expansions, all transactions that have

[1] Details relating to money-lending are compiled from local answers to questions on money-lending The account of banking in Broach has been kindly furnished by N. R. Oliver, Esq., assistant collector of salt revenue.

[2] There were in 1815, according to Colonel Williams, five houses of money-lenders, possessing capitals of from £2,000 to £10,000 (Rs. 20,000 to 1,00,000).

taken place, both cash and adjustments. (5) The ledger, *khátáwahi*, containing an abstract of all the entries made in the *ávaro*, arranged in the order of their dates under the names of the various persons to whom they refer. (6) The account current book, *sámádaskat*, with a separate page for each client, where, when a transaction takes place, an entry is made in the client's handwriting. (7) The interest book, *viájwahi*, containing statements of interest due.

System of banking In 1847.

In the year 1847 an important change was introduced in the banking arrangements of the district. Before then the Broach revenue had been forwarded in bullion by sea to Bombay, while nearly an equal amount of cash had to find its way back to the district to pay for cotton exported. In 1849 Mr. Davies wrote: "The bankers of Broach and Jambusar have within the last two or three years become useful in transmitting the public revenue to the general treasury at the presidency town by negotiating bills drawn by purchasers of cotton at Bombay in payment of cotton shipped from Broach. By these means the whole of the revenues for 1847-48 and 1848-49 were remitted without recourse being had to the expensive, dangerous, and cumbrous medium of shipments in bullion by coasting vessels. A more healthy tone in the money-market was another advantage arising out of this mode of keeping up the circulation. Formerly much public inconvenience had at times been felt, and dissatisfaction expressed when large sums remained locked up for months together in the collector's treasury awaiting the means of shipment to Bombay. At the same time all risk to government was avoided by not cashing the bills until certificates of payment made at the general treasury in Bombay were duly received."

In 1875.

In 1864 the bank of Bombay established a branch in Broach, and for six years the business was conducted under the system described by Mr. Davies. Orders or supply bills in favour of the bank agent were drawn upon the treasury officer in Broach by the accountant general in Bombay. In 1870 a further change was introduced. The government treasury in Broach was handed over to the charge of the agent of the branch bank of Bombay, and since then the whole of the government surplus balances at Broach, and nearly the whole of the government balance in the Surat treasury, have been utilized by the bank at Broach in purchasing cotton bills. By this arrangement, besides doing away with the cost and risk to government of sending the surplus revenues from Broach and Surat to Bombay, the bank has been able to accommodate the cotton-dealers and others on easier terms than were possible under the former system. Since this change the rates of discount charged on cotton bills have considerably declined, varying from $\frac{6}{16}$ to $\frac{12}{16}$ per cent, instead of from a half to one per cent. The chief business of the branch of the Bombay bank in Broach consists in negotiating cotton bills. These cotton bills are presented at the bank either by the representatives of local companies, who have, on consideration of their property, a certain credit with the bank, or they are presented by the Broach agents of Bombay firms who have bought the cotton under orders received from Bombay. The bills are usually granted at eight days' sight. The agent of the Bombay bank sends the bills to Bombay, and when

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they fall due, they are presented by the Bombay bank, and paid by the firm on whose account the purchase of cotton was made. Eight years ago the export trade in cotton, as well as the financing of this trade, was in the hands of native dealers and bankers, chiefly Wániás and a few Pársis. But as the native bankers cannot compete with the low rates of discount charged by the Bombay bank, the greater part of the cotton trade is now (1875) carried on by Europeans and Eurasians, only about one-eighth remaining in the hands of local capitalists. Of the former bankers some are said to have shifted their head-quarters to Jambusar, where higher rates of discount still prevail, and others have invested their capital in cotton-presses and ginning-factories.

Insurance.

Formerly, when cotton was exported in large quantities by sea to Bombay, the business of marine insurance employed a certain number of capitalists. Some account of the Gujarát system of insurance has been given in the Statistical Account of Surat. In Broach insurance charges vary slightly, according to the season of the year, rising, as the risk of storm increases, towards the close of the hot-weather months. In 1850 the rates for insuring cotton stood at one and a quarter per cent. In 1875 the corresponding charges had greatly declined, varying from $\frac{1}{3}\frac{3}{2}$ to $\frac{2}{3}\frac{1}{2}$ per cent in the fair season (October to April), rising to $\frac{2}{3}\frac{3}{2}$ per cent in the stormy season (May and June).

Currency.

According to the census returns of 1872 the work of money-changing gave employment to 174 persons. In addition to their nominal occupation of exchanging copper coins for silver, these money-changers act as money-lenders, supplying to some extent the place of the class of professional usurers met with in Surat and Kaira.

In 1748, by the permission of Ahmad Sháh, the emperor of Delhi, a mint was established in Broach.[1] In its infancy the mint is said to have been but little resorted to. The standard was fixed at one part of alloy, lead, and copper, in equal parts, and 29½ parts of pure silver. In 1772 an additional quarter of alloy was added, and in 1782, on the cession of Broach to Sindia, the alloy was increased to three and a half parts. This standard remained in force till 1806. From a statement furnished by the collector, it would seem that between the years 1787 and 1800 £66,111 (Rs. 6,61,110), and between 1800 and 1806 £92,533 (Rs. 9,25,330) were, on an average, coined.

In 1850, of £315,000 (Rs. 31,50,000), the total amount in circulation, £140,000 (Rs. 14,00,000), or 44½ per cent, were the pieces coined by the nawábs of Broach.[2] According to the government assay table, as compared with the company's rupee, the value of the Broach rupee was about five per cent below par. But local prejudice had so far depreciated the Bombay coin as to raise the Broach rupee to one per cent only below par, and often for months together both currencies, though intrinsically so unequal, exchanged at par.

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[1] Collector to Government, dated 21st December 1806.

[2] Collector's report to Mint Committee, dated the 1st March 1849.

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At present (1875), except in five or six villages near the frontier, where the Baroda coin is in use, the ordinary currency of the Broach district is the government rupee. The old Broach coinage is still, however, sometimes met with, circulating at rates from one and a half to three per cent below the standard rupee.[1] At one time the Broach money-changers made some profit from the different varieties of copper coins in circulation. But before 1850 the native copper coinage had been superseded by 'that of the Bombay mint to the benefit of the lower classes, who had previously suffered from the constantly varying rates of the market.'[2]

Bills of exchange.

Bills of exchange, or *hundis*, are of two kinds—payable at sight, and payable after a certain interval. Bills payable at sight are generally issued on Ahmedábád, Wisnagar, Wadnagar, Pátan, and Kari, for British currency; and on Nánod, Pitlád, Borsad, Kaira, for Baroda (*bábásái*) currency. Bills payable after a certain interval are granted on the following stations:—

On Baroda, for Baroda coin,	payable after	10	days.
„ Surat for British currency	do.	10	„
„ Bombay do.	do	8	„
„ Páli, in Márwád do.	do.	30	„
„ Kota, Jávra, Partábgarh, Ratlám	do.	45	„

Traders and merchants in need of exchange bills on stations other than the above, obtain them from Bombay. During the cotton season (January to April), when money is in great demand, bills of exchange upon foreign merchants are granted at a premium of from $\frac{1}{16}$ to one per cent. In Jambusar there are bankers who give bills of exchange for sums up to £2,000 (Rs. 20,000).

Classes who save.

Saving is the normal state of almost all classes of the people. With the greater number this pinching is either in view of the cost of holding one of their great family festivals, or, as is more commonly the case, is a forced abstinence in the attempt to clear themselves from debt. At the same time, among almost all classes, there would seem to be some persons whose economy goes further than this, and who are able, from time to time, to add permanently to their stock of wealth Of townsmen, the chief savers are Wániás and Khedáwál Bráhmans. Men of these classes spend their every-day life so frugally, and manage their affairs with so much thrift, that many of them, from small incomes, are said to lay by a little from year to year. Other Hindus and Pársis live with less care than the Wániás. But some of them, especially among pleaders and the more highly-paid class of government servants, are in the receipt of incomes large enough to leave a margin for permanent saving. Among skilled artizans, some of the blacksmiths and carpenters employed at the cotton-factories, with wages as high as £30 (Rs. 300) a year, are said to spend not more than half of what they receive. Of the rural population, village shop-keepers, and about one-eighth of the cultivating classes, are said to save money.

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[1] Details regarding the withdrawal of Broach rupees are given in the Statistical Account of Surat, p. 204.

[2] Mr. Davies' Statistical Account, 1849.

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State securities.

The amount of money invested in state securities has within the last five years considerably increased. In 1870 only £28 (Rs. 280) were paid as interest to the holders of government paper. In 1872 the corresponding amount was £397 (Rs. 3,970). In 1874 it had risen to £942 (Rs. 9,420), representing, at the rate of four per cent interest, a capital of £23,550 (Rs. 2,35,500). The chief investers in state securities are government servants and Pársis. Within the last ten years the decline in the shipping trade, and the large share of business that has passed into the hands of Europeans, have deprived some of the old traders of their former investments. New industries have absorbed some of these funds. But it is by men of this class, especially among the Pársi traders, that the greater amount of government paper is said to be held.

Savings banks.

Fifty years (1820) ago savings were to a large extent placed in the hands of private bankers, who, on such deposits, allowed interest at the rate of three per cent.[1] Since that time the practice would seem to have fallen into disuse. Even with the bank of Bombay the amount of deposits is small,[2] while the credit of the native bankers has not recovered the shock of the failures that took place between 1864 and 1867. On the other hand, the popularity of the state savings banks has rapidly spread. In 1850 the total amount of deposits was £292 (Rs. 2,920); in 1860 it had risen to £863 (Rs. 8,630); in 1870 to £8,695 (Rs. 86,950); and in 1873-74 it stood as high as £37,037 (Rs. 3,70,370). In the past year (1874-75) a rule was introduced limiting to £50 (Rs. 500), the amount allowed to stand in one year at the credit of any one depositor In consequence of this change, the total has again sunk to £7,359 (Rs. 73,590). Of forty persons, with sums of money at their credit at the close of December 1874, four were Europeans, nine Hindus, and twenty-seven Pársis. No Musalmáns had savings lodged in the state bank.

Shares.

Within the last five years (1870-1875) a new opening for the investment of capital has been presented to the people of Broach. This opening is the offer of shares in the joint stock companies, to whom four of the thirty-one factories, at present at work in the Broach district, belong. Of £100,925 (Rs. 10,09,250), the total capital of these four companies, £16,050 (Rs. 1,60,500), or 15·93 per cent, are held by residents in Broach. Of the remaining shares, 128, representing £3,300 (Rs. 33,000), are held by residents in England; 3,731 shares, representing £75,020 (Rs. 7,50,200), by residents in Bombay; sixty-nine shares, of £5,430 (Rs. 54,300), are held in Surat; seven shares, of £105 (Rs. 1,050), in Ahmedábád; three, of £300 (Rs. 3,000), in Dholera; four, of £200 (Rs. 2,000), in Kháng áum; four, of £400 (Rs. 4,000), in Umráwati; and eight, representing £120 (Rs. 1,200), in Madras. Of 400, the total number of shareholders, sixty-seven are Europeans, 162 Hindus, twelve Musalmáns, and 159 Pársis. Of the Broach shareholders, four are Europeans, holding fifteen shares amounting to £700 (Rs. 7,000); ten

[1] Colonel Williams's Memoir, 58.

[2] The deposits held at the Broach bank in 1875 amounted to £7,675 16s. (Rs. 76,758).

are Hindus, holding sixteen shares amounting to £1,200 (Rs. 12,000); and forty-one are Párs, holding 160 shares amounting to £14,150 (Rs. 1,41,500). None of the Broach shareholders are Musalmáns.

Land.

Ten years ago, when money was abundant, a large part of the cultivators' gains was spent in building new houses, or adding to their old ones. Since that time, among the rural population but little money has been expended in this way. In the town of Broach, on the other hand, among well-to-do traders, pleaders, and others, many new dwellings have recently been built, and, owing to the rivalry of different families, large sums of money have been laid out upon them. Shops in Katappor and other large markets in the town of Broach, generally purchased as a speculation, are said to yield not less than seven per cent of interest on the money invested. But, with this exception, houses are seldom bought with the view of being let to tenants. On the other hand, the purchase of land is said of late years to have become a favourite form of investment among the successful pleaders and other non-professional money-lenders of the town of Broach. These men are said to hold alienated lands in government villages, and shares in alienated villages, and to be superior holders and occupants of government lands. As landholders men of this class do not invest money in improving the soil. So long as rent is properly paid, they are considerate to their tenants. But any failure is promptly followed by proceedings in the civil courts. Their rent is taken in coin, and not in kind.

Ornaments.

Except among the poorest classes, each family has its stock of ornaments of gold and silver. But these are generally not more than what are required according to the marriage rules of the caste. A man in easy circumstances may from time to time add to the family store of jewels. But his purchases are for show—articles of jewelry, or richly worked metal ornaments. He will not buy the plain bands of gold and silver, the favourite form of hoarding in Kaira.

Money-lending.

The reason for this is, that, except such small amounts as he wishes to keep by him for display, his savings are all put out at interest. It is, indeed, the peculiar feature of the system of money-lending in Broach, that transactions of this kind are almost entirely in the hands of non-professional money-lenders, who supplement the profits of their regular business by advancing small sums at high rates of interest. Of these lenders there are two sets, one of townsmen, and the other who generally live in the rural parts of the district. Of town money-lenders, the chief are pleaders, dealers, clerks in merchants' offices, government servants, and a few well-paid artizans. Of the country money-lenders, the chief are village shop-keepers, well-to-do cultivators, and cotton-dealers. By caste the town money-lenders are Bráhmans, especially of the Khedáwál sub-division, Bráhma-Kshatris and their priests, *purohits*, Wániás, Márwáris, and Párs. Of money-lenders who live in the country, the village shop-keepers and cotton-dealers are Wániás by caste. The money-lending cultivators in the northern parts of the district are Rajputs, Bohorás, and Kanbis; and to the south of the Narbada, Bohorás and Bráhmans of the Sajodra sub-division. Of professional money-lenders there are few

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in Broach. Bankers occasionally lend money, but only in large sums, and to persons of good credit.

Borrowers.

Most classes of the community are at times forced to borrow. Traders and shop-keepers require an advance with which to purchase their year's stock, and artizans and labourers are seldom in a position to meet from their own funds the expenses of the marriages and deaths that occur in their families. Of the rural population, it is said that no more than six per cent can, without borrowing, pay for the large sums they spend on feasts and entertainments. The want of money to pay rent, to meet the expenses of cultivation, or, in a few cases, to buy grain, forces field labourers and others of the poorer classes of the peasantry to seek help from money-lenders. Traders, shop-keepers of credit, and townspeople in a good social position, as a rule, borrow from bankers. They ask for advances of from £20 to £100 (Rs. 200 to Rs. 1,000), and are charged rates of interest varying, according to their individual credit, from nine to twelve per cent a year. Borrowers of this class, who are said to form from seven to ten per cent of the town population, are not required to give any special security by leaving an article in pledge, or by passing a bond on stamped paper. The entry in the ledger, *thán khátu*, will, in a majority of cases, be considered by the banker sufficient security. A few borrowers of this class, in order to get a loan on easier terms, may pledge ornaments or other valuables. But such a course is seldom taken. Even among well-to-do townsmen this practice of pledging ornaments is said to be unusual, and among the poorer classes of townspeople, and the whole rural population, it is unknown. Artizans, labourers, and the poorer class of townspeople, or about ninety per cent of the whole town population, have generally no house or land to mortgage, and no ornaments to pledge. They borrow from the non-professional town money-lenders,—the small capitalists, shop-keepers, money-changers, pleaders, and others, who are ready to put their savings out at interest. As a rule, they ask for advances varying from £1 to £10 (Rs. 10 to 100). In dealing with borrowers of this class, the money-lender takes a bond on stamped paper, containing, not unfrequently, a stipulation to repay the loan by monthly instalments, at rates of interest varying from fifteen to twenty-four per cent a year. But, besides these nominal rates of interest, an artizan or labourer will have to pay a premium, *mandámni*, varying, according to his credit, from one to three per cent of the sum borrowed.

Of the rural population, the better class of cultivators, if in need of money, generally go for an advance to the village shop-keeper, or to some well-to-do cultivator in their own or in a neighbouring village. Many of them, however, have dealings with some small capitalist in the nearest town, and a few, chiefly those who are known to have property, or who have started as traders, borrow from bankers in Broach or Jambusar. The best class of cultivators, who are estimated to form about six per cent of the whole rural population, obtain advances from bankers on almost the same terms as traders or other townsmen of credit. A rich cultivator borrows on personal security sums varying from £50 to £100 (Rs. 500 to 1,000), and pays

interest from nine to twelve per cent. Cultivators in less prosperous circumstances require, chiefly for the celebration of marriages and other family events, sums varying from £10 to £30 (Rs. 100 to 300). To obtain this amount they either seek the help of the village shop-keeper, of some well-to-do cultivator, or of a town money-lender. The terms of these different classes of money-lenders differ but little from each other. According to his own personal credit the borrower will find it easy or difficult to obtain the advance he wants. But in almost all cases cultivators, except the few known to be men of property, are asked, in the first instance, to mortgage their land If the borrower has property to mortgage, an advance of from £10 to £30 (Rs. 100 to 300) will be made, at rates of interest varying from nine to twelve per cent All classes of money-lenders are willing to take land in mortgage But this form of security is said to be specially approved of by well-to-do cultivators If the borrower obtains a loan on personal security, the terms, as to the rates of interest, the amount of premium, and the payment of instalments, will be of the same character as those made with artizans. As in the case of artizans, the rates charged vary according to the borrower's personal credit. But they are generally from fifteen to twenty-four per cent, with a premium of from one to three per cent The poorer classes of cultivators raise money on their growing crops, especially on cotton. Advances of this kind are made by the village cotton-dealer. In some cases the money is lent to a poor cultivator to help him to meet the cost of food, of rent, or of farming. In other cases, the payment is an earnest given to a well- to-do cultivator that the dealer may secure the crop when it is ripe In agreements of this kind the full value of the cotton is never advanced The amount is always from twenty to thirty per cent below the value of the growing crop, estimated according to the ruling rates in the previous year. In default of delivery, the cultivator is held to be bound to pay a sum from twenty to thirty per cent more than the value of his cotton in the preceding year.

Borrowers.

Grain advances.

About twenty per cent of the poorest class of cultivators and field labourers—Kolis, Talávias, Bhils, and Dhers—are said to require advances of grain for food or for seed. In return for loans of grain, the general rule is that, at harvest time, one-fourth more than the quantity received is repaid. In the Wágra sub-division higher rates are charged, varying from one and a half to double the amount advanced. Grain advances are generally repaid in cash, and seldom in kind. The lender keeps no separate account of dealings of this sort; and in almost all cases the borrower has to pass a bond on stamped paper for the value of the grain received. In addition to the nominal profit on such dealings in grain, the lender, when entering the advance in his books, adds to the ruling price, for every forty pounds, 3*d.* to 4½*d.* (2 to 3 as. a *man*).

Ordinarily a debtor has current dealings with only one creditor But many of the poorer class of cultivators are said to be indebted to more than one money-lender. Great competition among small capitalists, dating from 1862, would seem still to continue, and so it happens that, when a creditor refuses to make further advances

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Competition among money-lenders.

to one of his clients, the debtor can generally find some needier money-lender willing to accommodate him at higher rates. Any further dealings the debtor has will be with this last money-lender, and the debtor will sometimes obtain from his new banker a sum sufficient to meet the demands of the original creditor. But oftener, when a borrower has sunk deep into difficulties, there is a scramble among his creditors to secure the first attachment on his property. Though, when there seems to be no prospect of recovering the full amount, they are said sometimes to compromise their claims, money-lenders seldom write off old debts as irrecoverable, or suffer the period of limitation to lapse without taking the precaution of having the bond renewed.

Mortgage of labour

In some of the villages the headman, or other well-to-do cultivators have labourers, chiefly Bhils, Talávias, and Kolis, who, on payment of a sum of money towards the expense of a marriage or a funeral, have agreed to act for a certain period as their creditors' servants. An engagement of this kind generally lasts for about a year, though sometimes the borrower will consent to serve for as long as two or three years These servants are bound only by a verbal agreement; but they are said to be faithful to their promise, not engaging their services to any other master In such cases the creditor has no claim over the services of his debtor's wife or children.

Rates of interest.

The rates of interest paid by cultivators and heads of villages to sureties and other money-lenders before the introduction of British rule into Broach, and afterwards during the period (1783-1803) of Marátha possession, would seem to have varied from forty-eight to sixty per cent per annum.[1] During the time of Colonel Williams' survey (1811-1820), the rates of interest were limited by law to twelve per cent. But this regulation would seem to have been successfully evaded by adding the interest to the principal, and taking a new bond for the whole as principal, 'exactions to which the necessities of the borrowers compelled them to submit.'[2] In 1846, on all valuable deposits money was readily advanced at from six to sixteen per cent per annum For agricultural purposes the higher class of cultivators paid from nine to twelve per cent compound interest; the second class, Musalmáns, Bohorás, and Rajputs, from twelve to eighteen per cent; while poor cultivators, besides a premium of from ten to twenty-five per cent, were forced to pay interest at from eighteen to twenty-four per cent.[3]

In 1820.

In 1846.

Since 1846 the cultivating classes have passed through a time when the produce of their fields was very valuable and their credit was good. But though the prices of agricultural produce have again fallen, money would not seem, as far as the nominal rates of interest are a guide, to have become much dearer than it was even in the years of the greatest agricultural prosperity In small transactions, when an article was given in pawn, the rates of interest charged to artizans

[1] Colonel Walker's report, dated 8th April 1804. Compare Broach Consultations of 26th March 1777.

[2] & [3] Mr. Richardson's report dated 18th April 1846.

and well-to-do cultivators varied from six to seven and a half per cent in 1864, and from six to nine per cent in 1874; while in the case of the poorer class of borrowers interest at eight per cent was charged in 1864 as compared with twelve in 1874. In small transactions, when personal security only was given, the better class of borrowers in 1864, paid interest ranging from twelve to fifteen per cent. For the poorer classes the corresponding charges were from eighteen to twenty-four per cent. These rates were still in force in 1874. In large transactions, when well-to-do borrowers pledged jewelry and other articles of permanent value, the rates are said in 1864 to have ranged from six to seven and a half per cent and from six to nine per cent in 1874. In similar cases, when the poorer class of borrowers pledged cattle or other less convenient security, the rates of interest varied in 1864 from fifteen to eighteen per cent, charges which are seldom exceeded in 1874. Should a banker or other large trader want to raise money, he has recourse to another banker, who will, on the borrower's personal security, lend a large amount, at rates varying from six to nine per cent. The rates now current are said to have been in force in 1864. When land was mortgaged in 1864, the rates varied from nine to twelve per cent; the corresponding charges in 1874 ranged from six to twelve per cent, rising, in some cases, as high as fifteen per cent. Rates of interest.

Though the greater part of the population appears, from the information furnished by local officers, to be at present (1875) in a state of indebtedness, the accounts available for former years would seem to show that they are much more independent of the help of money-lenders than was formerly the case. During the first period of British management (1772-1783), the land revenue of the district was received not directly from the cultivators, but through the medium of a class of Wánia capitalists, known as sureties, or *manotidárs*. In the following years (1783-1803) of Marátha rule, a system of farming the land revenue was introduced, under which the exactions of money-lenders increased to so great an extent that, in 1805, it was proposed that no cultivators should be allowed to borrow money without the permission of government.[1] It was estimated in 1805, that, on a state demand of £63,225 (Rs. 6,32,250), the exactions of sureties, *manotidárs*, and the charges on account of the perquisites, *dasturi*, of government officers, cost the villagers £15,020 (Rs. 1,50,200), or 23·75 per cent in addition to the government demand. In 1820 the cultivators were pretty generally in debt. "The Wániás," says Colonel Williams, "are in the constant habit of lending money at a high interest to the headmen and cultivators, and the fruits of the industry of these villagers but too frequently go to the money-lenders; or a cultivator once deeply in debt can do little more with all his exertions than pay the interest of it."[2] Indebtedness. 1772-1783. 1805-1820.

The years between 1820 and 1836 would seem, on the whole, to have been a time of prosperity. Prices of agricultural produce were 1836-1850.

[1] Bombay Secretariat Revenue Diary, No. 45 of 1805.
[2] Colonel Williams's Memoir, 47.

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Indebtedness. 1836-1850.

high, indebtedness decreased, and the cultivators took to 'spending large sums of money on marriages and entertainments in honour of the dead.'[1] But with 1836 began a period of falling prices and growing indebtedness. "A few years ago," writes Mr Jenkins in 1846, "money-lenders were willing to accommodate the cultivators with loans But now, as the most part of the cultivators are in bad circumstances, their creditors refuse to make them any further advances"[2] In the same year (1846), another district officer reported general distress, increasing and hopeless poverty among the cultivators, and a falling off in the government revenues;[3] and the collector, in forwarding this report, admitted that 'the great bulk of the cultivators were notoriously involved in embarrassments owing to long-standing debts made up of compound interest'[4] Three years later 'almost half the cattle and, among the poorer cultivators, their crops were mortgaged to money-lenders;'[5] and Mr. Davies, writing in the same year (1849), speaks of 'the excessive rates of interest and the great increase of debt.' As to the cause of the cultivators' wretchedness, the opinions of district officers were much divided. According to Mr. Richardson (1846), it was chiefly due to the fact that the money-lenders were not professional traders, but district hereditary officers, pleaders, and government servants, whose interests were concerned in the increase of the debtors' difficulties and necessities. On the other hand, Mr Davies, in 1849, doubted whether, upon the whole, the lenders recovered more than would be looked upon as a fair return in commerce for the risk of their investment, and Mr. Ravenscroft (1846) was of opinion that the chief cause of the cultivators' indebtedness was the large sums they spent in their 'rejoicings and mournings.'

1850-1875.

From 1846 the state of the cultivators began to improve. By the exertions of Mr. Davies, between 1847 and 1849, the pressure of the state demand was considerably lightened over the entire district. To this relief, after a few years, was added increased profit from the rise in the prices of agricultural produce. The gains were greatest during the years of the American war (1860-1864) At that time (1864) money was abundant, and the cultivators' credit almost unlimited. By some, especially among the Kanbis, their gains were well spent, debts were cleared off, and by a few of the most intelligent considerable sums were laid by. Others failed to make so wise a use of their good fortune They did not, it is true, as they are said to have done in Surat, cease to work with their own hands, or, tempted by the offer of high prices, part with a portion of their fields; but they, especially cultivators of the Bohora class, are said to have indulged in extreme extravagance, building new houses, giving costly dinners to their caste-fellows, and spending large sums on their marriages and funerals. Others, whose gains were less, had at least an improved credit, and in a spirit of rivalry, making

[1] Mr Davies' Statistical Account, 1849.
[2] First assistant collector, 1st June 1846.
[3] Mr. Richardson, second assistant collector, 18th April 1846
[4] Mr A. W. Ravenscroft, collector of Broach, 26th August 1846.
[5] Mr. Richardson's report No. 2, of 15th February 1848.

use of the offers of the money-lenders, found, when prices began to fall, that they had lost the opportunity of becoming independent. Some of the more persevering and ambitious cultivators, especially, it is said, among the Bohorás, suffered from another cause. With capital of their own and good credit, they took to trading chiefly in produce. Some became timber merchants, others dealt in molasses, sugar, and grain; but most of them took to the business of cotton-dealers. They bought up cotton from the growers, had it ginned, and, through their brokers, forwarded it to Bombay. The fall in prices pressed hard on these men, who, holding on in the hope of a rise, lost heavily. Though some of them still (1875) continue to speculate a little in produce, few of them have succeeded in establishing themselves permanently in the position of traders. But, though from the fall in the prices of produce, and the large amounts which many of them still owe, borrowers have been, within the last eight years, increasingly pressed for payment by their creditors, indebtedness would seem to be less general, and, except among the poorest classes, the exactions of money-lenders less crushing than they were in the years previous to 1856. The thrifty habits of those days have not, however, returned, and the standard of what is fitting to spend on their chief ceremonies is said to have remained at a permanently higher level, in some cases twice as high as it was in former years.

Indebtedness. 1850-1875.

In 1848 Mr. Davies wrote[1]: "It is a noticeable peculiarity in Broach that very little government land changes hands in satisfaction of decrees. The money-lenders possess but a very small lien on the soil paying revenue to government." Since 1848 the rise in the prices of agricultural produce, and the consequent enhanced value of land, would seem to have led men of capital, both cultivators and members of the non-cultivating classes, to an increasing extent to invest their savings in the purchase of land. A comparison of the registration returns for 1867 and 1874 shows, as regards the sale of land, that the area transferred has risen from 5,938 acres in 1867 to 16,087 acres in 1874, an increase of 170·91 per cent. Of the whole area transferred in 1874, 14,149 acres were state land and 1,938 alienated, as compared with 4,684 and 1,524, the corresponding totals in 1867. The average price per acre of state land was in 1867 £5 12*s* 9*d* (Rs. 56-6), as compared with £1 4*s* 6*d*. (Rs. 42-4) in 1874. The corresponding prices of alienated lands were £6 19*s*. 9*d*. (Rs. 69-14) and £6 18*s* (Rs. 69-0), respectively.

Transfer of land.

As regards the extent to which land is passing from agriculturists to members of the non-cultivating classes, the marginal summary shows that the excess of transfers from cultivators to non-cultivators has advanced from 22 in 1867 to 128 in 1874. In 1874, of 1,018, the total number of cul-

Land transfers from Cultivators to Non-cultivators, 1867-1874.

	Sellers		Buyers		Excess of buyers	
	1867	1874	1867.	1874	1867	1874
Cultivators	549	1,018	527	890	—22	—128
Non-cultivators	85	271	107	399	+22	+128

[1] Statistical Account of Broach, 1849.

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Transfer of land.

tivating-sellers, seventeen were landholders or hereditary officers, one was the headman of a village, twenty-one were entered under the head of house business, 142 under the head of service, and the remainder, 837, were cultivators. Of 271, the total number of non-cultivating sellers, seven were professional men, of whom six were pleaders or law agents, and one was a doctor, seventeen were traders, among them a broker, a dealer, and fifteen merchants; seventy-four were money-lenders; eight were religious devotees, of whom two were priests, and six were beggars. Of artizans there were three—a weaver, a cotton-spinner, and a goldsmith; and two were labourers. In 160 cases government sold land. In 1874, of 890 the total number of cultivating-buyers, eight were landholders and hereditary officers, eight came under the head of house business, fifty-three under service, two were shepherds, and 819 were entered as cultivators. Of 399, the total number of non-cultivating-buyers, thirty-one were professional men, of whom thirty were pleaders and law agents, and one was a doctor; eighty-eight were traders, of whom two were cloth-dealers, two oil-sellers, one a stamp-vendor, and eighty-three merchants; 246 were money-lenders; seventeen were religious beggars, of whom eight were worshippers and nine religious mendicants; eleven were artizans, among them a weaver, a cotton-spinner, a potter, two goldsmiths, two blacksmiths, two carpenters, a tailor, a photographer, a washerman, and a labourer. In four cases government bought land. As compared with 1867, among cultivating-sellers, the chief points in the 1874 returns are an advance from 480 to 837 under the head of cultivators, and of persons in service from seventeen to 142. Among non-cultivating sellers, money-lenders have risen from seventeen to seventy-four. Among cultivating buyers, the classes that show the greatest increase are cultivators, from 503 to 819, and servants from thirteen to fifty-three. Among non-cultivating-buyers, money-lenders have increased from forty-six to 246, merchants from twenty-eight to eighty-three, and pleaders and law agents from eleven to thirty. Except in the Wágra sub-division, where a return of from twelve to eighteen per cent is expected, money invested in land (1874) is said to yield from six to nine per cent interest.

Mortgages of land.

From the following statement it would appear that mortgages of land have increased from 1,263 in 1869-70 to 1,676 in 1873-74.—

Statement showing the number and value of Land Mortgages 1869-1874.

1869-70		1870-71		1871-72		1872-73		1873-74.	
No.	Value.	No	Value	No.	Value	No.	Value	No	Value.
	£ s		£ s.		£ s.		£ s.		£ s.
1,263	65,911 14	1,634	87,994 2	1,384	71,216 0	1,501	104,264 12	1,676	88,024 0

When land is *bonâ fide* mortgaged, the common practice is for the mortgagee to pay the government assessment on the land and to sub-let it to some third party for cultivation. The mortgagee sometimes cultivates the land himself, and in a few cases, on his passing a deed to pay rental, *ganotpato*, the land is left in the hands of the original

holder. In some cases the government assessment is paid by the tenant. Of this increase in the number of land mortgages, local officers offer two explanations. One, that on account of the straitened circumstances into which many of the cultivators have fallen, money-lenders have, to a greater extent than formerly, begun to insist on some pledge more trustworthy than mere personal security. The other explanation is, that of late years, to free it from the claims of creditors, the practice has grown up of alienating land by fictitious grants to friends or relations. So common, especially among debtors of the Bohora class, has this device become, that experienced officers have estimated that in 1874, of the total number of sales and mortgages of land fifty per cent were fictitious.

Mortgages of land.

A statement prepared by the educational inspector for Gujarát throws some light on the extent to which of late years the non-cultivating classes have been investing their capital in land. In 1875, 4,743 persons, on the ground that, as landholders, they had paid the local fund cess, claimed exemption from the levy of school fees. Of these, 581, or 12·2 per cent,—294 traders, 178 artizans, and 109 shopkeepers,—belonged to the non-cultivating classes. Besides these, it seems probable that, under the head of Bráhmans (502) and Pársis (125), many landowners are included who take no part in the actual work of cultivation.

Wages.—A hundred years ago labourers' wages were 3*d.* (2 as.), carpenters 6*d.* (4 as.), and bricklayers 3¾*d.* (2½ as.) a day.[1] Thirty years ago (1844) the daily wages of a labourer were from 3*d.* to 3¾*d.* (2 to 2½ as.), and a bricklayer or carpenter 9*d.* (6 as.)[2] In 1863-64, when the rates were highest, the daily wage of an ordinary labourer varied from 9*d.* to 1*s* (6 to 8 as.); of agricultural labourers, from 4½*d.* to 6*d.* (3 to 4 as); and of bricklayers and carpenters, from 2*s.* to 2*s.* 6*d.* (Re. 1 to Rs. 1-4)[3] In 1875 town labourers earned from 6*d.* to 9½*d.* (4 to 6 as.) a day; field labourers, from 3*d.* to 4½*d.* (2 to 3 as); and bricklayers and carpenters from 1*s* 3*d* to 1*s* 6*d.* (10 to 12 as.)[4] In the same year (1875) female labourers were paid about one-third less than males. Lads of from twelve to fifteen got about two-thirds less than full-grown men. Carpenters' and bricklayers' boys of from ten to thirteen were paid about one-fifth of the ordinary rate of an adult workman. Town labourers and artizans are paid in coin; field labourers both in grain and in coin. Labourers are, as a general rule, paid daily, or after an interval of two or three days. The townspeople generally go to work at nine in the morning, and return before sunset. One-fourth of an ordinary day's wage is paid for extra work done in the morning from six to nine. In the afternoon, between one and two, they are allowed about half an hour for rest. Field labourers go to work in the morning. They take two or three millet cakes with them into the field, and eat them at mid-day. Field work, such as cotton-picking, is paid for by the amount of work done. During the greater part of the rains and the cold weather seasons, labourers find

Wages, 1777-1875.

[1] Broach Factory Diaries for 1777.
[2] Broach Collector's report No. 191, dated 8th October 1844.
[3] & [4] Broach Collector's letter No 292, dated 2nd February 1875.

Chapter VI. Capital.

Wages.

employment in helping the cultivators to weed and watch, and, later on, to reap and harvest their crops. For this work they are paid daily at the rate of 4½*d.* (3 as.), 3¾*d.* (2½ as.), 2¼*d.* (1½ as.), for adult males, females, and children, respectively. Except when harvesting food crops, when the labourers receive their wages in grain, these payments are chiefly made in cash. Other employment, such as service in the household of large farmers, is paid for at monthly rates, varying from 4*s.* to 6*s.* (Rs. 2 to Rs. 3), with one mid-day meal. In their slack season (March to June) field labourers help bricklayers, clear out reservoirs, mend roads, or pick up chance pieces of work in the Broach factories.

Factory workers.

[1] As they can earn as much in four months as they can at their ordinary work in eight, the same people for the most part come every cotton season to the steam ginning and pressing factories. The old cotton-cleaners, *charka*, employed more hands than the steam-gins require, so that the demand for labour has of late years fallen off rather than become greater. Under the old system hundreds of men, women, and children came from Ahmedábád and Márwár to work the hand-gins at Broach. They used to arrive after the Diwáli (October), and leave, about the end of May, in time to reach home before the rains began. The steam factories find all the labour they require in Broach and its neighbourhood. Some of the men receive fixed wages, and in the case of others, a system of payment by piece-work has been found to answer well. For piece-work the men are handsomely paid. A good gang of pressmen or cotton-carriers will each earn as much as 2*s* (Re. 1) a day. Common labourers earn 7½*d.* (5 as.) a day in the busy season, and 6*d.* (4 as.) in the slack season. During the ginning months (January to May) women and children earn from 3*d.* to 4½*d.* (2 to 3 as.) and from 1½*d.* to 3¾*d.* (1 to 2½ as.) during the remaining months of the year. In a ginning factory the women and children keep feeding the gins with uncleaned cotton. In a spinning-mill the women attend to the drawing, slubbing, intermediate, and roving frames; and women and children together attend to the reeling.

In the busy season native-managed mills work from four in the morning to ten at night. Mills managed by Europeans from five or six in the morning to ten at night. In the slack season the hours are from six in the morning to six at night. During the busy months the same women and children do not remain at the ginning-factories the whole day. A mother will work from six to twelve in the morning, and in the afternoon be replaced by her daughter or son. The owners of ginning-factories lay no restriction upon women or children going to their homes at any time during the day, provided they get some one to do their work. The spinning-mills cannot allow any change of hands, as all the labour is more or less skilled. Besides, there is no need for change, as the spinning-mill hands are never asked to work more than ten to twelve hours a day. Some of the workers prepare their food overnight, and bring it with them in the morning. Others have their food brought by their mothers, wives,

[1] From an account kindly furnished by Mr. Cotton, 1875.

sisters, or children; but a great many, including all the well-paid artizans, in the middle of the day, return to their homes to take their food. Diwáli, Christmas Day, Holi, and Moharam are close holidays, observed alike in the mills managed by Europeans and by natives. In the idle season Sunday is, as a rule, observed as a holiday. In the busy season, except when they are obliged to stop for cleaning their boilers, the native and some of the European managers of factories work on Sundays. Native workmen are beginning to look for one day's rest in seven, and, as a rule, they are unwilling workers on a Sunday. In one of the mills the skilled labourers, when ordered to work on Sundays, turned out and threatened to strike. The better class of workmen are careful of their earnings. They live well, and spend a part of their gains in clothes, but invest most in jewels for their wives and children. One of the objects of ambition to a well-paid mechanic is to own a silver watch and chain.

Wages.

Prices.—The earliest available price returns are those for 1782. In that year wheat sold at fifty pounds for two shillings; Indian millet, *juwár*, at seventy-five pounds; pulse at forty-six pounds; and rice at fifty-four pounds.[1] In the great famine of 1790 (*Samvat* 1847), locally known as *sudtálo*, or the forty-seven famine, wheat sold at eleven pounds for two shillings; Indian millet, *juwár*, at eighteen pounds; and millet, *bájri*, at fourteen pounds.[2] With the exception of a break of twelve years, from 1821 to 1832, the following statement[3] shows in detail the prices of the staple products of the district from 1810 to 1874:—

Prices, 1782-1874.

Statement showing in Pounds for the Rupee (2s.) the prices of staple Agricultural Products, 1810-1874.

Product.	First period, 1810-1820.											Second period, 1833-1860			
	1810	1811	1812	1813, (a)	1814 (a)	1815	1816	1817.	1818	1819	1820, (a)	Average	1833	1834	1835.	1836.
Raw cotton, *kapás*	23	20	22	21	23	18	17	14	14	13	18	18	19	17	21	19
Indian millet, *juwár*	73	51	36	21	25	42	51	40	40	36	21	46	50	44	44	50
Wheat	60	50	31	17	18	36	36	39	42	37	17	41	28	37	37	47
Rice	60	57	50	22	27	46	44	49	50	46	35	50	44	41	73	55
Pulse, *tuver*	64	55	55	21	27	47	49	55	53	47	30	52	36	38	44	60

Product.	Second period, 1833-1850—*continued*														
	1837	1838	1839	1840	1841	1842	1843.	1844.	1845.	1846	1847	1848	1849	1850.	Average.
Raw cotton, *kapás*	26	19	30	22	34	32	30	33	34	34	32	33	27	24	27
Indian millet, *juwár*	82	36	51	73	82	94	73	94	64	64	94	88	73	88	68
Wheat	51	32	39	41	51	60	73	65	32	32	53	47	44	55	46
Rice	82		55	55	64	73	82	94	65	64	55	51	53	53	62
Pulse, *tuver*	60	44	54	54	60	60	54	60	47	50	69	60	69	69	54

(a) The three years of famine, 1813, 1814, and 1820, have been excluded from the average.

[1] Forbes' Oriental Memoirs, II., 250.

[2] Colonel Etheridge's Report on Past Famines, 55.

[3] This return is prepared from statements given in Mr. Davies' report No. 334, dated 11th September 1849, and Mr. Jenkins' No. 978, dated 15th August 1854, and from Government Price Currents.

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Prices.

Statement showing in Pounds for the Rupee (2s.) the prices of staple Agricultural Products, 1810-1874—continued.

Product.	Third period, 1851-1860.											Fourth period, 1861-1866.		
	1851.	1852	1853.	1854.	1855.	1856.	1857	1858.	1859	1860	Average.	1861.	1862	1863.
Raw cotton, *kapás*	30	28	26	32	25	24	22	18	17	18	24	17	11	6
Indian millet, *juwar*	87	69	69	69	57	74	53	42	44	41	60	39	42	25
Wheat	50	60	47	60	45	46	42	40	39	32	46	28	28	22
Rice	55	57	55	57	27	32	27	44	40	40	43	41	44	33
Pulse, *tuvar*	55	64	50	58	42	43	40	38	32	16	44	24	18	18

Product.	Fourth period, 1861-1866—*continued*				Fifth period, 1867-1874									General average, 1810-1874
	1864	1865	1866	Average.	1867	1868	1869	1870.	1871	1872.	1873.	1874	Average.	
Raw cotton, *kapas*	5	11	7	9	12	16	10	9	12	9	7	8	10	18
Indian millet, *juwar*	17	27	30	30	23	26	22	25	29	37	37	40	30	47
Wheat	15	14	19	21	20	21	16	17	25	22	27	29	22	35
Rice	22	24	33	31	27	30	27	28	34	32	21	22	27	43
Pulse, *tuvar*	11	8	12	15	13	17	13	13	19	..	15	18	15	36

These returns may be roughly divided into five periods. The first, from 1810 to 1820, exclusive of three special years of scarcity (1813, 1814, and 1820), a time of high prices; after the gap of twelve years the second period, from 1833 to 1850, years of falling prices; the third, 1851 to 1860, a time of reaction, with prices tending upwards, due to the increased demand for exports and the additional importation of bullion caused by the Russian and Persian wars and the mutinies. The fourteen years since 1860 may be divided into two portions. The first, from 1861 to 1866, the term of high prices, due chiefly to the American war; and the second, a period of reaction. The following summary shows, for each of these periods, the average price of the chief products of the district in pounds per rupee (2s.) :—

Statement showing the average prices of staple Agricultural Products, 1810-1874.

Product	First period, 1810-1820	Second period, 1833-50	Third period 1851-1860	Fourth period, 1861-1866.	Fifth period, 1867-1874	General average, 1810-1874.
Raw cotton, *kapás*	18	27	24	9	10	18
Indian millet, *juwar*	46	68	60	30	30	47
Wheat ...	41	46	46	21	22	35
Rice	50	62	43	31	27	43
Pulse, *tuver*	52	54	44	15	15	36

Weights and measures.

[1] Pearls and other precious stones are valued by their purity and weight. In weighing gold the table shown in the margin is used.

[1] Condensed from a paper prepared by Ráv Bahádur Pránlál Mathurádás, huzur deputy collector.

The *tolo* in general use is that known as the old *tolo*, weighing one and a half *wáls* more than a government rupee. The weight *rati*[1] is the seed of the Abrus precatorius, and the other weights are made of lead, copper, and brass; in shape they are either square or round. A goldsmith has generally in his possession the following weights: several *ratis*; a one *wál*; a two *wál*; a four *wál*; an eight *wál*; a *gadiáno*, a one *tolo*; a two *tola*; a five *tola*; a ten *tola*; a twenty *tola*; and a fifty *tola* weight. In wholesale transactions the British rupee is used in weighing silver. The nominal standard in retail dealings is the Broach rupee. But as these coins vary considerably in weight from each other, in actual weighing a British rupee is used, and a deduction made of two per cent.

3 *ratis*	= 1 *wál.*
16 *wáls*	= 1 *gadiáno.*
2 *gadiánás*	= 1 *tolo.*

Weights and measures.

Silver.

In the case of metals, such as brass, copper, zinc, lead, and iron, and of grain of all kinds, the table shown in the margin is current. The weights under ten *sers* are made of iron. In shape they are either square or round. Those above ten *sers* are long, like British hundredweights. In practice the weighing of certain articles deviates from the standard. Thus the *man* of clean cotton is equal to forty-two *sers*, and the *ser* equal to forty-one rupees of the British currency. The *man* of salt, coffee, spices, and molasses is equal to forty-two *sers*, and the *ser* equal to forty rupees of the British currency; and the *man* of sugar is equal to forty-one *sers*, and the *ser* to forty British rupees.

2½ *rupees*	= 1 *adhol.*
2 *adhols*	= 1 *navták.*
2 *navtáks*	= 1 *páser.*
2 *pasers*	= 1 *achher.*
2 *achhers*	= 1 *ser.*
40 *sers*	= 1 *man.*
8 *mans*	= 1 *háro.*
16 *mans*	= 1 *kalsi.*
2 *kalsis*	= 1 *bedáyu.*

Grain.

Head-loads of grass and fuel, and cart-loads of fuel, rice-straw, and chaff, are sold by the load, and not by the weight. Millet straw, or *kadab*, and grass are sold in quantities of 100 bundles.

Grass.

In weighing clean and uncleaned cotton, two distinct systems of measurement are used. Cotton in its raw state, *kapás*, is estimated by the *dhadi* of forty-eight pounds, and the *bhár* of twenty *dhadis*, that is 960 pounds. Cotton, when cleaned, is measured by a *man* of forty-two pounds, a *kalsi* of sixteen *mans*, and a *kháṅdi* of twenty *mans*. The proportion of clean cotton to *kapás* is one-third of wool to two-thirds of seed. Two and a half *bhárs* of uncleaned cotton is equal to one Surat *kháṅdi* of cleaned cotton.[2]

Cotton.

Milk is sold either by measures of capacity or by weight. The measures of capacity used are a ladle, *palo*; a cup, *paválu*; and a metal bowl, *loto*, serving as quarter, half, and one *ser*, measures respectively. In selling milk by weight, a *ser* is considered equal to forty British rupees. Castor-oil, *divel*, used for burning, is measured by a copper pot capable of holding twenty-one *sers* of forty British rupees, and so known as *adhmanio*, that is, half a *man*; sweet-oil, *tel*, used for cooking, is measured by a copper pot similar to *adhmanio*, but of one *ser* less capacity.

Liquids.

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[1] Again, 8 *ratis* are equal to 1 *máso*, and 12 *másás* make one *tolo*.

[2] Mr. Davies' report, 28th January 1847.

Weights and measures.

As for wines, when required in a smaller quantity than a bottle, glasses of two or three sorts are used, and charged for according to their size. When more than a glassful is wanted, small or large bottles of glass, prepared in England, and gallon measures, which are nothing but a sort of copper vessel, regulate the sale.

Cement.

In the case of gravel, sand, and cement, round bamboo baskets are used, and the weight calculated according to the size of the basket. These substances are also weighed and sold at so much for a hundred *mans*.

Cloth.

Broadcloth, woollen cloth, and linen cloth are sold by length, in feet and yards. Cotton and silk cloth, and gold, silver, and silk lace, are sold by lengths of two feet, *gaj*. Country cloth, *doti*, and cotton, tape, *navár* or *páti*, are sold by length in cubits, *háth*. Handkerchiefs, gloves, socks, and stockings are sold by the dozen, by the pair, or, in the case of handkerchiefs, singly. The robes, *sári*, worn by native women, are sold singly or by the score.

Carpets.

Carpets and coarse floor-cloths, *bora*, are measured by the surface. The former are made at the Kaira, Ahmedábád, and Surat jails, and at Cambay, Agra, Bareilly, and Jubbulpore. The latter are made in the Broach district and at Agra and Bareilly.

Masonry.

In the case of masonry, to a great extent people themselves purchase bricks and cement, and for the work of building engage artizans and labourers. A few employ contractors, who are paid by the hundred cubic feet.

Timber.

Rafters and beams of teak and other forest timber are sold by the score. Pillars and large posts are bought singly, their size and appearance regulating the price. When a large quantity is required, timber is measured by its cubic contents. In the Broach district there is a considerable quantity of timber along the banks of the Narbada river. On the northern side of the Narbada a *gaj* of 28½ inches in length is used, while on the south the *gaj* is 27½ inches in length. A piece of timber is measured lengthwise. As it is not found, as a rule, to be of uniform thickness, the circumference is measured at the middle of the length. This latter measure is divided by four, and the quotient is squared. The result thus obtained is multiplied by the length-measure, and the product is divided by 400. This last quotient gives the cubical contents in *gaj*; the remainder in connection with this quotient, when multiplied by twenty and divided by 400, gives the measure in *vasás*, and the remainder in this last case, when multiplied by twenty and divided by 400, gives the measure in *visvásis*. Thus the required measure is determined in *gaj*, *vasa*, and *visvási*, and the sale price is fixed at so much per *gaj*. A *gaj* of 28½ *tasus* gives 17·5 cubic feet. A *gaj* of 27½ *tasus* gives 15·32 cubic feet.

Earth work.

Field boundaries and house walls are constructed at so much for 100 cubits in length, one cubit in width, and one in height.

Tanks are dug by men of the *Od* caste. In measuring their work the cubical unit is eight *gaj* in length, eight in breadth, and one in

height, and is called *chokdi*. As this *gaj* is eighteen inches in length, the cubical contents of a *chokdi* are 216 cubic feet. City people, who engage contractors, pay at so much per 100 cubic feet.

Weights and measures.

Porbandar stones are bought by the hundred. The price varying according to the size of the stones. Rough-hewn stones from hills, and pebbles called *khadi*, used as metal for roads, are spread and piled on the ground, and the measures of the length, breadth, and height of such a heap are taken. The unit consists of cubic feet.

Stones.

Land.

In the villages of the Broach, Wágra, and Ankleswar including Hánsot sub-divisions, and in the town of Jambusar, a *bigha* is the unit for measuring land. A measure of seven feet and 5·7 inches in length is called *visvási;* twenty of such *visvásis* in length, and as many in breadth, make a *bigha*, which is sub-divided into *vasás* and *visvásis* as shown in the margin. One *bigha* is equal to 22,300 square feet, or about half an acre. In all the other villages of Jambusar, in ten of the villages under Dehej, in the Wágra sub-division, and in the A'mod sub-division, the unit is called *kumbho*. Thirteen (cubits) hands in length make a *mánlo*. Ten of such *mánlás* in length, and as many in breadth, make a *kumbho*. One *kumbho* is equal to 4,641 square yards and twenty square inches, or but little less than an acre. The system of land measurement adopted in the revenue survey has been recently introduced in the Broach, Wágra, A'mod, and Ankleswar sub-divisions, where the unit, therefore, is an acre sub-divided into forty *guntás*. The proportions between the different land measures of the country and those of England are further illustrated as follows :—

20 *Visvásis* = 1 *Vasa.*
20 *Vasás* = 1 *Bigha.*

	Sq yd.	Sq ft.	Sq inches.
In an English statute acre	4,840	0	0
In a Broach standard *kumbho*	4,641	0	20
Ditto ditto *bigha*	2,477	7	64
In a *bigha* of the districts of Ahmedábád, Kaira, and Surat	2,844	4	0

Though their varieties are still puzzling, considerable progress in the form of the weights and measures in ordinary use would seem to have been made since 1821, when the collector wrote : " The weights consist of rude lumps of iron, varying in shape according to the number of people using them, and frequently pieces of brick and stones, rendering it quite impossible for the lower orders to ascertain, by outward appearances, whether the weights intended to be represented are actually so or not, which is the cause of great impositions being practised upon them in the sale of the necessaries of life." Weights and measures are at present examined by police officers under Act X. of 1872.

CHAPTER VII.

HISTORY.

Chapter VII. History.

The history of the district of Broach contains three main periods —the Hindu, the Musalmán, and the English. Of these, the first, traced as far back as the fourth century before Christ, continues through, about seventeen hundred years, till the final Musalmán conquest of Gujarát in 1297. The second, starting with that conquest, lasts till, in 1772, the power of the Musalmán chiefs of Broach was destroyed by the English. The third contains the century of English rule from the date of the capture of Broach till the present time.

Section I.—Hindu Period (B.C. 300-A.D. 1297).

Hindu period, B.C. 300—A.D. 1297

Of the Hindu period, Dr. Buhler writes: "The oldest dynasty with which the Broach districts are said to have been connected is that of the Mauryas. According to the tradition given in the Revámáhátmya, and still current, Sukaltirth, ten miles north-east of Broach, became the last residence of Chandragupta (B.C. 315) and of his minister Chánakya, who there sought repose from their toil and absolution from their sins. This tradition would be worth little, but for the As'oka (B C. 300-200) inscription of Girnár, which proves that Gujarát formed part of the empire of the Mauryas.[1] What the fate of Gujarát was after the destruction of the Mauryas through Pushyamitra (B C. 178) is not known. But somewhat later, about 1800 years ago, Broach seems to have passed into the hands of Parthian princes, known by the name of Sáhas or Kshatrapas. Rudradáman's Girnár inscription,[2] dated in the year seventy-two, probably of the S'aka era (A.D. 150), states this distinctly, and the occurrence of Sáha coins in the Broach district confirms it. It is less certain if the successors of the Sáhas, the Guptas, also held Broach. Their coins are frequently found in the district. The author of the Periplus (A.D. 60-210) and Ptolemy mention the town of Broach under the name Barugaza (Bharugachha).[3] According to the former Barugaza gave its name to a tract of country stretching from the town northwards to the border of Sind. Two hundred years later, the lands in

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[1] Lassen Ind. Alth., II., 251, 256, 2nd edition.

[2] Journal Bom. Br. R. A. Soc., VII., 113.

[3] The old name of Broach given in the Girnár, Násik, and other inscriptions, and by Varáhamihira (sixth century A.D.) is Bharukachha. This is a corruption of Bhrigukachha, the field of Bhrigu, a Vedic Rishi, who has become the heroseponymos of Broach. The change of Bhrigu to Bharu is supported by the analogy of the Gujaráti *varu*, wolf, which stands for *vriko*.

the neighbourhood of the city of Broach (Bhrigupur) formed a small kingdom under an independent Rajput chief, by religion a Jain.[1] After about two hundred years more we find Broach under the rule of the Gurjara princes, Dada I., Jayabhaṭa, and Dada II. Of Jayabhaṭa we have a land grant dated Vikrama 486 (A.D. 429), giving a field to the temple of As'rames'vara, now called A'samesar, near Kemajju, now Kimoj, in the Jambusar sub-division.[2] The villages of Sîhugráma, now Sigám; Golavali, now Golel; and Jambha, now Jámadi, which as well as Kemajju were included in the Vishaya, or district of Bharukachha, are likewise mentioned in the grant. The Bharukachha Vishaya must have comprised the sub-divisions of Broach, Wágra, A'mod, and Jambusar. Four copper-plate grants of Dada II. have been found, dated respectively 380, 385, S'aka 400, and S'aka 417 (A.D. 458-9—495-6).[3] The first two grants[4] assign the village of S'irishapadra, or Sisodra, stated to be included in the district of Akrûres'vara, the modern Ankleswar, to a number of Bráhmans residing in the town of Jambusar. By the last of these grants,[5] S'aka 417 (A.D. 495), Dada gives the village of Ráchhchhava, now Rachid, near Iláv, to a learned Bráhman. This village was in the district of Ankules'vara, which, as this and the preceding grant show, included the sub-division of Ankleswar and the subordinate division of Hánsot. Of other places, the grant mentions the village of Varnera, now Walner; Saraṭhua, now Surthán; and the Varanda, now the Wand creek. Nothing more is known of this triad of princes through written documents or tradition. Jayabhata mentions in his grant a victory over a king of Valabhi. He says that 'he quieted in battle the impetuosity of the lord of Valabhi.' The capital of Dada II. appears to have been Nándipura, which, according to tradition, was a fort situated on the east side of Broach, close to the Jhádeshvar gate. It is very probable that these three Gurjara princes were not independent sovereigns, but *sámantas*, or tributary chiefs. A copper-plate[6] of a Chálukya prince named Vijayarája, dated 394, grants to certain Jambusar Bráhmans the village of Pariyachasa, probably the modern Pariej in the Broach sub-division. It may, therefore, be assumed that at least Dada II. was subject to the powerful rulers of Kalyána in the Deccan, who, at a later period, held the whole of Gujarát. In the sixth century the astronomer Varáhamihira mentions Bharukachha as one of the countries of Western India. In the beginning of the seventh century (629) Broach was visited by the Chinese pilgrim Hiouen Thsang. He gives its name as Bharugachheva, and describes it, apparently with but little accuracy, as a kingdom of 480 to 500 miles in circuit, 'the land impregnated with salt, so that shrubs and trees are few and far apart.' In 636, not long after the visit of the Chinese traveller, the town of Broach and some parts of the coast suffered

[1] Forbes' Rás Mála, I., 14.

[2] Indian Antiquary, V., 109.

[3] Prof. Bhandárkar has proved in his article on the grant of 417 (Journal, Bom. Br. R. A. Soc., X.), that the older grants also are dated in the S'aka era.

[4] Journal, R. A. Soc., New Series, I, 247, *seq.*

[5] Journal, Bom. Br. R. A. Soc., X., 19.

[6] Journal, R. A. Soc., New Series, I., 270.

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from an Arab invasion. According to the Gujarát chroniclers, about the end of the seventh century. the Châlukya king, Bhûvad or Bhubata of Kalyána, undertook his expedition against Jayas'ekhara of Panchásar on the Ran of Cutch.[1] From their account it is clear that, after this period, and until the foundation of Anhilvád Páthan[2] by Jayas'ekhara's son Vanarája, the whole of Gujarát, and with it Broach, obeyed the Châlukya king. Probably, in the case of Broach, this overlordship lasted until in the second half of the eighth century, the Châlukyas of Kalyána succumbed for a time to the Ráshtrakutas of Mányakheta, or Málkhet.[3] During the eighth century, in 717 and 770, two more Musalmán raids occurred.[4] In the last of these attacks the Jaina temples at Gandhár are said to have been destroyed. Towards the close of the eighth, or in the beginning of the ninth century, the Ráshtrakutas of Málkhet conquered the Broach districts and the other parts of the plain of Gujarát that lie between the Mahi and the Narbada. Two grants, one of Karkarája[5] and one of Govindarája, dated respectively S'aka 734 and S'aka 749 (A.D. 812-3 and 827-8),[6] give some information on the Ráthor invasion. Both grants state that Govinda III. (of Málkhet) conquered the realm of the ruler of Láta, and gave it to his brother Indrarája, who was succeeded first by his son Karkarája, the donor of the first grant, and later, by his grandson Govinda. Karkarája's grant disposes of a village near Baroda. Govinda's grant, which is dated from Broach, gives the village of Thûrnavi, now Thánva, in Jambusar, to the temple of the Sun, called that of Jayáditya, in Kotipura, which was included in Kápika, the modern Kávi. It mentions also the villages Vatapadraka, now Wardla; Ruhnáda, now Runád; Kaliyara, now Kalier; and Jadrâna, now Jantrán. In the absence of other information it must remain uncertain how long the Ráthors held Broach. They may have fallen before the Chápotkatas or Chauras of Anhilvád. But, certainly, when in 942 the power of the Châlukyas of Kalyána revived, and Mularája, the representative of one branch of the house, ascended the throne of Anhilvád, Broach was conquered, and until the final victory of the Musalmáns (1297) formed part of the Chaura, and then of the Wághela dominions."

Section II.—Musalmán Period (1297-1772).

Musalma'n Period, 1297-1772.

The Musalmán period of Broach history, lasting for about four centuries and three-quarters, contains four divisions,—the administration of the early Musalmán governors of Gujarát, ninety-four years, from 1297 to 1391; the government of the Ahmedábád kings, 181 years, from 1391 to 1572; the supremacy of the Delhi emperors, 164 years, from 1572 to 1736; and the rule of a family of almost dependent chiefs, thirty-six years, from 1736 to 1772. At the beginning of the fourteenth century, when his capital was taken, the Broach district, together with the other more settled parts of the

[1] Forbes' Rás Mála, I., 26-36.
[2] Anhilvád, or Páthan, on the Sarasvati river, near the border of the lesser Ran of Cutch, about sixty-five miles north-west of Ahmedábád.
[3] Málkhet (N. Lat. 17°, E. Long 77°), in the Nizám's dominions.
[4] Reinaud's Fragments, 182, 198, 257, 212
[5] Journal, Bom. Br. R. A. Soc., VIII., 302.
[6] Indian Antiquary, V., 144.

dominions of the Anhilwára sovereign, fell into the hands of the Musalmáns. Half a century after (1347), during the rebellions of the latter part of the reign of Muhammad Toghlak, the city of Broach was taken possession of by one of the insurgent nobles; but on the advance of the king the rebels abandoned the fort without a struggle.[1] When Muzafar Sháh, the founder of the line of Ahmedábád kings, assumed, in 1391, the position of an independent ruler, the district of Broach, with the other parts of the plain country of continental Gujarát, was included within his dominions. On the death of Muzafar (1411), Broach was the scene of a contest for the succession between his grandsons Firoz Khán and Ahmad Khán. Firoz Khán was proclaimed king at Broach, but was easily defeated by Ahmad Khán, who, in 1413, founded the city of Ahmedábád. For the greater part of the remaining 161 years (1411-1572), during which the Ahmedábád dynasty continued to rule over Gujarát, the Broach district, from its neighbourhood to the head-quarters of the government, would seem seldom to have been the scene of war. In 1534, when the emperor Humáyun made his rapid conquest of the dominions of Bahádur Sháh, Broach, with the rest of Gujarát, fell into the hands of the Moghals. But this possession lasted only for two years. In 1536 the city was retaken by an united attack by sea and land, conducted in favour of Bahádur Sháh by two of his nobles, Khán Jehán and Rumi Khán the builder of the Surat fort.[2] About this time the Portuguese appeared in the Gulf of Cambay, and though they do not seem to have settled, they twice, 1535 and 1546, took and plundered the city of Broach.[3]

In the reign of Muzafar Sháh III. (1561-1572), the last of the Ahmedábád kings, the lands of Broach were in the possession of Rustam and Jahángir Khán, the sons of Imád-ul-Mulk. At that time the Broach territory consisted of the following twelve fiscal divisions[4]:—

Statement showing the Area and Revenue of Broach, 1561-1572.

No.	Name.	Villages.	Revenue.	
			In Changizis (1¼ Changizi=one rupee).	In Pounds Sterling
1	Broach	161	3,000,000	240,000
2	Hánsot	36	400,000	32,000
3	Dehejbára	12	150,000	12,000
4	Goralbára (Koral)	12	200,000	16,000
5	Urpár (Olpád, Surat)	106	1,200,000	96,000
6	Chormándvi (Mándvi, Surat)	1	50,000	4,000
7	Kala (Galla)	36	400,000	32,000
8	Jambusar	56	800,000	64,000
9	*Oklesar (Ankleswar)	55	600,000	48,000
10	Atlisar	36	200,000	16,000
11	Tarkesar (Surat district)	12	100,000	8,000
12	A'mod and Makbulábád	36	400,000	32,000
		559	7,500,000	600,000

[1] Rás Mála, I., 290.
[2] Erskine's History of India, II., 77.
[3] Correa's Lendas da India, III., 670; and Decadas de Couto, V., 325.
[4] Mirat-i-Ahmadi (Bird's) 119. In the Ain-i-Akbari (1590) Broach is described as a

Chapter VII. History. 1297-1772.

In the year 1572, after Muzafar Sháh III. gave up his dominion in Gujarát to the emperor Akbar, Broach was captured, and for a short time held by the rebel Husain Mirza. On the approach of Akbar the Mirza fled, and the lands of Broach were granted to Mirza Kutu-din Atka Ten years later (1583) intrigues arose in Gujarát, and Muzafar Sháh was invited to escape from his residence in Hindustán, and put himself at the head of his old followers. So successful was this revolt that, along with other places, Broach was occupied by the insurgents. But Muzafar Sháh failed to keep his hold over the territory he had regained. In the next year, after a siege of seven months, the town of Broach was captured and the country, in its neighbourhood, was again brought under the rule of Akbar.

European traders, 1614-1620.

In the year 1613 Broach was visited by Aldworth and Withington, English merchants, and in the next year (1614), on Withington's return from Sind, a house in Broach was hired for a factory. In 1616 Sir Thomas Roe obtained from the emperor Jahángir permission for the English to establish a trading-house at Broach on very favourable terms. They were to be allowed to live near the governor, and the decree commanded no man to molest them by sea or land, or take any customs of them.[1] The chief of the factory at Broach was subordinate to the president at Surat. He was one of the senior factors of more than three years' standing, who, besides lodging and victuals at the company's expense, were allowed £40 (Rs. 400) a year during their stay in the company's service. Factors in charge of out-stations are described by Fryer (1673-1681) as "in their several seignories behaving themselves after the fundamentals of Surat, and in their respective factories living in like grandeur. From the position of chiefs of subordinate factories they rose successively to be of the great council in Surat."[2] The Dutch were not long of following the example of the English. In 1617 they also settled at Broach and established a factory. But the Broach factory does not seem to have risen to much consequence. In the eighteenth century there was but one junior merchant and one book-keeper, with a few native servants under them.[3]

The Maráthás, 1675.

In 1660, in consequence of the help given by the people of Broach to his brother Dára, Aurangzeb ordered a part of the city walls to be razed.[4] Fifteen years after (1675) a body of Marátha horse, part of the army of Hambirráv, the commander-in-chief, coming down from Khándesh by one of the passes near Surat, crossed the Narbada and levied contributions in Broach.[5] As they found the city unprotected, the Maráthás were not long of returning. In 1686 Sambháji, the son of Shiwáji, led a body of troops by hurried marches across the Tápti and Narbada, and, within a few hours after their approach was known,

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great emporium, to which the ports of Kávi, Gandhár, Bhalwut (Bhádbhut), and Bhigureh (Bhagwa in Olpád) belong.—Gladwin's Trans., II., 66.

[1] Orme's Historical Fragments, II., 371.

[2] Fryer's New Act. 85.

[3] Stavorinus, III., 109.

[4] Ham. New Act., I., 145.

[5] Grant Duff, I., 194.

took and plundered the city of Broach.[1] In consequence of this success Aurangzeb ordered the walls of Broach to be rebuilt, and to commemorate the sufferings of his army during the siege of 1660, gave it the name of Sukábád, or the dry city.[2]

About the time of this Marátha raid the English merchants at Broach were carrying on a large trade. But a few years later (1696) the Broach factors were, like the other servants of the company in Surat, placed in chains on account of the plunder, by the English pirate Avory, of the Musalmán pilgrim ships, and for a time the factory was closed. In 1702, on the union of the new English company with the original London company, Broach is mentioned as one of the factories in the Bombay presidency. But before the middle of the eighteenth century both English and Dutch are said again to have withdrawn their establishments,[3] though the latter would seem once more to have returned before the conquest of Broach by the English in 1772.[4]

Nawábs of Broach, 1736-1772.

In 1736, during the government of Abhesing, Abdulla Beg, a Musalmán officer, held Broach from the Nizám-ul-Mulk, who, shortly before he assumed a position of independence in the Deccan (1722), had, as viceroy of Gujarát, made Broach part of his private estate. This officer, who is said to have acknowledged neither the viceroy Abhesing nor the claims of the Maráthás, received from Nizám-ul-Mulk the title of Nek A'lam Khán, and was the founder of the short-lived line of the nawábs of Broach. Abdulla died in 1738, and was succeeded by his second son Mirza Beg, who assumed the title of Nek A'lam Khán the Second. Dying in 1752, Mirza Beg was succeeded by a third son. On his death, which happened within three months, the succession was disputed, and no settlement made for two years. At last Syed Idrus, the head of a family which had long exercised a powerful religious influence at Surat, espousing the cause of Mirza Ahmad Beg, a grandson of Abdulla Beg, the first nawáb, placed him in possession of Broach. Mirza Ahmad died in 1768, and was succeeded by his son Mázad Khán, the last of the Broach nawábs.[5]

ENGLISH PERIOD, 1772-1875.

Section III.—English Period (1772-1875).

The political connection of the English company with Broach dates from their capture of Surat in 1759.[6] There were certain claims of

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[1] Grant Duff, I., 242.
[2] Ham. New Act., I., 145.
[3] Anderson's English in Western India, 291.—Hamilton's New Act., I., 146.
[4] In the despatch (10th April) of the commission appointed to inquire into the condition of affairs at Broach in 1777, it is said: "We cannot help remarking that the Dutch still hoist their colours in the factory in and outside of the town, especially as they behaved badly when the city was being stormed by the British, and it is said general Wedderburn was struck by some one in European clothes." How strong the ill-feeling between the Dutch and English was at that time is shown in Stavorinus' account of affairs at Surat, 1774.
[5] Bombay Secretariat Records, Political Department, Vol. 23 of 1864, 235 to 242.
[6] This account has been prepared from the correspondence recorded in the following volumes of the Secretariat Records, Public Department. Letters to Court of Directors.—Vol. 18 of 1771, Vol. 19 of 1772, Vol. 20 of 1773, Vol. 21 of 1774, Vol. 22 of 1775.

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the nawáb of Surat upon the customs revenue of the port of Broach. These, together with a sum due to the English on account of an excessive levy of duties on cloth, amounting altogether to £15,000 (Rs. 1,50,000), the nawáb of Broach was called upon to pay. In the early months of 1771 a body of the company's troops in the neighbourhood of Surat was engaged against the Kolis. In the hope that a military display might induce the nawáb to propose some settlement of the claims made against him, the chief of Surat was directed to transport this force by sea to the neighbourhood of Broach. These instructions the factors at Surat did not carry out. A month later (April 21st) they wrote to Bombay that, instead of sending them by sea, they had determined to despatch the troops to Broach by land. In spite of further orders to give up the expedition against Broach, and embark the troops for their return to Bombay, preparations were continued at Surat. Even then some further delay occurred; and it was not till the 27th April that the march from Surat to Broach was actually begun. The nominal commander was Colonel Cay; but that officer was instructed to observe all orders he received from Mr. Gambier, one of the committee appointed to carry on the negotiations with the nawáb of Broach. The expedition was accompanied by 700 men, belonging to the nawáb of Surat, under the command of the *bakshi*, or paymaster. On the march they were attacked by a force sent by the nawáb of Broach, about two thousand strong; but the attack was beaten off with small loss on the side of the English, though the assailants, it is said, suffered considerably. On the 1st of May the troops reached the bank of the Narbada opposite the city of Broach. Posting themselves on an island in the river, they directed their guns against the wall of the city, and succeeded in making a breach. A party was sent in boats to effect an entrance, but miscalculating the strength of the current, the boats were carried down the stream, and the attempt had to be abandoned. In addition to this failure, a shell from the city, lighting on the magazine, blew it up, destroying the greater part of the besiegers' munitions. A consultation was held, and it was agreed that, on account of the lateness of the season, the attempt to reduce the town should be given up, and the troops led back to Surat. As the management of the expedition had been in many points contrary to the instructions of the Bombay government, and had ended in so complete a failure, the conduct of the officers concerned was made the subject of a committee of inquiry. The result of the inquiry was that Mr. Draper, the chief of the factors at Surat, was removed, and the other members subjected to severe reprimand and censure.[1]

First expedition, 1771.

On the 30th July 1771, the Bombay government received a letter from the nawáb of Broach, offering to visit Bombay with the view of settling in person the claims brought against him. Mázad Khán's proposal was accepted, vessels were sent to Broach, and, setting out at the close of the stormy season, the nawáb reached Bombay on the 4th November 1771. While in Bombay Mázad Khán was treated with every consideration. Before he left he had engaged to pay a sum

[1] Mills' History of India, Vol. II.

of £40,000 (Rs. 4,00,000), of which £20,000 (Rs. 2,00,000) were to be forwarded in six months, and the remainder at stated intervals, the whole payment to be completed within a term of two years. He also agreed to make over to the Bombay government the duties collected on English trade, and on all goods brought to, or exported from Broach, under English pass and colour. As the time for the payment of the first instalment drew near, Mr. Morley, the resident at Broach, was, in April 1772, directed to demand from the nawáb a distinct statement of his intention with regard to the treaty. In the event of the chief's refusing to explain his intentions, Mr. Morley was ordered to return to Bombay. Mázad Khán failed to give any positive promise to abide by the terms of the treaty, and Mr. Morley left Broach. Seeing the Bombay government resolute in their determination to enforce the agreement, the nawáb, in a letter to Bombay, promised at once to pay the amount of the first instalment. That he might have one more chance of redeeming his promises, Mr. Morley was sent back to Broach; but again he was met by evasions. The chief, it seemed, had no intention of fulfilling his engagements.

Second expedition, 1772.

A force was accordingly despatched from Bombay in the beginning of November 1772, and reached Broach before the middle of the month. The expedition was under the command of General Wedderburn, with Mr. Watson in charge of the marine department. On the morning of the 14th November, General Wedderburn, when reconnoitering, was killed by a shell shot from the walls of the city. Colonel Gordon, also on service at Broach, was appointed to succeed him. On the 18th November 1772, the English forces stormed and captured Broach, with a loss, including the brigadier-general, of five officers, sixteen sepoys, and twenty Europeans killed. Besides these, forty-four sepoys and seven Europeans were wounded, and forty-one sepoys missing. A life of Mázad Khán, by one of his courtiers, gives the following local details of the capture of the city: The enemy encamped to the north of the town near the tomb of Báwa Rahan. The bombardment began from the west. The nawáb's men met the besieging forces at the Jhámpa gate, and repulsed them to the Idga (1½ miles). The assailants then found a passage round to the river bank, and made an attack from the flagstaff tower and the Katappori gate. A sharp fire from 6,000 muskets was kept up. General Wedderburn, mounted on his charger, and standing in the open field of Saráh, received a bullet wound directed from the fortifications, and fell off his horse, dead. The attack was resumed from various positions, and lasted for thirty-six hours. At last a traitor pointed out the weak point in the walls, the Kundi tower near the water. Through the Mecca gate the English forces first made an entrance. The nawáb, with three of his sons and a few followers, fled northwards. They sought shelter with Jálam, the Koli chief of Dewán, on the Mahi, and here, before long, the nawáb died.

Mázad Khán left several sons, and one of them, it would seem, found his way to England.[1] The court of directors, in a despatch

[1] Secretariat Records, Political Department, Vol. 23 of 1864, 238-242.

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dated May 1794, informed the Bombay government of the arrival in England of a native of India named Mirza O-du-din Khán, styling himself a descendant of the late nawáb of Broach :—

The nawáb's descendants.

"He has delivered," wrote the honourable court, "a representation to us in his own behalf, and in the behalf of five other descendants of the said nawáb, a copy of which is enclosed, and we direct that you cause inquiry to be made into their claim to a house at Surat, and to a duty, said to have been vested in their family, on all goods imported there under the denomination of *wakenagáng*, and that you use your endeavours to procure them such redress as the nature of the case may require. If you should be perfectly satisfied of the identity of Mirza O-du-din Khán, we have agreed that you shall make him an allowance of Rs. 200 per month so long as he shall conduct himself to your satisfaction. Should either of the other descendants of the nawáb of Broach make a similar application to you, we authorize you to grant them a like allowance, provided you shall be satisfied that they are really the descendants of the said nawáb. Mirza O-du-din Khán and his two attendants have, during their continuance in England, been subsisted at the company's expense, and we have furnished them with a passage to Bombay in the ship *Sir Edward Hughes*."

The Bombay government, having satisfied themselves that O-du-din Khán was really a son of the late nawáb of Broach, and had three other brothers then living, assigned to each of them a pension of £20 (Rs. 200) a month. With reference to these pensions, it was subsequently ruled by the Honourable Mountstuart Elphinstone, and confirmed by two successive governments, that the grant should continue for three generations, commencing with the last nawáb of Broach. In 1809 the court of directors specially assigned an additional yearly allowance of £460 (Rs. 4,600) to the surviving members of the nawáb's family, in consideration of some ancestral property, which, it was shown, had been sequestrated at the time of the acquisition of Broach. This allowance is, in its nature, hereditary; and by the orders of the Bombay government, dated January 1812, the amount settled on each member descends according to the right of inheritance in the late nawáb's family. According to the pension list of the Bombay presidency for 1874, a sum of £450 13*s.* 4½*d.* (Rs. 4,506-11) is annually paid to fourteen descendants of the nawáb.

Settlement of affairs, 1772.

On the news of the capture of Broach, Mr. James Morley was appointed resident, with Messrs. James Cheape and William Makon, joint factors, 'for the management of the concern, and for collecting the revenues of the town.' The chief factor at Surat was ordered to repair to Broach to settle matters upon a proper footing. The demands of the Maráthás for a share in the revenue had, as noticed above, been refused by the first nawáb; but before the capture of the city by the British, the Maráthás had succeeded in compelling the nawáb to pay them tribute. This increase of Marátha power at Broach probably dates from the year 1755, when the Peshwa Bájiráv and the Gáekwár Dámáji marched northwards from

Surat, levying tribute, and ending their expedition by the capture of Ahmedábád. Shortly after the English conquest of Broach, Fatesing, the youngest son of Dámáji Gáekwár, then nominally acting as representative of his eldest brother, approached the city with a body of troops. Fatesing would seem to have formed the design of gaining possession of the fort of Broach, and making it his head-quarters in his contests with his brother Govindráv. With this object, he offered to pay the Bombay government £60,000 (Rs. 6,00,000), and to transfer to the British a yearly sum of £6,000 (Rs. 60,000) from his share in the revenues of Surat. These terms were considered inadequate, and it was determined that Fatesing should in future receive the same share of the Broach revenues that the nawáb had been in the habit of paying him. On the conclusion of these negotiations part of the troops returned to Bombay, leaving in Broach a garrison of 200 European infantry, thirty artillery, and about 800 sepoys. The arrangements with Fatesing were not altogether satisfactory. He contended that he had the right to collect a portion of the revenue and share in the management of the Broach territory. This claim was disallowed by the Bombay government, and arrangements made for the administration, by British officers, of the entire settlement. Broach was separated from Surat, and the management of affairs entrusted to a council, who were placed in direct communication with the government at Bombay. The first president was Mr. William Shaw. The agents of Fatesing ceased to press his claim to share in the management of Broach, and on the 12th August 1773 the Bombay government were able to inform the court of directors that at Broach 'the company's share in the revenue was settled with credit and advantage, and almost the whole amount £15,000 (Rs. 1,50,000) due for that year was recovered.'

Disturbances, 1773.

Not long after this (1773, August 22nd) an attempt was made against Broach by 'a Koli rája near Cambay,' probably the chief of Dewán, by whom, on his flight from Broach, the nawáb had been entertained. To put down this rising a detachment of troops was sent from Broach, and the Kolis retired. They again assembled to the number of several thousands, and after a forced march, on the morning of the 24th September, made an attempt on the town of Broach, and actually raised twenty-five of their scaling-ladders against the walls. Timely news of their approach had been received, and they met with so warm a reception that they retreated with precipitation. On the side of the English only one sepoy was killed. Not long after, a body of Sindhis and Kolis, under the banner of the nawáb's illegitimate son, attacked one of the company's villages. But this outbreak also was easily suppressed, and on the 23rd November 1773 the Broach committee reported to the Bombay government that order was completely restored.

Acquisition of land, 1773-1817.

The territory acquired by the capture of the city of Broach in 1773 corresponded to the existing sub-divisions of Broach and Wágra. This 'settlement,' as it was then called, contained 162 villages, and was estimated to yield a total yearly revenue of £50,171 14*s.* (Rs. 5,01,717). Of the whole amount, forty per cent went to the English, and sixty per cent to the Gáekwár. In the following year, under

Chapter VII. History. 1772-1875.

Acquisition of land, 1773-1817.

the terms of the treaty (1773, March 6th)[1] concluded between the government of Bombay and the Peshwa Raghunáthráv (Rághoba), the honourable company, as security for the pay of the contingent supplied by them to Rághoba, received in pledge the districts of A'mod, Hánsot, and a part of Ankleswar. At the same time the interest of the British in Broach was further strengthened by the permanent cession, in their favour, of the lands of Jambusar, by an assignment of £7,500 (Rs. 75,000) a year on the revenues of Ankleswar, and by the promise of procuring the remission of the Gáekwár's claims on the revenues of Broach. Two years later (1775, June 10th), by the aid of the British troops, Rághobá's position in Gujarát was much improved. Under the terms of an agreement then made between Rághoba and Fatesing, Fatesing agreed, besides ceding to them the district of Koral, to give up in favour of the British all the Gáekwár's claims on the Broach revenues, estimated to yield a yearly revenue of £21,300 (Rs. 2,13,000).[2] At the same time Rághoba, in return for the aid he had received, made the cession of the lands of Hánsot and A'mod permanent—a grant estimated to be worth £27,700 (Rs. 2,77,000) a year, and generally referred to, in the papers of that time, as the 'three-lakh' territory. In the next year (1776) the alliance with Rághoba was broken off, and the treaty of Purandhar concluded with Nána Farnavis, the head of the government of the young Peshwa of Poona. This change of policy was accompanied by the restoration, on the part of the British, of the cessions recently made by Fatesing Gáekwár At the same time the title of the English to the territory of the 'three-lakhs,' A'mod and Hánsot, was, 'by way of friendship,' confirmed by the Peshwa, and a sum of £120,000 (Rs. 12,00,000) was promised to the English to meet their expenses in the war. It would seem from the diaries of that period that the government of Nána Farnavis was not in a position to pay this amount, and that in its place the Jambusar sub-division was allowed to remain under British management.

In 1780, when war with the Maráthás was again declared,[3] Jambusar was still in the hands of the English; and when hostilities actually began, Mr. Robert Gambier and other members of the civil service at Broach, taking advantage of the presence of General Goddard, raised some irregular troops, and, driving out the guards stationed there by the Peshwa, took possession of Ankleswar, Hánsot, Dehejbára, and A'mod. The successes gained by General Goddard's forces soon after hostilities began (1780) induced Fatesing to come to terms. He agreed again to remit his claims on the revenues of Broach, ceding, at the same time, the lands of Sinor on the Narbada and certain villages in the Broach sub-division. But affairs at Broach remained in this position only for three years. In 1783[4] the treaty of Sálbai was concluded, and the whole possessions acquired by the

[1] Grant Duff, II., 202.

[2] Grant Duff, II., 217.

[3] Grant Duff, II., 287, 288.

[4] Grant Duff, II., 324, 325,—Honourable Mr. J. Duncan's Summary of Broach history.—Rev. Dept. Diaries, 40 and 45 (1805).

British in Broach, yielding a revenue of £158,707 18*s.* (Rs. 15,87,079), were handed over to the Peshwa. An exception was made in the case of the sub-division and town of Broach. These possessions, which in 1782 had yielded a revenue of £61,414 (Rs. 6,14,140), were made over to Máhádáji Sindia 'in testimony of the sense entertained of the conduct manifested by him to the British army at Wadgám (January 1779), and of his humane treatment and release of the English gentlemen who had been hostages.'

Acquisition of land, 1773-1817.

For nineteen years these territories remained under Marátha rule. The portions first restored to the British were the Peshwa's share—the districts of Hánsot and Ankleswar, south of the Narbada. The cession of these lands, together valued at £16,300 (Rs. 1,63,000), formed part of the agreement by which, under the terms of the treaty of Bassein (1802, December 31st), the Peshwa Bájiráv II. obtained the help of the British government in his contest with Sindia, Holkar, and the rája of Berár, the confederate Marátha nobles.[1] Operations against Sindia's possessions in Gujarát formed a part of the great preparations made by the British in consequence of this treaty of Bassein. On the 29th August 1803, a European regiment, with a proportion of artillery and sepoys, commanded by Lieutenant-Colonel Woodington, marched from Baroda.[2] On the 23rd of the month they encamped within two miles of Broach. Though the next day, when the English advanced upon the place, the enemy were seen posted as for resistance in front of the suburbs of the town, they were soon compelled to retreat within the fort. Next morning Colonel Woodington took possession of the suburbs. On the 29th the breach in the fort was declared practicable. The storming party was led by Captain Richardson, and though for a time the enemy resisted with considerable spirit, the fort was taken with slight loss to the assailants. By this victory the lands now included in the Broach and Wágra sub-divisions, including 162 villages, and yielding £105,454 (Rs. 10,54,540) of revenue, came under British management. As before, the possession of the town of Broach carried with it the right to levy tributes from the petty chiefs of Dehej and A'mod. Ankleswar and Hánsot, after their cession by the Peshwa in 1802, at first administered from Surat, were in 1805 made a part of the Broach district. No further territorial changes took place till, in 1817, under the terms of the treaty of Poona, Jambusar, A'mod, and Dehej were added to Broach.

Since 1817 no additions have been made to the British territory in the neighbourhood of Broach, and on no occasion have those lands been the seat of war. Twice only has the peace of the district been disturbed—in 1823 by a Koli rising, and in 1857 by a disorderly contest between the Pársis and Musalmáns. In 1823 a body of Kolis, assembling in the Mahi Kánta, from two to three hundred strong, planned an

[1] In the account of the treaty of Bassein, Aitchison's Treaties, Vol III., 72, the total yearly value of these cessions is entered at £8,300 (Rs. 83,000). Of this amount, Hánsot (Hansord) is estimated to yield £500 (Rs. 5,000), and Ankleswar (Octisier) £7,800 (Rs. 78,000).

[2] Mills' History, VI., Chap. 12.

Koli rising, 1823.

attack on the town of Broach. About the same time another band of from forty to fifty men plundered the village of Utáli, in the Broach sub-division, killing the headman of one village and wounding one of the watchmen. The peasantry made no resistance, and so paralysed were they with fear that they refused to say by whom the outrages were committed. "Landholders," writes the magistrate (1823, April 28th), "are deserting their fields, and cultivating patches in other villages." So much land was left untilled that there was a considerable falling off in revenue.[1] Of the Koli plunderers, two of the chief offenders were seized. On their way to the Broach jail, the escort was attacked by a band of men about a hundred strong, and one of the prisoners carried off. The other, Wali Khán by name, was secured and confined in Broach. To effect his rescue, bands of Kolis assembled near the town, and threatened to attack the jail and set fire to the powder magazine. The arrival of troops from Surat intimidated the marauders, and during the rains the country gradually quieted down.

Musalmán riot, 1857.

The other disturbance was in 1857. Happening at the time of the mutinies in Bengal, and among a Musalmán population of so turbulent a character as the Bohorás, this riot was the cause of grave anxiety to the government of Bombay. But whatever hopes some of the actors in the outbreak may have had as to the ultimate form affairs might take, the inquiries made at the time showed that, in origin at least, it was a local quarrel between the Párs and Musalmáns, and at no time assumed the form of hostility to the British government. The following particulars of this disturbance are compiled from records in the office of the collector of Broach. In the beginning of May 1857, the Muhammadans of the city of Broach were enraged against the Párs population on account of certain insults offered to the religion of Islám by one Bezanji Seriádji, a Párs, well known in Broach as a man of bad character. A charge of assault was brought against Bezanji, and a conviction followed But the Musalmáns, considering the punishment insufficient, determined to inflict summary retribution upon the offending Párs. An attack by the town Muhammadans upon the Párs quarter would seem to have been planned; and, to stir up the cultivating Bohorás to join, the report was circulated that, in addition to certain indignities offered to the Musalmán religion, the Párs had defiled a mosque. Rumours of meetings among the villagers to the north of Broach were current for some days, and on the 15th May distinct information was brought to the district magistrate that about two hundred Bohorás had collected at the Báwa Rahan, a Musalmán shrine about a mile to the north of the city of Broach. Leaving the police drawn up near the city, the district magistrate and superintendent of police rode out to the shrine, and attempted to persuade the body of men gathered there to disperse. But the mob refused to disperse, and in a body followed the officers as they returned towards the city. About the same time another band of Muhammadans entered the Párs quarter from behind, and the riot was already begun. The Párs made no attempt to defend themselves, but, wherever they could, closed their houses and

[1] Magistrate of district, to Government, 28th April 1823.

took refuge inside. The police, many of whom were probably Musalmáns, failed to stop the progress of the riot, and not till the arrival of a detachment of troops was order restored. Meanwhile the rioters had gained their object. Bezanji, the offending Pársi, had been beaten to death, and his body, dragged through several of the lanes, was, on the approach of the military, left to lie in one of the chief thoroughfares. Another outrage—not, it would seem, part of the rioters' original plan—had also been committed. Some, among the Muhammadans, forcing their way into the fire-temple, had, at the altar, killed the Pársi high-priest. Twenty prisoners were lodged in the jail; but, on account of rumoured risings in different parts of the country, no inquiries were made into their guilt. The military force in Broach was strengthened by the arrival of troops from Baroda, and the outposts of the Gujarát irregular horse from Wágra, Hánsot, Ankleswar, and A'mod. On the 13th of June, Mr. Rogers, of the civil service, was transferred from Surat, and placed in charge of Broach, with instructions to examine, without delay, into the circumstances of the riot. The result of the inquiries was to implicate the Molvi's son, 'a gloomy, weak-minded man, who would seem to have used his influence to stir up the Bohora inhabitants of the villages round Broach.' This action of the Molvi's son was not, however, in Mr. Rogers' opinion, the result of any political ill-feeling towards the British government, but came from a wish to have the insult on his religion avenged. On the 12th July, seventeen of the men implicated in the riot were committed for trial at the sessions. On the 23rd of August, five of them were convicted of having taken a share in the murder of the Pársi priest. Of these, two were afterwards hanged, and several other prisoners sent off to Bombay. No attempt was made either by Musalmáns or Parsis to renew the disturbance. The whole riot had, in Mr. Rogers' opinion, no connection with the mutinies in Upper India. At the same time it would seem that advantage was, to some extent, taken of the local disturbance, and emissaries sent by the chief mutineers in the hope of stirring up the Musalmán population of the district to revolt against the government. About the middle of August information was given by the chief of Rájpipla that a certain Syed Morád Ali was trying to organize a disturbance in Nándod, the chief town of the Rájpipla territory. The chief asked for help, as he believed the head of his troops had been tampered with by the Syed, and that the men of the militia were inclined to join his mercenaries in revolt. On the 17th of August, Mr. Rogers, taking with him two hundred native and fifty European troops, started for Nándod. But the Syed had taken alarm and fled. The anxiety of the Europeans at Broach, kept alive by constant rumours of attacks from Rájpipla Bhils and Mahi Kánta Kolis, was increased by signs of disaffection among the men of the native regiment stationed in the town. A close watch was kept upon the suspected characters; and as by the middle of September government were able to send a company of Europeans to Broach, any risk of mutiny was averted. By the beginning of December affairs were again so settled that the guard of Europeans was withdrawn. No disturbance of any kind followed their removal.

Musalmán riot, 1857.

CHAPTER VIII.

ADMINISTRATION OF THE LAND.

On its capture by the English in 1772, Broach ceased to be a factory subordinate to Surat. The title of chief and factors continued to be borne by the officers placed in charge, but they administered the settlement, as the conquered territories were called, under the direct supervision of the government of Bombay. In 1776 the chief of the factory was made a collector-general; and, with the object of transferring his personal interest from trade to administration, the grant of threepence for each acre of cultivated land was added to his former emoluments.[1] In 1777 complaints of misgovernment at Broach would seem to have reached Bombay. A commission[2] was in that year appointed to inquire into the charges of mismanagement, and to collect information regarding the revenues and products of Broach and its dependencies. While at Broach, the members of the commission were invested with power to conduct the management of its affairs. They returned to Bombay on the 30th April 1777, and from that time till 1783 the form of administration by a chief and factors was maintained. On the recovery of the town of Broach in 1803, an officer, subordinate to the resident at Baroda, was appointed to the district with the title of assistant, revenue department. This arrangement continued for two years. In 1805 the territories south of the Narbada, Hánsot and Ankleswar, ceded in 1802 under the terms of the treaty of Bassein, were transferred from Surat, and united to the charge of the assistant at Broach. At the same time the whole was, for administrative purposes, placed under an officer styled collector of the revenues of the town and district of Broach.[3] Mr. William Steadman, the assistant in charge of the district under Colonel Walker, was appointed to the office of collector, and Mr. Prendergast, another member of the Bombay civil service, was at the same time made judge and magistrate of the district.[4] This state of affairs continued till 1830, when, owing to the financial difficulties of that time, Sir John Malcolm's scheme for consolidating large districts under an officer of high rank and emolument was introduced. As part of the

A sub-collectorate, 1830-1843.

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[1] Government order dated 30th July 1776.

[2] The members of this commission were—

John Carnac.. . } Members of the Bombay Council.
Andrew Ramsay .. }
R. H. Boddam—Chief of Surat.

[3] Government orders dated 14th and 24th June 1805.

[4] Government proclamation dated 20th January 1805, and Reg. II. of 1805.

changes then introduced Broach was lowered to the position of a sub-collectorate, and placed[1] under the principal collector of Surat.

A separate district, 1843-1861.

This arrangement continued till 1841, when the Bombay government submitted proposals for dividing the principal collectorate of Surat into two distinct districts, Surat and Broach. In support of their application the Bombay government urged that the supervision exercised by the principal collector was nominal; that the district of Broach, though one of the least extensive administrative divisions of the presidency, was, in point of revenue, one of the most valuable, yielding in 1839 £207,749 (Rs. 20,77,490), as compared with £151,870 (Rs. 15,18,700) from Surat; and that, under existing arrangements, the agency employed was unequal to the efficient management of the district. On the ground of the increased expenditure involved, the government of India declined to sanction the proposals of the Bombay government. Subsequently, however, the proceedings were submitted to the honourable court of directors, and it was decided by them that the suggestions of the Bombay government should be carried out, and Surat and Broach constituted distinct charges. This change took effect from the 15th November 1843.[2] With a view to reduce the cost of administration, Surat and Broach were again, from 1st June 1861, united to form one district.[3] At the time of the amalgamation a change in the distribution of the lands of the two districts was also introduced. The portion of the former district of Broach south of the Narbada, the Hánsot and Ankleswar sub-divisions, were united to form the sub-division of Ankleswar, and from the 1st August 1861 were transferred to Surat.[4] The limits of the new sub-collectorate of Broach were thus confined to the lands north of the Narbada. These lands were at the same time redistributed, and the separate small division, *peta máhál*, of Dehej abolished.

Again a sub-collectorate, 1861-1869.

Finally, in the general revision carried out in 1869, in consequence of its large revenue and its importance,[5] Broach was raised to its former position as a separate district, and the Ankleswar sub-division restored to it. Since 1869 this arrangement has remained unchanged.

Again a separate charge, 1869-1875.

Administrative staff, 1875.

For fiscal and other administrative purposes the lands under the collector's charge are distributed among the five sub-divisions of Jambusar, A'mod, Wágra, Broach, and Ankleswar. Of these, two are generally entrusted to the covenanted assistant or assistant collector; two to the uncovenanted assistant, or district deputy collector; and one sub-division is kept by the collector under his own direct control. The third assistant, styled the head-quarter, or *huzur*, deputy collector, is entrusted with the supervision of the district treasury. These officers are also assistant magistrates, and those of

[1] Government order dated 15th February 1830.
[2] Government notification of 25th October 1843.
[3] Government notification, 27th May 1861.
[4] Government notification, 23rd October 1861.
[5] Government resolution No. 2817 of 10th July 1869, Revenue Department.

Chapter VIII.

Administration of the Land.

1772-1875.

them who have revenue charge of portions of the district, have, under the presidency of the collector, the chief management of the different administrative bodies, local fund and municipal committees, within the limits of their revenue charge. Under the collector and his assistant or deputy, the revenue management of each fiscal division of the district is placed in the hands of an officer styled *mámlatdár*. These functionaries, who are also entrusted with magisterial powers, have yearly salaries varying from £210 to £330 (Rs. 2,100 to 3,300). One of the fiscal divisions—Ankleswar—contains a subordinate division, or *peta máhál*, placed under the charge of an officer styled *máhálkari*, who, except that he has no treasury to superintend, exercises the revenue and magisterial powers generally entrusted to a *mámlatdár*. The yearly pay of the *máhálkari* is £90 (Rs. 900).

Headmen.

In revenue and police matters the charge of the 410 state villages of the district is entrusted to 753 headmen, of whom six are stipendiary and 747 are hereditary. Two of the stipendiary and 343 of the hereditary headmen perform revenue duties only; 161 of the latter attend to matters of police only; while four stipendiary and 243 hereditary headmen are entrusted with both revenue and police charges. The yearly pay of the headman depends on the amount of revenue derived from his village. It varies from 5*s.* 1*d.* (Rs. 2-8-8) to £19 1*s.* 5*d* (Rs 190-11-4), the average receipts amounting to £2 16*s.* 3*d.* (Rs. 28-2). Besides the headman there are in many villages members of his family in the receipt of grants from the state,[1] amounting altogether to a yearly sum of £870 18*s.* 7*d.* (Rs. 8,709-4-8), of which £461 9*s.* 4*d.* (Rs. 4,614-10-8) are met by grants of land, and £409 9*s.* 3*d* (Rs. 4094-10) are paid in cash Of £2,989 3*s.* 11½*d.* (Rs. 29,891-15-5), the total yearly charge on account of the headmen of villages and their families, £1,315 5*s.* ⅝*d.* (Rs. 13,152-8-5) are met by grants of land, and £1,673 18*s* 10½*d.* (Rs. 16,739-7) are paid in cash.

Accountants.

The village accountants, or *talátí*, who, under the headmen keep the village accounts and draw up statistical and other returns, number 210 in all, or about one accountant for every two villages, each charge containing, on an average, 1,492 inhabitants, and yielding £1,042 19*s.* 10*d.* (Rs. 10,429-14-8) to the state. Their yearly salaries, paid in cash, and amounting on an average to £19 5*s.* 10½*d.* (Rs. 192-15), vary from £12 (Rs. 120) to £24 (Rs. 240), and represent a total yearly charge to the state of £4,051 16*s.* (Rs. 40,518).

Servants.

Under the headman and the village accountant are the village servants, with a total strength of 5,851. These men are liable both for revenue and for police duties. They are either Musalmáns or Hindus belonging to the Bhil, Koli, Talávia, Dher and Bhangia castes. The total yearly grant for the support of this establishment amounts to £9,390 3*s.* 2⅛*d.* (Rs. 93,901-9-5), being £1 12*s.* 1⅛*d.* (Rs. 16-0-9) to each man, or an average cost per village of £22 18*s.* 0⅜*d.* (Rs. 229-0-5); of this charge, £6,962 19*s.* 0⅜*d.* (Rs. 69,629-8-3) are met by grants of land, and £2,427 4*s.* 1¾*d.* (Rs. 24,272-1-2) are paid in cash.

[1] These men, called *betha bhágia*, or sitting sharers, are entitled to a portion of the perquisites of the office without doing any work in return.

The yearly cost of the village establishments of the district may be thus summarized :—

	£	s.	d.	Rs.	a.	p.
Headmen and their families...	2,989	3	11⅛	29,891	15	5
Village accountants	4,051	16	0	40,518	0	0
Village servants	9,390	3	2¼	93,901	9	5
Total...	16,431	3	1¼	1,64,311	8	10

equal to a charge of £1 0 1s. 6d. (Rs. 400-12) per village, or 7·64 per cent of the entire land revenue of the district.

Land Tenures.

Large Landholders.

Land Tenures.—A landed aristocracy of Rajput pedigree still occupies a position of some importance in the Broach district. The principal estates—including 47,017, or 6·81 per cent, of the total arable assessed area of the district—are those of A'mod, Kerwára, Sárod, Dehej, and Janiádra, and of these Kerwára is an offshoot of A'mod and Janiádra of Dehej. Sprung from the stock of Yádav Rajputs, the ancestors of the A'mod and Kerwára *thákors* were among those converts from Hinduism known as Molesaláms, whom the sword drove within the fold of Islám. The Sárod, Dehej, and Janiádra *thákors* still adhere to the more ancient faith. The A'mod estate is the most extensive, comprising one whole village, Wádiá,[1] and shares in fifty-seven others. The area of the *thákorát* is 21,216 acres, and the yearly revenue is estimated at about £8,000 (Rs. 80,000). The Kerwára estate comprises shares in twenty villages, with an area of 9,287 acres, and a gross annual revenue of about £4,000 (Rs. 40,000). These estates are principally in the A'mod and Jambusar sub-divisions. The Sárod estate, comprising Kávli and portions of forty other villages, is in the Jambusar sub-division, skirting the Mahi river, 6,821 acres in area. Its gross annual revenue is estimated at £3,000 (Rs. 30,000). The Dehej estate is smaller, comprising shares in nineteen villages in the Wágra, A'mod, and Broach sub-divisions, about 4,301 acres in extent. The gross revenue is about £1,300 (Rs. 13,000). The Janiádra estate is made up of shares in twenty-one villages, and is about 5,391 acres in extent. It has been much neglected, and its gross revenue cannot be estimated at more than £1,300 (Rs. 13,000). All these *thákors* were in 1869 so heavily encumbered with debt that wholesale alienations of their estates, under the decrees of the civil courts, seemed inevitable. At this crisis the attention of government was directed to the condition of the *thákors*, and measures for their relief were undertaken, which resulted in Act XV. of 1871 (The Broach Thákors' Relief Act). The liabilities which were admitted to liquidation under the Act were found to be approximately as follows. A'mod, £15,000 (Rs. 1,50,000)[2]; Kerwára, £4,850 (Rs. 48,500); Sárod, £8,400 (Rs. 84,000); Dehej, £2,700 (Rs. 27,000); Janiádra, £2,900 (Rs. 29,000). These liabilities were met by a loan from government, who hold the estates in mortgage for its repayment. Under careful

[1] The possession of this village is at present (1875) disputed.

[2] Besides £10,000 (Rs. 100,000) advanced by government in 1869.

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Land Tenures.

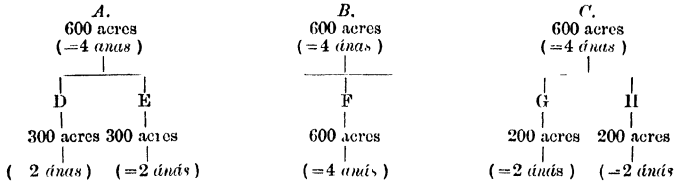
management, Kerwára has already become solvent. As it was found that the land in many cases was held on terms unduly liberal to the tenants, the estates have been surveyed with a view to a general revision of assessments. Rates have now been fixed, securing the landlord a fairer share of the profits of cultivation; but as these vary in different villages, and have been based on estimates furnished by the *thákors* they can hardly, at present, be looked upon as other than experimental. The system of money rents has existed from time immemorial, and falls inconveniently with the revenue survey system; but considerable opposition is experienced in introducing the revised assessments. The quality of the land varies greatly. A large part of the Dehej estate is a salt waste on the shore of the Gulf of Cambay, while portions of A'mod, Sárod, and Kerwára are to be found in the best villages of the district The estates are mostly the private property of the *thákors*, and, except perhaps in the case of certain lands held as *rálat wánta* in the Dehej and Jamádra estates, which are said to be liable to full assessment at the discretion of government, are not held on any political tenure like the *tálukdári* estates in Ahmedábád Some of the lands of the A'mod and Kerwára estates pay a lump sum, or *udhad jama*, to government, which is not liable to revision. Other lands, including the whole of the Sárod estates, pay quit-rent and summary settlement. The sums paid to government on account of land revenue in 1873-74 were as follows: A'mod, £1,235 18*s.* (Rs. 12,359); Kerwára, £923 (Rs. 9,230); Sárod, £741 18*s.* (Rs. 7,419); Dehej, £318 2*s.* (Rs. 3,181); Jamádra, £381 10*s.* (Rs. 3,815).[1]

Peasant proprietors.

With the exception of the seven per cent that goes to form the *thákors'* estates, the lands of the district are distributed among villages of peasant proprietors. The inhabitants of each of these villages may generally be divided into two main classes—those who do, and those who do not, hold land. The land-owning class are the descendants of the founders of the village Those who do not own land would seem to have become connected with the village in one of three ways. Some of them represent the remnants of an older settlement, dispossessed by the founders of the present village; others, the dependents who helped to establish the village; and a third section, the more recent additions to its population. As regards the relations of the members of the proprietary class to each other and to the land, the villages form two great classes—sharehold, where the members are, at least in theory, mutually responsible; and personal, where the holder has a distinct individual interest in the land he occupies. As late as the beginning of the eighteenth century, sharehold villages were both the most numerous and the most prosperous But, under the pressure of Marátha exactions (1737-1755), many of these communities lost their peculiar constitution, the proprietors and non-proprietors being reduced to a common level of poverty. The joint villages in the lands under the nawáb of Broach were more fortunate than those in other parts of Gujarát; for the

[1] Contributed by J. King, Esq., C.S., Tálukdári Settlement Officer.

Maráthás, instead of introducing their usual system of farming, agreed to take a share of the revenues raised by the nawáb. This is probably the reason why, in 1828 of 284 the total number of share villages in the Broach district, 129 were situated in the Broach subdivision. But, while they were spared the exactions of a revenue farmer, the villages had to submit to the levy of new cesses, and the increase of the state demand. To distribute the responsibility for the payment of these new demands, the managers of joint villages held each proprietor answerable for a share of the government demand proportionate to his share of the proprietary right; the members of each family holding a separate estate being, in the first instance, responsible for each other, and the whole coparcenary jointly answerable for the payment of the entire state demand.[1] "Suppose, for example, a village containing 2,500 acres of culturable land was originally founded by three families, and divided in the following manner:—



That is to say, at the foundation of the village, 600 acres were allotted to each of the three families, the remaining 700 being kept as a common property of the whole community. *A*, the first founder, left two sons, who, according to the Hindu rule of inheritance, received 300 acres each. *B* left one son, who succeeded to his father's estate. *C* left two sons, who, not being able to cultivate the whole estate allotted to them, divided 400 acres, and left the rest in common to the members of their own family only. The village would thus, according to the most usual arrangement, consist of five principal divisions, corresponding to the five sons of the original founders. At the head of each of these divisions would be a representative, *matádár*. Again, as time went on, according to the rules of inheritance, shares would be sub-divided into larger or smaller subsidiary estates, the cultivators being of three classes—proprietors, tenants of individual proprietors, and tenants of the community. Under Akbar's system, the village representative collected the government revenue and paid it into the treasury, dividing the surplus rents of the common lands among the proprietary body according to the hereditary interest of each in the village. It would seem, too, that the total assessment of all lands then cultivated having once been ascertained on the principles of the settlement, that amount was fixed as the lump impost on the village, and remained unaltered for a

[1] The difference between the *bhágdári* and *narwádári* tenures is that, in *narwádári* villages the state demand has been fixed as a lump sum on the entire village lands; in *bhágdári* villages the ordinary rates were settled in detail for each field, and the total so calculated formed the assessment of the village. *Narwadári* villages are almost confined to Kaira.—Bom. Govt. Sel., CXIV., 10-14.

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1772-1875.

Land tenures.

considerable period. Hence, if cultivation was extended, the rents of the common lands might nearly equal the total state charge on the village, and the proprietors would practically be holding their own estates nearly free of assessment. But under the Maráthás the common lands became a source of loss rather than of gain. To meet the heavy demands of their rulers, the following system of joint responsibility was introduced: Such a village as that mentioned above, with its three main estates, would be divided into twelve sub-shares, or *úna*. Of these twelve sub-divisions, the shares of *D* and *E* would be held to represent two *únás* each, *F*'s share four *únás*, and the shares of *G* and *H* each two *únás*. A descendant of *D*, having a one-twelfth share of *D*'s estate, would thus be said to hold a two *pái* share in the village. If the gross assessment imposed in any year was £1,000 (Rs. 10,000), and the rent of the common lands or other income derived from the possession of manorial rights amounted to £100 (Rs. 4,000), the managers would raise the deficit of £600 (Rs. 6,000) by imposing a rate of £50 (Rs. 500) per *úna* share upon the proprietary body, at which rate a two *pái* sharer would be assessed at £8 6*s.* 8*d.* (Rs. 83-5-4). But, since the descendants of *C* held in severalty only a portion of their family estate, they would first devote the rent of their common lands, say £60 (Rs. 600), to make up the £200 (Rs. 2,000) for which they were jointly responsible, and with them, therefore, one *úna* would not represent 150 acres of land in severalty, and £50 (Rs. 500) of the year's assessment, but 100 acres and £35 (Rs. 350)."[1]

Village Settlement, 1772-1783.

The system of collecting the land revenue at the time of the first settlement of the British in Broach (1772) is thus described[2] by Mr. Forbes, who, from 1777 to 1783, was a member of the local council: "In each village the headman distributes plots of land among the cultivators, who, with their own cattle and implements of husbandry, cultivate the soil at their own cost. At the close of the harvest the whole of the crops are brought into the village farm-yard, where is the common thrashing-floor and pits for storing cotton. Here the produce is examined by the revenue superintendent, or *desái*, who fixes the amount due to government. The head of the village then takes from the stores of the different peasants the share required to meet the government demand, and to pay for the allowances to the police and other servants of the village." The British officers first placed in charge of affairs at Broach maintained this system of collecting the land revenue, contenting themselves with removing certain abuses. These abuses arose out of the exactions of two classes of men, who had taken advantage of the unsettled state of the country to establish claims upon the land revenue. Of these classes, one was composed of the hereditary revenue officers, the superintendent, or *desái*, and the accountant, or *majmudár*, who, claiming the title of landlord, or *zamindár*, made use of their position as men of capital and government servants, to bring into their hands a large area of valuable land. The other class, the remnants of the old houses

[1] Indian Economist, September 1869.

[2] Forbes' Oriental Memoirs, II., 419.

of Rajput land-owners, taking advantage of the weakness of the government and the cowardice of the great mass of the population, by force procured from the cultivators the transfer of a share of the produce of their fields. With the hereditary revenue officers the favourite means of acquiring a claim was to advance money to the cultivators for the purchase of cattle, seed, and whatever else they might want at the beginning of the rains. On those loans interest was charged at the rate of forty-five per cent per annum. To procure advances the produce of the field was often mortgaged to the money-lender, who, in such cases, secured the crop, paid or became surety for the payment of the government cess, and left with the cultivator such balance as he thought right. "This practice was," says Mr. Forbes, "productive of the worst consequences. The cunning, chicanery, and wickedness of the hereditary officers cannot easily be described or comprehended by a mind unused to their artful wiles."[1]

District accountant.

During the first years of British rule, the most powerful and unscrupulous member of the class of money-lenders and sureties was the hereditary district accountant, or *majmudár*, a Wánio named Lallubhái.[2] Succeeding to the position of accountant in 1767, and using for this purpose the great wealth he had inherited, Lallubhái was able, before 1773, to draw into his own hands the entire management of the district. According to the local memoir of the last nawáb, the loss of Broach was partly due to Lallubhái's intrigues. Enraged at being fined by the chief, Lallubhái is said to have busied himself in stirring up the English to enforce their claim against the Broach revenues, and to have hastened the overthrow of his master by inducing him, on the plea of economy, to dismiss a part of his troops. The memory of the advice he then gave is preserved in the proverb 'Lallubhái, by his talk, ruined Broach.'[3] Under the British (1772-1783) Lallubhái would seem to have been the most prominent of the native officials, who, acquiring possession of so-called alienated lands, and making use of the name *zamindár*, tried to establish themselves in the position of landlords. "Lallubhái," Mr. Perrott (1776) complains, "moves about from place to place, with mace-bearers running before him, proclaiming idle titles." During the early years of British management he would seem to have profited by the ignorance of the first officers placed in charge of the district. He went on adding to his property in land, and kept the factors in the dark as to the amount of revenue the district formerly yielded. Though unscrupulous in his dealings, he is said to have been profuse in his charities. On the occasion of the great famine of 1790, he distinguished himself by distributing large quantities of grain, and, about the same time, he also founded a hospital for animals. In his private life he was careful to appear as one of the leading men of the district, living in one of the finest houses in Broach, and on the occasion of his daughter's marriage spending more than £12,000 (Rs. 1,20,000). After the cession

[1] Forbes' Oriental Memoirs, II., 419.

[2] These details are partly from Forbes' Oriental Memoirs and other records of that time, and partly from Mr. Pedder's Watan Settlement Report (1865).

[3] *Lalubhaye watma Bharuch khoyu.*

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of the district to Sindia (1783), the farm of the revenue was granted to one Gopalráv Malharráv, who rented the district for £85,000 (Rs. 8,50,000) *minus* £17,500 (Rs. 1,75,000) for the expenses of the fort and garrison. At that time Lallubhái's interests are said[1] to have suffered severely. In 1790, when the lease was to be renewed, Lallubhái outbid his rival by offering £100,000 (Rs. 10,00,000). In the first year of his farm he made good this amount by enhancing the rates. New cesses were levied, and so hard did he press the people that an appeal was in the next year made to Sindia, and Lallubhái was fined £57,500 (Rs. 5,75,000). In addition to this misfortune a season of scarcity soon succeeded, and to meet his engagements he had, in 1794, to borrow a sum of £40,000 (Rs. 4,00,000). In the next year, failing to satisfy his creditors, Lallubhái was thrown into prison, where in 1799 he died.

Garásiás.

The second class of men, who at the time of the introduction of British rule claimed a certain share in the land revenues of the district, were the *garásiás*, representatives of the old houses of Rajput landowners and of certain Koli chiefs, who, from their warlike habits, had succeeded in enforcing demands on the district.[2] Of these *garásiás*, some petty chiefs, such as the *thákors* of Miágám, Kerwára, A'mod, Jamádra, and Dehej, whom the British found in the position of tributaries to the nawáb of Broach, and the members of the younger branches who had been reduced to the position of cultivators, lived in the district. Others only occasionally visited Broach, and the irregularity with which their demands were enforced led to many disputes. In 1777 the Broach authorities wrote[3]: "It is really a disgrace to allow to pass with impunity such enormities as, under the plea of right, these contemptible people are continually committing." Disorders would seem to have come to ahead in 1782, when Mr. Forbes, then collector of Dabhoi, wrote[4]: "For several weeks scarcely a night has past without some of the villagers being plundered, their houses burnt, the cattle driven off, and the patels and helpless villagers murdered and cut to pieces."

Land revenue farmed, 1783-1803.

Under Sindia's government (1783-1803) the land revenue of the district was farmed. On recovering possession of the district in 1803, one of the first objects of the British officers was to reduce the irregular demands made on the cultivators. In 1804, when the total nominal land revenue was but little over £60,000 (Rs. 6,00,000), the exactions of the district officers, either as government servants, or as sureties and money-lenders, amounted to more than £10,000 (Rs. 1,00,000), or about one-sixth part of the entire

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[1] "A great many inhabitants of the city have left it because they could not live under such tyranny, and your friend Lallubhái has suffered most of all."—Forbes' Oriental Memoirs, III., 356 (1783).

[2] Some account of the *garásiás*, an epithet said to be derived from the word *grás*, a mouthful, will be found in the general chapter on the history of Gujarát under the Musalmáns.

[3] Despatch of the Broach Commission, dated the 10th April 1782.

[4] Collector of Dabhoi, dated 29th October 1782.

revenue.[1] To lessen this burden the dates for the payment of instalments of government rent were fixed later in the season, and the cultivators were further helped by the introduction of a practice of receiving cotton in payment of revenue demands. Advances were also made by government at yearly rates of twelve per cent, and the interest which, as sureties, the district officers could recover was reduced from forty-five to twelve per cent. Though their power was by degrees lessened, as cultivators became more able to pay the state demand without borrowing, the claims of this class of money-lenders were still, in 1822, sufficient to attract the special notice of the revision committee of the judicial code. At that time the members of the committee came to the conclusion that no special provisions were required for enforcing the claims of sureties. Such claims, the committee decided, were of two classes,—those in which the surety stood in the place of the former government, and those in which he had contracted only as a private individual Claims of the first class were, on account of the change of governments, decided to have lapsed. Cases of the second class were held to be private transactions, to be settled in accordance with ordinary rules.

Village Settlement, 1805.

In 1805 the land revenue ceased to be farmed, and the system of village settlements was re-introduced. It was the wish of government to fix the amount to be paid by each village with the head of the village, and not to attempt a settlement with the individual cultivators. So, in answer to a proposal that his share of the state demand should be fixed with each cultivator, Mr. Duncan (1805) says, "it is against the custom of the land, and, even if good in itself, is probably not possible."[2] It was with no intention of departing from the system of village settlements that, in 1811, it was determined to make a survey of the original Broach district; that is, the sub-divisions of Broach, Ankleswar, and Hánsot. Besides the geographical and statistical information sought for regarding the natural features of the country, the number of its population, and the quantity of agricultural stock, with a view to help in the land administration of the district, the following were laid down as the chief objects of the survey: i, to determine the boundaries of each village; ii, to fix a standard measure of land; iii, to show the total area of land included in each village; iv, to show of the total area how much was arable and how much unfit for cultivation; and v, of the arable land how much was actually under cultivation and how much was in a neglected state—ascertaining at the same time how much was rice soil, how much light soil, and how much black soil; and in the season of survey, the area under cotton, under grain, under tobacco, and under sugar-cane. To divide the village lands into small plots, and by testing ascertain the character of the soil in each field, and

[1] Colonel Walker calculated in his revenue report of 1803 that the profits of the sureties on the land revenue of Broach was £6,320 (Rs. 63,200), and that their profits in the shape of charges, *dasturi*, as government officers, came to £8,500 (Rs. 85,000) more, making a total burden on the district of £14,820 (Rs. 1,48,200), or 18·92 per cent of the entire land revenue then collected.—Diary, Volume 45 of 1805, 569.

[2] Revenue Dept. Diary, Vol. 45 of 1805.

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the amount of assessment the land could fairly bear, was not considered to be one of the objects of this survey. The fixing of the money demand on each field should not, Colonel Williams was of opinion, be attempted either by the assessors or by the collector. The village community was, it seemed to him, the best judge of the advantages and disadvantages, permanent or temporary, under which each cultivator managed his land. Even were the government servants employed for this purpose all men of integrity, zeal, and activity, they must, he thought, be deficient in the local knowledge necessary to estimate the various circumstances that affect the value of a field. Survey inquiries were extended to the territories—the three sub-divisions of Jambusar, A'mod, and Dehej added to the Broach district under the terms of the treaty of Poona (1817, June 13th),—and the whole of the first survey operations were concluded early in 1820.

Village Settlement, 1817-1836.

The following details show the working of the system of village settlements between the years 1817 and 1836, when the chief abuses in existence at the time of the introduction of British management had, to a great extent, been removed.[1] About the end of April, or the beginning of May, cultivators began to clear their land and prepare for sowing the first crop. This was reaped in November or December. The assessment on this crop was called the rice cess, or *dángar tavji*. The amount was fixed by the collector, who, in each year, took the following steps to ascertain the state of the district. Early in October the village accountants and peons collected information as to the extent of land under cultivation, and the area under the different varieties of crops. Sometimes the hereditary district officers and village headmen were asked to frame distinct estimates. When this was not the case, the statements of the village accountants were handed over to the hereditary officers with orders to frame from them an estimate of the first instalment of the government demand. The collector, after comparing this estimate with the corresponding demand in former years, and taking into consideration the price of grain and the usual rent, fixed a lump sum as the assessment for the whole village. In the Broach sub-division this assessment on the early crops generally amounted to about one-fourth of the entire government demand for the year. In the Ankleswar and Hánsot sub-divisions, south of the Narbada, the corresponding share was about one-sixth. Jambusar and A'mod, the portions of the district last received from the Marátha government, were in some respects under a different system of revenue management. There two distinct sets of estimates were always framed, one by the village accountant, the other by the hereditary district officials. By the latter, a separate statement was drawn up showing the rental paid by the cultivators to the head of the village. From these papers the stipendiary sub-divisional officer, or *kumávisdár*,[2] in consultation with the hereditary officers, prepared a draft of the rates to be levied from

[1] These details are compiled from a minute by Mr. Elphinstone in 1821, and a report written in 1828 by Mr. Stewart, at that time collector of Broach.

[2] The designation *kumávisdár* was in 1841 changed into *mámlatdár*.

Village Settlement, 1817-1836.

each village. These proposals were then submitted to the collector, who, in addition to the points noticed by the local officers, taking into consideration the amounts paid by each village in former years, fixed the assessment payable for the current year. Each village headman then signed the statement for his village. In Jambusar the early crop yielded about one-half, and in A'mod and Dehej about one-fifth, of the state demand for the whole year The assessment on the spring crop was determined after a set of similar inquiries. The government share was supposed to be equal to one-half of the money produced by the sale of the crop.

As far as government officers were concerned, the settlement of the government demand ceased with the consent of the head of the village to the payment of the amount fixed by the collector. Though the names of individual cultivators were entered in the estimate, the collector did not interfere in assessing them. The amount to be paid by each cultivator or shareholder was fixed by the head of the village, who, in each case, explained to the cultivator the sum he was to pay, and to the village accountant the sum he was to recover. The assessment so fixed was then realized by the accountant direct from the cultivator, or from the shareholder, according as the village was of the personal or sharehold constitution. The crops, when cut, were brought to the village farm-yard, and, without the permission of the government officers placed in charge of them, they could not be removed or disposed of. Payments made by the cultivator were placed to his credit by the village accountant, and when the whole of his share of the state demand was paid a release was handed over to him It was not, however, necessary that the whole of the assessment should be paid before any of the crop was removed. On the contrary, a cultivator might carry off a portion of his produce as soon as he could pay the price of it, and when his payments were equal to the whole demand against him, he might remove the whole of his crop. A cultivator, whose share of the whole village payment was unfairly increased by the head of his village, might complain to the collector. But from the dependence of the village accountant on the village headman, and from the mode of settlement in which the collector had so little occasion to watch over the correctness of village accounts, it would probably not be easy for him to ascertain how far the cultivator had a real ground for complaint. The most striking defects in this mode of recovering the government demand were its uncertainty and its irregularity. It was uncertain, because it depended on the hasty estimate of native officers, liable to be mistaken, and still more liable to be corrupt. It was unequal, because the officer might be led, by corruption or other motives, to favour some villages and throw the burden on the rest; and, still more, because the assessment was made on the general state of the village, without regard to the circumstances of the individual, and might, therefore, bear heavily on a man who had a bad crop, while it was light on one who was more fortunate. Further, the village accountants were very closely connected with the headman, and failed to furnish that check on the headman's proceedings which their appointment, as government servants, was meant to ensure. Mr. Elphinstone (1821) suggested an inquiry by an European officer into the existing system of

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assessment. In cases where the rates levied seemed tolerably reasonable, the details should, he thought, be recorded and the amount fixed. The settlement would still be with the heads of villages, but the rights of each cultivator would be known, and, in case of oppression, both the revenue and civil courts would at once give redress.

"In the year 1837 an important change was introduced in the system of revenue management, under which the government no longer left to the head of the village the power of fixing the share of the total demand which each cultivator was to pay; but, instead, levied on the holding of each cultivator a sum, fixed according to the character of the soil and other considerations of local value. This change is said to have been introduced with the double object of helping the cultivator, by fixing a fair average rate upon his fields, and of benefiting government by the increased area of land which the change was calculated to bring under cultivation. The experiment was first commenced in 1837-38, and by 1843-44 all the villages of the district had undergone the projected reform. No fresh measurement of the lands was found necessary, as the results of Colonel Williams' survey were found to be sufficiently lucid and to be depended upon. The steps taken to classify and record the different kinds of soil were throughout of one uniform character. A committee of experienced district and village officers was appointed at a rate of stipend sufficient to cover their actual expenses, and by these committees the whole of the lands were inspected and registered. Rates were thus recommended, proportioned to the apparent class to which the land belonged, controlled in some degree by those local circumstances which must ever intervene to modify mere intrinsic value. The proceedings of these committees were then submitted to the collector as presiding officer, and it was found that the rates recommended by the committee were, as a rule, reduced by the collector."[1] One important result of the introduction of this field settlement was the change it made in the constitution of shareholds villages. Instead of the entire rent of the village being raised and paid by the representative, it was collected piecemeal by the village accountant, who received from each shareholder an amount proportionate to the land held in his name. Again, the common lands were taken out of the hands of the former managers, the occupants made tenants of the state, and their rents collected by the government accountant. With the loss of their position and power the chief sharers were freed from their former responsibility. Though, in theory, they remained liable to make good the failure of a tenant or lesser shareholder, in practice the officers of the state did not enforce this liability. The number of these villages, which have now to a great extent lost their special character, would seem to have been gradually becoming fewer. In 1828 there were 284, in 1847 277, and in 1862 the number had fallen to 244. "As a whole, it would seem that the new system of assessment was not altogether a success. The error of the new settlements lay in the imposition of too high a standard assessment; but this, again, was attributable to undue en-

[1] Mr. J. M. Davies' report No. 334, dated 11th September 1849.

Field settlement, 1837-1848.

hancements of the general share taken by the government in the years immediately antecedent to the introduction of the new measure. An analysis of the latter clearly proves either that the new rates entailed a serious increase of taxation upon the land, or, where founded on the actual realization of past years, that those years were in themselves exceptions to the general character of the village settlements. The result of the introduction of the system of payment by the acre was to increase the state demand by no less than twenty-four per cent. The average settlement of the nine years ending with 1834-35 being £145,074 (Rs. 14,50,740), as compared with £191,411 16*s.* (Rs. 19,14,118), the average assessment during the term of the nine years ending with 1843-44."[1]

The following statement shows in detail the amount of land revenue recovered under the former system of village settlement and under the new system of field rates :—

Statement showing the Land Revenue of the Broach District, 1818-1843.

Year	Total realizable rental	Balance of the year on 1st August	Balance of the year afterwards written off	Year.	Total realizable rental	Balance of the year on 1st August	Balance of the year afterwards written off
	Rs	Rs.	Rs.		Rs.	Rs	Rs.
1818-19	16,35,318	....	...	1835-36 ...	22,97,458	54,216	15,866
1819-20	16,54,910	...	....	1836 37 .	20,57,411	74,929	24,045
1826-27 ...	14,06,756	57,530	10,697	1837-38	20,94,253	39,620	15,594
1827-28	13,55,692	71,062	22,065	1838 39	13,38,202	3,24,920	2,18,153
1828-29	11,96,494	1,88,048	43,161	1839-40	21,22,178	98,084	23,259
1829-30 ...	15,85,846	58,298	14,647	1840-41	17,55,041	2,59,909	1,85,086
1830-31	15,67,028	70,608	16,856	1841-42 ..	18,77,970	13,522	4,100
1831-32 ...	14,17,025	1,71,738	17,755	1842-43 ...	19,38,429	31,964	4,001
1832-33 ...	14,80,797	55,124	7,989	1843-44	17,46,124	1,13,614	145
1833-34 ..	16,44,102	19,756	2,970				
1834-35 .	14,02,920	1,16,682	44,739	Total of 9 years ...	1,72,27,066	10,10,808	4,90,219
Total of 9 years ...	1,30,56,660	8,08,846	1,80,879	Average of 9 years	19,14,118	1,12,312	54,472
Average of 9 years	14,50,740	89,871	20,097				

Revised settlement, 1848-1870.

This enhancement of the government demand was to some extent the natural result of the greater breadth of land under cultivation, 352,427 acres, as compared with 295,475, an advance of nineteen per cent within the thirty years ending with 1847. But this increase of the government demand was, as shown in the margin, accompanied by a decline of an average of twenty-nine per cent in the price of all the chief grain crops and cotton The increasing difficulty of realizing the

Name of Grain.	Value in pence per ten pounds		Decline per cent
	1836	1848	
Cotton, *kapás*	12·75	7·06	80 59
Indian millet, *juwár*.	4 75	2·56	46·1
Wheat ...	5 09	4 48	11 98
Rice	4 39	4·39	
Pulse, *tuver* ..	4 02	3 47	13 43

[1] Letter of the collector of Broach No 206, dated 12th June 1848.

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Revised settlement, 1848-1870.

government demand; the large outstanding balances, amounting, on 1st August 1844, to £31,505 14*s.* (Rs. 3,15,057); the break up of sharehold villages, and the diminished credit of the cultivating classes,—were, in a series of reports, extending from 1844 to 1848, laid before government by the collectors of the district. On the evidence thus placed before government, orders were issued for the general revision and reduction of rates; and during the years 1848 and 1849 revised rates were introduced on the different classes of land shown below:—

Statement showing the revised rates of Assessment, 1848.

Class of land	Highest rate per acre in	Lowest rate per acre in	Remarks
	Rs a p	Rs a p	
Garden	2 0 0	0 14 0	Highest in Broach sub-division and lowest general.
Rice	1 4 0	0 10 0	Do Ankleswar do do.
Light soil (*goràt*)	1 8 0	0 5 0	Do. Broach do do
Black soil	1 0 0	0 4 0	Do do do do.
Grass-lands	0 8 0	0 1 0	Highest in Broach, lowest in poor black (*barad*) villages

Under these rates the government demand was, as shown in the following statement, reduced over the whole district by about thirteen per cent:—

Statement showing the total Government demand before and after 1848.

Sub-division	Revised rental	Former rental	Decrease per cent.
	Rs.	Rs.	
Ankleswar	1,33,985	1,46,550	8 57
Hánsot	1,40,628	1,41,472	0 59
Jambusar	3,50,340	4,27,890	18 12
Amod	1,09,898	1,42,424	22 83
Broach	3,71,043	4,14,860	10 56
Wágra	3,45,484	3,91,356	11 72
Total	14,51,378	16,64,552	12 8

Existing settlement, 1870-1875.

On account of the changes that had taken place since 1848, it was in 1868 considered advisable to have the lands of the district re-measured and revised rates introduced. The only change in the position of the occupants under the new revision was that they received a guarantee that the rates should not be increased for a term of thirty years. At the end of that time the rates are revised and may be increased. But no addition can be made on account of improvements effected by the occupiers' capital. From experience in other districts the system was more carefully worked out than was the case at the time of the former settlement. At the same time the value of agricultural produce had, as shown in the margin,

Name of gram	Pence per ten pounds.			Percentage Increase in 1870, above	
	1836	1848	1870	1848	1836
Cotton, *kapás* ...	12 75	7 06	26·44	274·5	107·37
Millet, *juwar*	4·75	2·56	9 41	267 57	98 1
Wheat	5 09	4·48	14 32	219 73	181·33
Rice	4 39	4 39	8 38	90·88	90 88
Pulse, *tuver.*	4 02	3 47	17 77	412 1	342 04

risen on an average 146 per cent over the current rates in 1836. The introduction of the railway and the opening up of roads had also helped to make the Broach cultivators able to pay without difficulty an increased money rental to the state. Accordingly, the new government demand was pitched at higher rates than those previously in force. The Broach sub-division was settled in 1870-71, Ankleswar in 1871-72, and Wágra in 1872-73. The revised rates for A'mod and Jambusar have not yet (1875) been fixed.

Existing settlement, 1870-1875.

The following statements show the rates[1] imposed and the amounts recovered by the state from the different varieties of land :—

Contrasted statement of the rates of Assessment in 1848 and 1875

Sub-Division	Late System					
	Dry-Crop.		Garden.		Rice	
	Max	Min	Max.	Min	Max.	Min
	Rs. a. p.	Rs a p	Rs a p	Rs. a. p	Rs a. p.	Rs a p
Broach	13 10 6	2 7 0	19 8 2	9 12 1	5 13 8	5 13 8
Ankleswar	9 12 1	1 15 3	13 10 6	3 6 8	11 11 4	3 14 5
Wágra	5 13 8	1 9 0	9 12 1	4 2 9	5 13 8	2 14 10
A'mod	8 5 5	1 15 3	9 12 1	9 12 1	5 13 8	5 13 8
Jambusar	9 12 1	1 15 3	11 11 4	5 3 5	9 12 1	1 15 3
	Survey System					
Broach	9 8 6	1 4 6	16 0 0	2 8 0	9 2 0	7 14 0
Ankleswar	9 2 0	0 7 6	15 2 0	1 4 0	13 0 0	3 2 0
Wágra	8 8 0	0 12 6	8 8 0	2 11 6	8 7 0	3 12 0
A'mod	Survey Settlement not yet introduced.					
Jambusar						

The financial results of these rates on government land are likewise contrasted below :—

Statement showing the total Land Revenue under the old and new Settlements.

Sub-Division	Ten years' average collections	Collections the year before the settlement	Old System.		Survey System		Percentage Increase.
			Collections.	Rate per cultivated acre	Collections	Rate per acre of Survey holdings	
	Rs. a p	Rs	Rs a. p	R a p.	Rs. a. p	Rs a. p	
Broach	4,55,405 6 10	4,65,245	4,68,382 12 0	4 7 2	5,52,133 0 0	5 3 10	18
Ankleswar	3,74,363 9 2	3,74,289	3,67,779 9 0	3 11 5	4,21,780 11 0	4 4 2	15¼
Wágra	2,47,845 6 3	2,47,918	2,46,206 3 3	2 15 0	3,16,576 0 0	3 8 2	28
Total	10,77,614 6 3	10,87,452	10,82,368 8 3	3 11 2	12,92,489 11 0	4 5 4	19

The following details contrast the pressure of the state demand under each of the sets of rates of assessment that have been in force in the Broach district. During the first, or village settlement period (1818-1836), the average area of government land under cultivation

State demand, 1818-1875.

[1] For convenience of reference the rates of assessment in rupees, ánás, and pies, have been retained. They can be converted into pounds and shillings by calculating the ánás as equal to 1½*d.* (12 pies = 1 a., 16 as. = R. 1).

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during the last ten years was 325,263 acres, yielding a land revenue of £167,675 8*s.* (Rs. 16,76,754), or an average pressure per acre of 10*s.* 3¾*d.* (Rs. 5-2-6), representing, according to the average prices ruling during the last four years of this period, 242 pounds of millet, or ninety-eight pounds of raw cotton. During the second, or original field-rate period (1837-1844), the average area of government land under cultivation was 348,848 acres, yielding a land revenue of £167,097 2*s.* (Rs. 16,70,971), or an average pressure per acre of 9*s.* 7*d.* (Rs. 4-12-8), representing, according to the average prices ruling during those years, 350 pounds of millet, or 134 pounds of raw cotton. During the third, or revised field-rate period (1845-1870), the average area of government land under cultivation was 349,476 acres, yielding an average land revenue of £140,847 6*s.* (Rs. 14,08,473), or an average pressure per acre of 8*s.* ¾*d.* (Rs. 4-0-6), representing, according to the average prices ruling during those years, 210 pounds of millet, or eighty pounds of raw cotton. Under the recently revised rates (1870-1875) the average area of the state land under cultivation in the Broach, Ankleswar, and Wágra sub-divisions was 298,781 acres, yielding a revenue of £129,319 2*s.* (Rs. 12,93,191), or an average pressure per acre of 8*s.* 8*d.* (Rs. 4-5-4), representing, according to the prices current in 1874, 173 pounds of millet and thirty-five of raw cotton.

Resources of the district, 1820-1875.

The development of the resources of the Broach district during the same periods may be thus summarized: in 1820 the population was estimated at 229,527; the agricultural stock, including cows, bullocks, and buffaloes, at 92,174; the area under cultivation, government and alienated, at 295,475 acres; and the revenue at £163,531 16*s.* (Rs 16,35,318). In 1847, after twenty-nine years had passed, the population was estimated at 262,631; the agricultural stock at 123,755; the area under cultivation at 352,427 acres; and the revenue at £184,018 6*s* (Rs 18,40,183). In 1872-73, after twenty-five years more, or fifty-four years in all, the population was estimated at 350,322 souls, an advance, as compared with 1820, of fifty-two per cent; the stock, 137,840, a corresponding increase of 49 per cent; the land under cultivation, 459,820 acres, or 56 per cent more than in 1820; and the land revenue £194,670 10*s.* (Rs. 19,46,705), an advance of nineteen per cent.

Share of crop, 1870-1875.

The rates recently introduced represent, according to estimates framed by the heads of villages, a one-fourth share of the crop. Independent tests were in nineteen cases taken by survey officers, the crop in each instance being reaped without previous warning, and weighed in the presence of European officers. The results of these experiments, as given below, would seem to show that the rates lately introduced do not, on an average, represent more than the one-fifth part of the gross produce of the land:—

Statement showing the result of experiments as to the share of the produce taken by the State under the rates recently (1870-1873) *introduced.*

Crop.	Value of crop per acre.	Rate of assessment per acre.	Remarks
	Rs. a. p.	Rs. a. p.	
Indian millet	49 9 4	4 10 6	Crop better than average.
Do.	22 1 4	3 11 0	Crop below average. Old system assessment.
Do.	21 6 0	3 2 6	Average crop Old system.
Do.	28 14 0	6 2 6	Crop good. New system.
Do.	25 12 8	4 15 6	Do. do.
Do.	29 0 8	4 1 0	Do do.
Do.	39 0 8	5 5 6	Crop above average. New assessment.
Do.	18 14 0	5 3 4	Old assessment
Do.	19 14 0	3 2 0	Old assessment
Total ..	254 8 8	40 5 10	
		2 1 0	Plus one ána agricultural cess.
		42 13 10	Average one sixth of the total produce.
Wheat	20 11 4	4 0 6	Crop below average. New assessment.
Do.	16 7 0	3 2 6	Middling crop. Old assessment.
Do.	59 15 4	3 11 0	Crop much over average. Old assessment.
Do.	30 2 0	5 12 6	Average crop. New assessment.
Do.	19 4 0	4 1 0	Crop below average. New assessment
Do.	31 2 8	5 14 6	Average crop. New assessment.
Do.	16 9 2	5 3 4	Old assessment.
Do.	13 7 4	4 2 8	Old assessment.
Do.	16 0 0	5 3 4	Old assessment.
Do.	10 9 4	2 9 8	Old assessment.
Total	234 4 2	43 13 4	
		2 11 0	Plus one ána agricultural cess.
		46 8 0	Average one-fifth of the total produce.

Alienated lands.

Lands given by the state in grant, and upon which the government demand is fixed and cannot be increased, are known as alienated lands. They extend over an area of 146,869 acres, or 21·28 per cent of the entire arable land of the district. The alienated lands of the district are of two kinds,—lands granted free of service, and lands granted under condition of service. Of the lands granted free of service, the most important are the share, or *wánta*, lands, the remains of the original estates of the Rajput landlords. The system in force under the early Hindu kings, according to which large tracts of land were held by Rajput chiefs on condition of military service, was unsuited to a government by foreign conquerors like that of the Musalmáns. Accordingly, under the Muhammadan sovereigns, the Rajput chiefs were freed from the duty of military service, and deprived of a portion of their territory. The change was effected in Broach by confiscating a portion, generally two-thirds of each estate, and leaving the remainder in the owner's hands. In Broach there are three forms of the *wánta* tenure: Lands held subject to the pay-

Chapter VIII. Administration of the Land. 1772-1875. Alienated lands.

ment of a fixed rental, and so called fixed, *udhad; ráhat wánta*, apparently at one time held free of any payment—*ráhat* meaning enjoyment in Arabic, but now subject to a cess; and *ugaria wánta*, that is, share given in return for succour *(ugárvu*, to aid). This last form of *wánta* was probably originally levied as black-mail, on condition that the person by whom it was enjoyed should protect the villagers from robbers and marauders. The only privilege attending this tenure is the payment of rent for certain state lands at something less than the full assessment.

The second class of lands held free of service are those known as *wajifa*, or stipendiary lands. This is a Musalmán form of gift, and is of importance in this district, as the estates of the *thákors* are technically alienations of this class. In a report on the alienated lands of the Broach sub-division in 1776,[1] *wajifa* lands are said to have extended over 5,873 acres, representing a yearly revenue of £3,000 (Rs. 30,000). Most of these lands were, it was stated, then enjoyed by Muhammadans, Kájis, Syeds, Fakirs, and others, who chiefly resided at Surat. Some of these alienees held under grants from the Delhi emperors; others under grants from the Ahmedábád sovereigns; and a third class under grants from the nawábs of Broach. These lands are now said to have almost entirely passed into the hands of Hindu money-lenders—Wánás, Brahmans, Bráhma-Kshatris, and others.

The next class of non-service alienations are those known as *dewasthán* and *dharmáda*, or religious and charitable grants. Alienations of this class are Hindu in their origin. They amount in all to 8,207 acres, with an estimated yearly value of £2,143 4*s*. (Rs. 21,432). These lands were brought under the summary settlement Act (VII. of 1863), and continued to the holders on payment of an annual quit-rent of one-eighth part of the ordinary assessment.

The last class of non-service alienations includes two sub-divisions, *vechánia* and *giránia*, and *walatdánia*. Grants of this class originated in the years of over-assessment (1750-1773), consequent upon the exactions of the Maráthás. Of the first sub-division, the *vechánia* were village lands transferred by sale, *vechán;* and the *giránia*, lands transferred by mortgage, *giro*, by the village managers, in order to meet the demands of their rulers on the village revenues. *Walatdánia* were lands set apart by the representatives of village communities for the benefit of the capitalist, who agreed to become surety, *manotidár*, for the payment by the village of the state demand. The rates charged for the advances made by those capitalists were as high as forty-five per cent per annum; and when the head of the village found that he was unable to meet his engagements, he assigned the surety a portion of the village lands to enjoy for a period of from five to twelve years.

[1] Mr. Perrott's report of 16th May 1776, Political Department, Diary No. 70.

Lands held under condition of service are of two kinds, *pasáita*[1] and *watan*. Of these terms, *pasáita* would seem generally to be applied to grants made to the inferior class of village servants, and *watan* to hereditary grants to the headmen of villages and to sub-divisional officials. Besides lands held by trackers, *pagi*, by watchmen, and by other village servants, the term *pasáita* includes the grants of land to artizans and others, who, though not useful to the state, are useful to the village community. At the time of inquiry into alienations these grants of village lands were continued on the payment of a quit-rent varying, according to the value of the alienee's services, from a fourth to a half of the ordinary assessment. Though they come under the general designation of *pasáita*, the lands held by members of the village establishment are sometimes specially called *waswáya*; while an allotment of land granted by the village community in compensation for life lost in its service is called *háriá*. At present the village service lands, including the allotments, *watan*, to the heads of villages, extend over 34,276 acres, assessed at £11,736 17*s*. (Rs. 1,17,368-8). In return for their services as chief revenue officer and district accountant, the *desái* and *majmudár* received grants of land bearing the name of *watan*. Under the altered system of collection introduced by the British, the services of the district hereditary officers were no longer required. A quit-rent, varying from one-quarter to one-half of the ordinary survey rates, was imposed on their lands, and they were allowed to hold them free from any condition of service. On the other hand, as their services were still required, the hereditary headmen of villages were continued in the enjoyment of their rent-free lands.

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[1] "The next description of tenure was the *pasáta*, which is government land allotted, according to the ancient custom of the country, for the maintenance of various descriptions of artificers in each village. The *pasáta* being, therefore, an official rather than a personal occupancy, its mortgage or sale could not be justified. Where the produce was found to be actually appropriated to the purposes intended, the possession has been respected. *Pasáta* is also generally held throughout the district by Gosáis, Wairági, Fakirs, and Bráhmans. Of these, many do not reside nor perform the religious duty of the villages. *Pasáta* is also assigned to Bháts, Syeds, Bhawávás, &c., and for cleaning tanks, drawing water for the village cattle, for supplying water to travellers, for temples and mosques, besides the portions allotted to the Desáis and Majmudárs." (Bombay Revenue Selection, Vol. III., p. 649.) *Pasáta* were granted for the support of Hindu families, but south of the Mahi the term is applied to service lands.—(Indian Economist, Vol. I., 212.)

As to the origin of the words, *pasáta* would seem to be connected with *posvu*, to support; *waswáya* (*wasávu*, to settle,) is applied to the village artizans, who are called *waswáya lok*, or settlers; and *hária* is said to come from *har*, defeat or destruction.

CHAPTER IX.

ADMINISTRATION OF JUSTICE.

On the establishment of British power in Broach (1773) the chief of the Broach council, in virtue of his authority as a justice of the peace, tried such criminal cases as came within his powers. Offences beyond his jurisdiction were referred to Bombay. The magistrate decided according to the laws of England, the customs of the country, at the same time, being much respected. Civil suits were settled amicably by the chief, or referred to arbitration. In some cases parties applied to be tried by the mayor's court in Bombay. Caste questions were by Hindus decided at a meeting of the caste. Among Musalmáns social disputes were settled by the Káji. Revenue matters were disposed of in the revenue office, in accordance with the opinions of district hereditary officers and headmen of villages, or by arbitrators.[1]

During the years (1783-1803), when the Broach district was under the government of the Maráthás, places of trust were put up to sale. There were two farms of this class, the *jamádári* and the *thána* farms. The man who obtained the *jamádári* farm supported himself by fines and other exactions on the people under his charge. The *thána* farm was closely connected with the *jamádári* farm, and comprehended the rents of eight inferior courts of justice and the revenue derived from the officers in charge of those courts.[2]

On the recapture of Broach (1803) the judicial as well as revenue administration was, in the first instance, entrusted to the revenue assistant to the resident at Baroda. In January 1805, the judicial administration of the Broach territories was transferred to an officer styled judge and magistrate, to whom the collector was, in judicial matters, made subordinate.[3] A few months later (1805, May 7th) a provincial court of appeal in civil matters, and of circuit for the trial of criminal cases, was established[4] at Broach. This court consisted of three judges and a registrar. The local jurisdiction of this court extended over the British possessions in Gujarát, and its judges were empowered to hear appeals from the district courts of Surat and Kaira.[5] Five years later (1810, December 5th) the seat of the

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[1] Broach commission to the government of Bombay, 1777, April 10th.
[2] Honourable Mr. Duncan's Minute —Rev. Diary 45 of 1805, 572.
[3] Proclamation of 20th January 1805, and Section 2 of Reg. II. of 1805.
[4] Section III. of Reg. II. of 1805.
[5] Section VI., Clause 3 of Reg. II. of 1808.

provincial court was removed from Broach to Surat.[1] In June 1807, the judge of Broach was authorized to appoint a *sadar amin*, or head native referee, with power to dispose of suits not more than £10 (Rs. 100) in value, and *amins* with similar jurisdiction in cases involving property worth not more than £5 (Rs. 50).[2]

In 1818[3] the office of magistrate was transferred from the judge to the collector. The post of district judge of Broach was abolished in 1830, and in his place an officer was appointed with the title of senior assistant judge. In the year 1869 the office of senior assistant judge was also abolished, and the district of Broach included in the local jurisdiction of the judge of Surat. Criminal appeals not cognizable by the district magistrate and all civil appeals are heard by the judge or assistant judge at Surat. Criminal cases committed to the sessions are tried by the judge or assistant judge of Surat, who, for this purpose, hold sessions at Broach monthly and quarterly.

Civil courts, 1848-1874.

Civil Justice.—Of the strength of the staff appointed to decide civil cases in the Broach district no details have been obtained earlier than the year 1848. In that year the district was furnished with six judges, the assistant judge stationed at Broach, and five subordinate judges—two in Broach, one at Jambusar, one at Wágra, and one at Sajod, in the Ankleswar sub-division. The total number of suits disposed of in that year was 4,124. Twelve years later, in 1860, there were in all seven courts, the assistant judge stationed at Broach, and six subordinate judges—three at Broach, one at Jambusar, one at Ankleswar, and one at Hánsot. In 1860, 9,852 cases in all were decided. At present (1875) the number of courts is five. Four of these —with an average jurisdiction extending over an area of 364 miles, and including a population of 87,580 souls,—are courts of subordinate judges, and the fifth is a small cause court. Of the four courts of subordinate judges, one is at Jambusar for the Jambusar sub-division; one at Wágra for the Wágra and A'mod sub-divisions; one at Broach for the Broach sub-division; and one at Ankleswar for Ankleswar and Hánsot. The small cause court is situated in the town of Broach. The business of the court is conducted by the small cause court judge of Surat, who, for the hearing of suits, visits Broach every fortnight.

Average distance of courts, 1875.

The average distance of the Jambusar court from the six most distant villages of its jurisdiction is twenty-seven miles; that of the Wágra court, thirty-three miles; that of the Broach court, twenty-seven miles; and that of the Ankleswar court, twenty miles. The number of cases decided during the year was 8,960. It will be seen from the tabular statement given below that the average value of the suits decided during the past five years was £12 14*s.* (Rs. 127); the amount showing an increase from £12 8*s.* (Rs. 124) in 1870 to £19 5*s.* (Rs. 192-8) in 1874. Exclusive of cases settled by the small cause court, the average yearly number of cases decided during the past five years is 8,287, the number having risen from 6,565 in 1870 to 8,960 in 1874.

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[1] Section III., Reg. III. of 1812.
[2] Section V., Reg. II. of 1803, and Section III., Reg. V. of 1812.
[3] Reg. III. of 1818.

Chapter IX.

Administration of Justice.

1773-1875.

Decrees *ex-parte*, 1870-1874.

Of the total number of cases decided during the five years ending with 1874, 74·33 per cent have, as shown in the margin, on an average, been given against the defendant in his absence. The proportion of cases decided in this way would seem to be on the increase, the percentage being 69·62 in 1870 as compared with 76·40 in 1874.

Statement of ex-parte *decrees*, 1870-1874.

Year	Total number of suits	Decreed *ex-parte*	Percentage.
1870	6,565	4,571	69 62
1871...	9,178	6,735	73 38
1872	8,042	6,005	74 67
1873 ...	8,690	6,642	76·43
1874 . .	8,960	6,846	76·40
Total	41,435	30,799	74 33

Contested cases.

Of contested cases only 10·85 per cent have, during the past five years, on an average, been decided for the defendant. The proportion of cases decided in favour of the defendant would seem to be on the decrease, the percentage having fallen from 15·18 in 1870 to 9·93 in 1874.

Steps taken to enforce decrees.

In ninety-seven cases, or 1·08 per cent of the whole number of suits decided in 1874, the decree was executed by putting the plaintiff in the possession of the immovable property which he claimed. The number of cases of this kind would not seem to vary much from year to year, the total in 1870 being seventy-nine as compared with ninety-seven in 1874. In 33·25 per cent of the decisions passed in 1874, decrees for money due have been executed by the attachment or sale of property. Of these, 7·34 per cent were on an average by the sale of movable, and 25·91 per cent by the sale of immovable, property. As compared with 1870, the returns of attachment of movable property show a falling off from 797 to 658, while the number of the attachments of immovable property has risen from 1842 to 2,322.

Arrest of debtors.

Compared with 1870, the number of decrees executed by the arrest of the debtor has increased from 116 in 1870 to 183 in 1874, and the total number of civil prisoners from eighty-six to 191.

Statement showing the number and disposal of Civil Prisoners during the five years ending with 1874.

Year	Number of prisoners committed to jail	Average number of days prisoner was confined in jail	Number of Prisoners released: By decree being satisfied.	On request of person who put prisoner into jail	On omission of such person to pay the subsistence allowance	On disclosure by prisoner of all his property under section 290, civil procedure code	On expiry of period for which imprisonment is allowed by law	Caste of prisoners: Hindus.	Musalmáns	Pársis	Others.
1870	86	36	2	26	31	9	1	45	41		.
1871	143	28	9	54	72	6	3	88	55	..	
1872	139	40	3	39	73		3	89	50	.	.
1873 .	228	46	6	82	107	8	6	150	78		
1874 .	191	43	2	56	104	7	2	124	67	..	.

The following statement shows, in tabular form, the working of the civil courts of the district during the five years ending with 1874 :—

Statement showing the working of the Civil Courts of the Broach District, 1870-1874.

Year	Total number of suits disposed of	Average value of suits disposed of in pounds sterling	Uncontested					Contested				Execution of decrees.			
			Decreed *ex-parte*	Dismissed *ex-parte*	Decreed on confession	Otherwise disposed of	Total	Judgment for plaintiff	Judgment for defendant	Mixed.	Total	Arrest of debtor	Decree-holder put in possession of immovable property	Attachment or sale of property. Immovable.	Attachment or sale of property. Movable
		£ s. d													
1870	6,565	12 8 0	4,571	57	170	1,036	5,834	609	111	11	731	116	79	1,842	797
1871 ...	9,178	11 1 9	6,735	95	175	1,350	8,355	717	81	25	823	191	49	879	700
1872	8,042	10 6 0	6,005	66	190	1,101	7,362	606	59	15	680	195	71	1,559	799
1873 ..	8,690	10 9 0	6,642	26	176	1,117	7,961	*	79	650	729	174	51	1,965	715
1874	8,960	19 5 0	6,846	27	125	1,046	8,044	*	91	825	916	183	97	2,322	658

* Not shown separately in present Administration Returns

Small cause court.

During the five years ending with 1874 the total number of cases decided by the Broach small cause court has slightly fallen off from 1,021 in 1870 to 912 in 1874. The average value of the suits decided has remained pretty nearly constant at about £6 (Rs. 60). With regard to the execution of decrees, though the number of attachments of property has risen from sixty-two in 1870 to 186 in 1874, an increase of 200 per cent, there has been but little change in the number of sales of property, the numbers being thirty-eight and thirty-nine respectively. At the same time the number of debtors imprisoned by order of the court has risen from two in 1870 to thirteen in 1874.

Statement showing the working of the Broach Small Cause Court, 1870-1874.

Year.	Total number of suits decided	Value of Suits			Average amount in litigation.	Average cost per suit.	Coercive processes issued		Persons imprisoned
		Under £5	£5 to £20.	£20 to £50.			Movable property attached	Movable property sold	
					£ s. d	£ s. d.			
1870 .	1,021	644	323	54	5 17 10⅜	0 13 8	62	38	2
1871	1,281	830	372	79	5 19 11½	0 12 11¼	60	33	5
1872	1,186	799	300	87	5 18 3¼	0 12 10⅜	109	34	10
1873 ...	1,060	683	288	89	6 6 11¾	0 14 0¼	131	30	14
1874 .	912	585	269	58	6 0 4¼	0 13 5⅝	186	39	13

The hardships which attended the introduction into northern Gujarát of the system of British courts of justice would seem not to have been felt in Broach. "The system," wrote Mr. Elphinstone in 1821, "is exempt even from the few objections that exist to it beyond the Mahi. It is well understood by all classes, and seems,

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both useful and popular."[1] In 1849, after years of depression, when indebtedness had much increased, the cultivators complained that sons were held responsible for their fathers' debts, and that, in satisfaction of the decrees of civil courts, the houses and property of the debtor were sold.[2] Mr. Davies was, however, of opinion that the debtors were unreasonable in their complaints, and noticed that the cultivators, in their money dealings with each other, showed no dislike to putting in force their legal rights against their debtors. The fall of prices during the past five years, by diminishing the credit of the cultivators, has been accompanied by a marked increase in the pressure of the civil courts upon the indebted classes. As shown above, while there is an increase in the total number of cases decided, there is a falling off in the suits settled in the defendant's favour, and an advance in the proportion of cases decided against the defendant in his absence. Again, there is an increase in the number of sales, and in the extent to which the power of the creditor over the person of the debtor has been made use of.

Registration.

Registration.—The amount of registration is sufficient to employ six special sub-registrars. Of these, five are distributed,—one at each of the head quarters of the chief sub-divisions of the district, and the sixth is stationed at Hánsot. In addition to the supervision exercised by the collector, who is the district registrar, and by his assistant or deputy, a special scrutiny is, under the control of the inspector-general of registration, carried on by the inspector of registration for Gujarát. According to the registration report for 1874-75 the registration receipts for that year amounted to £1,222 18*s.* (Rs. 12,229), and the charges to £702 18*s.* (Rs. 7,029), leaving a balance of £520 (Rs. 5,200). Of 3,738, the total number of registrations during the year 1874, twenty-three were wills, fifty-eight were documents affecting movable, and 3,657 documents affecting immovable, property. Of the last class, in addition to 842 miscellaneous instruments, twenty-eight were deeds of gift, 1,420 were deeds of sale, and 1,367 mortgages. The registered value of the total immovable property transferred was £185,200 (Rs. 18,52,000).

Criminal courts, 1874.

Criminal Justice.—At present (1874) eighteen officers share the administration of criminal justice in the Broach district. Of these, six are magistrates of the first class, seven of the second class, and five of the third class. Of the magistrates of the first class three are Europeans two covenanted civilians, and one a commissioned military officer, and three are natives. With regard to the local jurisdiction and powers of these magistrates, two of them are placed in a special position,—the district magistrate invested with a general supervision over the whole of the district, and the superintendent of police, whose powers as a magistrate are limited to such as are required for his work as a police officer. There remain, therefore, four regular first class magistrates, with an average charge of 364 square miles, and a population of 87,580 souls. In the year 1874 the first class magistrates decided 543 cases. These officers have, as assistant and

[1] Bombay Rev. Sel., III., 661.
[2] Mr. Davies' report No. 132 of 1849.

deputy collectors, revenue charge of the parts of the district in which they exercise magisterial powers. Of magistrates of the second class there are seven, with an average charge of 208 square miles, and a population of 50,046 souls. In 1874 magistrates of the second class decided 732 cases. Besides their magisterial duties, officers of this class exercise revenue powers as assistant collectors or as *mámlatdárs* in charge of sub-divisions. Of magistrates of the third class there were five, with an average charge of 291 square miles, and a population of 70,064 souls. In 1874 magistrates of the third class decided 415 criminal cases. Besides being magistrates, men of this class are head clerks in the offices of the different *mámlatdárs*. From the table of offences given below, under the head of police, it will be seen that during the five years ending with 1873, 2,706 offences, or one offence for every 129 of the population, were on an average committed. Of these, there were on an average thirteen murders and attempts to commit murder, from two to three culpable homicides, forty-one cases of grievous hurt, twenty-five gang and other robberies, and 2,624, or 97 per cent of the whole, minor offences.

Police.

Police.—The force employed for the preservation of order consisted in 1773 of two bodies, one appointed by government, the other engaged by the village communities. The government police force, including both foot and horse, was distributed in bands posted at stations, or *thána*, in different parts of the district. Each post consisted of two or three men under a commandant, or *thánádár*. Their duty was to keep moving about and preserve the peace within the limits of their charge. The village watchmen, by caste chiefly Kolis, Taláviás, and Bhils, armed with bows and arrows, were, under the name of *wartania*, engaged by the managers of villages with the view of protecting the village lands from the attacks of the marauders, by whom at that time the country was infested. The total strength of the village watch in the 162 villages of the Broach district was in 1776 estimated at from 1,215 to 2,000 men. They were paid by the grant of, on an average, three acres of land to each man. At that time, and as late as 1828, it would seem that watchmen of this class were not permanently attached to a village. The headman of the village regulated his supply of police according to the state of the district, increasing the number when the *garásiás* were out, and dismissing some of the force as long as the *garásiás* remained quiet. Besides the force distributed in posts throughout the district, there was another class of state police, whose duties were civil rather than criminal. These men were the revenue peons, employed chiefly to guard the produce stored after harvest in the village grain-yard. The yearly expense of keeping up this body of peons was in 1805 estimated in the 162 Broach villages at from £1,000 to £1,500 (Rs. 10,000 to 15,000). There was also a troop of horse, who, on a monthly pay of 30*s*. (Rs. 15) each, were employed in assisting in the collection of the revenue, being billeted upon villages backward in paying the state demand.

Militia established, 1803.

On again occupying the Broach territories in 1803, the British authorities maintained the existing system of police posts, and continued to employ those of the revenue peons who were footmen. As their

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services in raising the revenue were no longer required, the troop of mounted peons was disbanded. In addition to the bodies of men stationed at the different police posts, it was, at the same time, determined to organize a local semi-military corps. This militia, *sibandi*, was provided with a uniform, 'sufficiently plain and unmilitary, to make them easily distinguished from regular troops.' They were armed with repaired firelocks and such other weapons as were deemed locally advisable, and arrangements were made for teaching them a certain amount of drill.

Formed into a military corps, 1805.

The strength of the corps, which originally stood at 200, was in 1805 increased to 266 men. Of the whole number 100 were effective militia, and the rest were chosen from among the revenue peons. The former received 10*s.* (Rs. 5), and the latter 6*s.* (Rs. 3) a month. The corps was shortly afterwards raised to the position of a military body.[1] A European officer was placed in command, and the members made amenable to the rules of martial law. The total strength of the corps was, at the same time, increased to 434 men, and the charges debited to the military department. The monthly cost of the corps amounted to £290 4*s.* (Rs. 2,902).[2] From the body of troops thus formed and disciplined, the guards required by the judicial, revenue, and commercial departments were supplied. The first commandant of the corps was Lieutenant S. J. Robertson.

By the change introduced in the year 1818, under which the office of district magistrate was transferred from the judge to the collector, the police of the district came under the management of the latter officer. At that time the total strength of the police force, distinct from the body of militia, was 170 men. Of these, twenty-one were horsemen, 141 peons, and eight *thánádárs* and clerks. At the time of the transfer the district magistrate, on the ground of the recent acquisition of the lands of Jambusar, A'mod, and Dehej, applied for an increase of strength, but this application was not granted, government holding that the revenue establishment of peons was adequate for the additional police work required.[3]

On the subject of police, Mr. Elphinstone in 1821 wrote: "The offences are those of a very settled country. The district is free from gang robberies or invasions of predatory Kolis. The Kolis, indeed, are among the most respectable cultivators, one out of four of the village headmen are of that caste. The Bhils occupy here the place of the Kolis beyond the Mahi, but even they are not turbulent. Robbers used sometimes to come from Rájpipla, and

[1] Government order dated 2nd April 1805, Revenue Department.

[2] The following are the details of this corps :—

	No	Annual cost			No.	Annual cost.	
		Rs. a	£ s			Rs a.	£ s.
Commandants ..	2	..	..	Brought over	44	535 0	53 10
Subedárs	5	210 0	21 0				
Jamádárs . .	5	100 0	10 0	Drummers	10	87 0	8 14
Sergeants	2	.	. ..	Sepoys .. .	375	2,250 0	225 0
Haváldárs .	15	120 0	12 0	Watermen	5	30 0	3 0
Náiks	15	105 0	10 10				
Carried over .	44	535 0	53 10	Total .	434	2,902 0	290 4

[3] Government order dated 8th July 1818, and Reg. III. of 1818.

still come from Dehegám."[1] But, in spite of the apparent efficiency of the police in 1821, within two years the Kolis again proved unruly. The country fell back into a state of disorder such as had not been known since the beginning of the century. The cause of these Koli outbreaks has not been traced. There was a general feeling of uneasiness, and a common belief that the *garásiás* were at the bottom of the disorder. And this was not unnatural, seeing that by a recent order the *garásiás* had been forbidden to levy their claims direct upon villagers, and their receipts had been limited to certain fixed payments from the government treasury. How far the *garásiás* acted as instigators does not appear. But it would seem that the actual marauders were Kolis, and that their excesses were immediately due to the capture of one Wali Khán, a popular bandit.[2] For several years after these disorders had been suppressed, the number of gang robberies would seem to have remained unusually large. "The crime of gang robbery," wrote the district magistrate in 1830, "is by far the most frequent in this sub-collectorate. The offenders are chiefly Bhils, Kolis, and other men of low caste. The greater proportion of these robberies are committed by Bhils belonging to the company's territories. These men are aided by their friends living in neighbouring states, and the ease with which they can escape out of British territory is one of the chief causes of the frequency of offences of this class." As will be seen from the statistics of crime given below, the number of gang robberies has considerably decreased of late years, and, with the exception of the Párasi and Musalmán riots in 1857, the peace of the district has seldom been broken.

Working of the police, 1821-1830.

Village police, 1831.

Inquiries made in 1831 showed that the establishments of village police consisted of a *mukhi patel* as head of the village, and under him of a body of Bhils, Talávias, and Kolis, varying in number according to the size of the village, or according to prescription. The village police were bound to guard and protect the property of the villagers and of travellers, to assist their head, the *patel*, in preserving peace, and in apprehending offenders; and, according to the custom of the country, when the footsteps of a robber were traced into their village lands, they were bound either to take up the marks and track them on till they reached the limits of the village, or, along with the people of their village, to make good the value of the property stolen. At present (1875) the total number of village servants, available for both revenue and police duties, is returned at 5,851, representing a yearly charge to the state of £9,390 (Rs. 93,900).

District police, 1828-1874.

Since 1818 several changes have been made in the constitution and strength of the district police. In 1828 the system of posts was abolished, the heads of villages were entrusted with certain police powers, and the chief sub-divisional revenue officer was made responsible for the police superintendence of his revenue charge. At the same time the strength of the local corps was reduced from 434 to 182, and the number of peons engaged in police duties raised from 141 to 669, of whom 497 were employed solely as policemen, and

[1] Bombay Revenue Selection, III., 663.

[2] Broach Magistrate's letter No. 12, dated 28th April 1832, to Government.

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District police, 1828-1874.

the rest served partly in the revenue and partly in the police departments. Under the changes made in 1852[1] the local corps was abolished, and its members, incorporated with the district police, formed the armed or disciplined part of the new force. In the year 1873 the total strength[2] of the district, or regular police force, was 417. Of these, under the district superintendent, two were subordinate officers, seventy-seven inferior subordinate officers, twenty-two mounted police, and 315 foot police. The cost of maintaining this force was as follows. The one European officer—the district superintendent of police—received a total annual salary of £685 18*s.* (Rs 6,859); the two subordinate officers a yearly salary of not less than £120 (Rs. 1,200) each; and the seventy-seven inferior subordinate officers a yearly salary of less than £120 (Rs 1,200) each, or a total yearly cost of £2,155 4*s.* (Rs. 21,552). The pay of the twenty-two mounted and 315 foot police came to a total sum of £4,015 14*s.* (Rs. 40,157). Besides the pay of the officers and men, there was a total annual sum of £267 8*s.* (Rs. 2,674) allowed for the horses and travelling expenses of the superior officers; £132 4*s.* (Rs. 1,322), annual pay and travelling allowance for their establishments; and £321 4*s.* (Rs. 3,212) a year for contingencies and other expenses,—making a total annual cost to government, for the district police, of £7,577 12*s.* (Rs. 75,776). On the basis of an area of 1,458 square miles, and a population of 350,322 souls, the total strength of the police of the Broach district is one man to every 3·49 square miles as compared with the area, and one man to every 840 souls as compared with the population. The cost of maintenance is equal to £5 4*s.* (Rs. 52) per square mile, or 5¼*d.* (as. 3-6) per head of the population. Of the total strength of 417, inclusive of the superintendent, fifty-seven—twelve officers and forty-five constables—were employed as guards over treasuries and lock-ups, or as escorts to prisoners and treasure; nine—one officer and eight constables—were employed to guard jails; 283—fifty-five officers and 228 constables—were engaged on other duties; and sixty-eight—twelve officers and fifty-six constables—were stationed in towns and municipalities. Of the whole number, exclusive of the district superintendent, 180 were provided with firearms and 236 with swords or battens; 210, of whom sixty were officers and 150 constables, could read and write; and sixty-two were under instruction. With the exception of the superintendent of police, who was a European, and the district inspector, a Eurasian, the members of the police force were all natives of India. Of these, 200 were Muhammadans, twenty-four Bráhmans, twenty-eight Rajputs, sixty Maráthás, 102 other Hindus, and one was a Pársi. Of 151, the total number of persons accused of heinous crimes, forty, or 26·49 per cent, were convicted, and of £4,425 6*s.* (Rs. 44,253), the value of the property alleged to have been stolen, £2,204 8*s.* (Rs. 22,044), or 49·81 per cent. of the whole, were recovered. Of the five Gujarát districts, the Broach returns showed in 1873 the lowest proportion of convictions to arrests. On the other hand, in the recovery of stolen property, this district held the first place.

[1] Acts XXVII., XXVIII, and XXIX. of 1852.

[2] Police report of the Bombay Presidency, 1873.

The following is a summary of such details as are available regarding the comparative amount of crime at different periods since the introduction of British rule. The total number of offences committed in the year 1845 was 2,166, or, on the basis of the census returns of 1846, one crime to every 121 inhabitants; ten years later, in 1855, the figures were 2,149 crimes, and the proportion, on the basis of the census returns of 1851, one crime to every 135 inhabitants; and for the five years ending with 1873 the average total yearly number of crimes has been 2,706, or, on the basis of the census returns of 1872, one offence to every 129 inhabitants. A comparison of the returns would seem to show that, in the matter of murders and culpable homicides, there has been but little change. For the five years ending with 1848 there were, on an average, eleven cases of murder against thirteen in the five years ending with 1873, while the corresponding averages for culpable homicide were three and two respectively. Under the head of robberies, including dacoities and thefts of cattle, there is a marked falling off, the average for the three years ending with 1873 being fifty-six, as compared with 509 for the three years ending with 1846, and 376 for the corresponding period between 1834 and 1836, both inclusive. The principal details of crime and of the working of the police during the five years ending with 1873 will be found in the following tabular statement:—

Statement showing the statistics of Crime and the working of the Police, 1869-1873.

Year	Offences and Punishment of Offenders															
	Murder and attempt to murder.				Culpable homicide				Grievous hurt and hurt by dangerous weapons				Dacoities and robberies			
	Number	Persons arrested	Persons convicted	Percentage	Number	Persons arrested	Persons convicted	Percentage	Number	Persons arrested	Persons convicted	Percentage	Number.	Persons arrested	Persons convicted	Percentage.
1869	16	98	21	21 42	3	11	1	9 09	47	107	32	29 9	30	60	4	6 66
1870	19	99	10	10 1	4	34	2	5 88	41	93	19	20 43	27	82	35	42 68
1871	9	27	8	29 62					31	65	23	35 38	35	109	31	28 44
1872	10	27	3	11 11	2	3	3	100	47	89	20	22 47	17	50	5	10
1873	11	27	8	29 62	4	11	2	18 18	39	71	12	16 9	18	42	18	42 85
Total	65	278	50	17 98	13	59	8	13 55	205	425	106	24 94	127	343	93	27 11

Year	Offences and Punishment of Offenders—*contd.*								Recovery of stolen property.		
	Other offences				Total.						
	Number.	Persons arrested.	Persons convicted.	Percentage.	Number.	Persons arrested	Persons convicted.	Percentage	Property stolen	Property recovered.	Percentage.
									£. s.	£. s.	
1869	2,584	3,877	1,106	28 52	2,680	4,153	1,164	28 02	2,585 2	731 2	28 28
1870	2,940	4,354	1,794	41·2	3,031	4,662	1,860	39·89	2,931 4	811 18	27 69
1871	2,972	3,941	1,988	50·44	3,047	4,142	2,050	49·49	1,294 4	579 8	44·76
1872	2,647	4,635	1,401	30 22	2,723	4,804	1,432	29 8	2,010 8	1,062 0	52 82
1873	1,979	3,386	1,368	40 4	4,051	3,637	1,408	39 8	4,425 6	2,204 8	49·81
Total	13,122	20,193	7,657	37 91	13,532	21,298	7,914	37 15	13,246 4	5,388 16	40·68

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Statistics of crime, 1845-1873.

As compared with other parts of British Gujarát, the district of Broach had in 1873 the greatest number of murder cases.

The two classes of the Broach people most addicted to the crime of murder are the cultivating Bohorás and the Kolis. Some of these murders are marked with circumstances of special cruelty. The following case,[1] which occurred in 1873, may be taken as an example: On the night of the 5th February, one Ahmad Sále, a Bohora, reported to the police patel of Tankária that a Bhil boy, named Kuslu Bhávsing, whom he had employed to watch his crops, had been assaulted with a hatchet, and murdered by three Bohorás, Ahmad A'dam, Umar A'dam, and Umar Bagas. He gave the names of two witnesses, and said that either himself or his father was the intended victim, but that the Bhil was killed by mistake. On further inquiry, it was discovered that the informant, Ahmad Sále, was himself the murderer, and that the life of the inoffensive Bhil had been sacrificed by him with the view of bringing into trouble the three men abovementioned, against whom he owed a grudge. Ahmad Sále confessed the murder, and was hanged at the village of Tankária on the 4th July 1873.

The following details of a murder committed by a Hindu, a Koli by caste, are from the police report for the year 1872: About 10 A.M. on the 5th May 1871, the police patel of Gajera, a village in the Jambusar sub-division, heard that kites and other birds of prey were flying around and hovering over an old well at the corner of the Hindu burning-ground. On reaching the spot he saw, at the bottom of the well, a body, much decomposed, lying with the head separated from the trunk, and close by the body a bill-hook. The police patel immediately reported what he had seen to the chief constable at Jambusar. From inquiries made by the police the corpse was identified as that of one Máhákáli, a Koli woman, who had, fifteen or sixteen years previously, run away from her husband with a man of inferior caste. After keeping her for about two years, her paramour had turned her off, and she had since been living alone at Gajera. She used to visit her children secretly, and was particularly attached to Gubha, one of her sons. Out of the money she earned she had spent a large amount in paying the expenses attending his marriage. About one and a half months previous to her murder she had been very ill. She sent for Gubha, and told him she did not expect to recover, and asked him to make arrangements for her funeral, telling him that he would find £6 (Rs. 60) buried in a certain place, out of which he could defray the expense. Máhákáli, however, got well, and Gubha, who had meanwhile possessed himself of the £6, would not return the money; the deceased importuned him frequently, but without any result, and at last she threatened to prosecute him. Gubha, being much annoyed by her, determined to murder her. He went to his mother at Gajera on the 3rd May, and requested her to accompany him to his house, promising that if she came he would pay her the amount he was indebted to her. On the road, close to

[1] Police report of the Bombay Presidency, 1873.

the well, he had placed in ambush his two cousins. When he arrived at the spot with his mother, he pretended to have run a thorn into his foot, and asked her to sit down for a short time till he pulled it out; directly the poor old woman sat down, he hit her a blow on the head with a bill-hook. He then set to work, and disfigured the face as much as possible, in order that it might not be identified; next he cut the head off, and disrobed the corpse, intending to burn the clothes. With the clothes under his arm, he was throwing the body into the well with the bill-hook when his foot slipped. In saving himself he put out his arms, and the clothes and bill-hook fell into the water. The bill-hook was identified, and Gubha convicted.

Jails.

Jails.—With the exception of accommodation provided for a few under-trial prisoners at the head-quarters of each sub-division, there are no prisons in the Broach district There was formerly a district jail in the city of Broach, but in 1861, along with the court of the assistant judge, the jail was removed to Surat. Subsequently, in 1872, this building, which is capable of accommodating eighty prisoners, was converted into a subordinate jail, with a staff of a jailer and two assistant warders, on salaries amounting in the aggregate to £4 (Rs. 40) a month. It was found, however, that, as compared with the cost of its maintenance, the jail was but little used; the daily average strength of the convicts in 1872-73 being only four, and the total number of prisoners confined but 120. For this reason, and because of the difficulty of finding any hard labour for the prisoners, the subordinate jail was closed from the 1st January 1874.[1] All prisoners are now conveyed by rail to the district jail in Surat.

[1] Government Resolution No. 6340, dated 11th December 1873, Judicial Department.

CHAPTER X.

REVENUE AND FINANCE.

Revenue, 1772-1783.

Under the last nawáb of Broach (1768-1772) the average yearly revenue of his territories was estimated at about £60,000 (Rs. 600,000). Of this amount £40,000 (Rs. 4,00,000) are set down as the revenue, and the remainder as the receipts from customs, tributes, and a variety of cesses. Of the whole revenue about forty per cent went to the nawáb and sixty per cent to the Gáekwár.[1] The British officers, first placed in charge of affairs at Broach, complained that, from a combination among the native officials, it was not possible to gain a true account of the resources of the district. No financial details for the first two years of British management (1773-1775) are available. But it was afterwards found out that the existence of several cesses, formerly levied by the nawáb, had been kept hid from the British officers. During the first season only £24,726 (Rs. 2,47,260) were realized under the head of land revenue. Fuller information is available for the year 1776. The total revenue of that season, from the 162 villages that then constituted the Broach settlement was £50,171 14*s.* (Rs. 5,01,717).[2] This amount was made up of the following items: land revenue, £36,995 (Rs. 3,69,950); customs, £5,084 (Rs. 50,840); coinage, £537 (Rs. 5,370); taxes and duties, £2,078 (Rs. 20,780); and tributes,[3] £5,478 (Rs. 54,780). At that time (1776) the state of the Broach territories would seem not to have been prosperous. Of a whole area, estimated at 215,604 acres, there were said in 1776 to be only 104,232 acres, or 50·61 per cent, under cultivation; and of the area under cultivation only 54,413 acres, or 49·81 per cent, were acknowledged by the district revenue officers to be in the possession of the state. The rest, they asserted, was alienated, held by *garásiás* and other mortgagees. In addition to the exactions practised by *manotidárs* and *garásiás*, it would seem that the share of the crop claimed by the state was at that time very large. From inquiries made by the commission of 1777, it appears that, from the whole crop, twenty-five per cent was at that time deducted for the expense of collection, and the remaining seventy-five

[1] The greater part of the details given under this head are from a minute by the Honourable J. Duncan, Governor of Bombay, Public Department, Vol. 45 of 1805.

[2] Broach Revenue Commission's report dated 10th April 1777.

[3] The head 'Tributes' included sums formerly levied from the following places by the rulers of Broach: from Jambusar, £2,984 (Rs. 29,840); from A mod, £1,539 (Rs. 15,390); from Ankleswar, £380 4*s.* (Rs. 3,802); from Hánsot, £204 14*s.* (Rs. 2,047); from Dehejbára, £273 (Rs. 2,730); from Kerwára, £45 6*s.* (Rs. 453); from Himatsing, the A'mod Garásia, £36 10*s.* (Rs. 365); and from Prtl, rája of Jamádra, £14 12*s.* (Rs. 146).

per cent divided equally between the cultivator and the government.[1] This demand was, however, considered excessive, and a reduction made, under which the cultivator would receive ⅔ths of the produce clear of every charge. With this arrangement the heads of villages declared that not an acre of land would remain uncultivated. The first proposal of the commission was that ten per cent should be deducted for charges of collection, and fifty per cent would remain to the government and forty to the cultivators. The allowance of ten per cent would amply defray all charges and render additional assessments unnecessary. By this change the commission were inclined to hope that, when the survey was introduced and the country became properly tranquil, an additional revenue of £15,000 (Rs. 1,50,000) would be realized. "And if," they went on to say, "the country of the three lakhs (A'mod, Jambusar, and Dehej), and the improvements that could be made upon it, are added, the revenues which our honourable masters will derive from this settlement will be so considerable that, we trust, the presidency of Bombay will be no longer the heavy burden it hitherto has proved to the company." During the following years (1778-1783) the Broach territories would seem to have made some progress. From a summary of the revenues derived from the British possessions that were ceded to the Maráthás in 1783, it appears that the Broach territories contributed £68,910 (Rs. 6,89,100). The increased amount recovered from the district between 1776 and 1783 was chiefly under the head of land revenue. This item rose from £36,995 (Rs. 3,69,950) to £61,414 (Rs. 6,14,140), an advance apparently, in large measure, due to the redemption by the state of land formerly held in mortgage by district officers and other alienees. Besides the area of land redeemed in this way, the survey of 1,778 brought to light that the actual area of state land was 25,000 acres more than had formerly been supposed.

Revenue, 1772-1783.

When the time (9th July 1783) drew near for the transfer[2] of the Broach villages from the British to Sindia, Mr. Forbes tells how the inhabitants of 'Broach execrated the approaching change, dreading the arrival of the Maráthás. No prayers, no ceremonies, no sacrifices were left unperformed by the different castes and religious professions to implore the continuance of the British government.' Mr. Forbes would naturally, before leaving, see most of those who personally lost by the change of rulers. But there would seem to be little reason to doubt that the people of the district, on the whole, were more lightly taxed under the British than under the Maráthás. As soon as the transfer had taken place, a system of farming the revenue was introduced, and under it the state demand from the district rose from £68,910 to £85,000 (Rs. 6,89,100 to Rs. 8,50,000). The first revenue farmer was one Gopálráv, who rented the villages of the district on a seven years' lease, from 1783 to 1791. The amount he agreed to pay was £85,000 (Rs. 8,50,000); but from this total sum he was allowed to deduct £17,500 (Rs. 1,75,000) for the expense of collecting his revenue and for maintaining the garrison at Broach.

1783-1803.

[1] Report from chief and factors of Broach to the Commission, dated 27th March 1777, and despatches of the Commission to the Government of Bombay, dated 10th April 1777.

[2] Forbes' Oriental Memoirs, III., 356.

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Revenue, 1783-1803.

In 1791, when the term of his lease fell in, Gopálráv was outbid by his opponent Lallubhái, the district accountant, who offered to pay a yearly sum of £100,000 (Rs. 10,00,000) for the right of farming the revenue. Lallubhái's offer was accepted, and, as before, he was allowed a deduction of £17,500 (Rs. 1,75,000) to meet the charges of collection. An account has already been given of Lallubhái's lease, how he levied new cesses, and, in 1795, failing to meet his engagements, was thrown into prison. Lallubhái was succeeded by his principal creditor Parbhudás. The terms on which Parbhudás agreed to take up the farm were, that he should pay a yearly sum of £94,000 (Rs. 9,40,000), with the usual deduction of £17,500 (Rs. 1,75,000) on account of the cost of collection. Parbhudás was still revenue farmer in 1803, when the lands of the Broach district again fell into the hands of the British.

Colonel Walker, both personally and through the chief local revenue officer, Mr. Steadman, made a careful examination into the amount of revenue drawn from the district during the years of Marátha rule. The result of this inquiry was to show that, for the twelve years preceding the capture of Broach in 1803, the average yearly amount recovered by Sindia was £75,500 (Rs. 7,55,000). In 1803 a statement of the resources of the district was drawn up. This, when compared with the corresponding return for 1776, shows, in the area of government cultivated land, an increase of 91·86 per cent, from 54,413 acres in 1776 to 104,402 acres in 1803. This change would seem to have been chiefly due to the much smaller extent of land entered in 1803 as alienated. The decrease under this head alone amounted to 12,825 acres, the total area having declined from 15,269 acres in 1776 to 2,444 acres in 1803. How this land had been recovered from the hands of the alienees is not shown, but it would seem to have been the work partly of the alienation committee (1776), and to be due partly to resumptions by the farmers of revenue under Sindia's rule. With regard to the amount of revenue recovered by the state from this increased area, it would seem that, as compared with an estimated average of about £60,000 (Rs. 6,00,000) before the first settlement of the British at Broach in 1773, and of an average income of about £55,070 (Rs. 5,50,700) during the ten years (1773-1783) of the first British settlement, the district, as shown in the margin, yielded in 1803 a total revenue to its rulers of £103,319 2*s.* (Rs. 10,33,191). The proportion of this total amount recovered under the head of land rental, £63,225 (Rs. 6,32,250),

Details of State Demand, 1803.

Source of revenue	Rupees	£ Sterling
1. Land rental . .	6,32,250	63,225 0
2 Additional cesses	1,56,280	15,628 0
3. Customs .	81,490	8,149 0
4 Tax on cotton .	42,005	4,200 10
5. Fees to government officers, *sukhdi-chándlo*[1] ..	28,865	2,886 10
6. Interest and surety charges, *manoti*	22,465	2,246 10
7. Administration of justice and police	55,330	5,533 0
8. Six small articles ..	14,506	1,450 12
Total..	10,33,191	103,319 2

1 *Sukhdi chándlo* (*sukhdi*, sweetmeats, and *chándlo*, the brow mark, the making of which by a Bráhman is generally acknowledged by some trifling gift), was applied to the fees levied from the villagers by the agent of the Marátha government for the trouble of rating their assessment.—(Wilson).

is but little more than the average raised from the land during the later years (1780-1782) of the first period of British management.[1] The additional cesses had been introduced for the most part during the years in which Lallubhái was farmer. The levy of most of these ceses was continued by the British, as, on inquiry, it was found that they were many of them revivals of taxes formerly enforced during the time of the nawáb.

Revenue, 1783-1803.

Besides the payment of £103,190 (Rs. 10,31,900) made to government, it was found in 1803 that the cultivators of the district were subject to many other exactions. These exactions, as shown in the margin, amounted altogether to £68,411 (Rs. 6,84,110), raising the whole sum taken from the cultivators to £171,730 (Rs. 17,17,300). This, on a total area of 242,598 acres, represents a rate of nearly fourteen shillings per acre (Rs. 3½ per *bigha*), or, on the area of 155,412 acres at that time returned as under cultivation, an incidence of nearly £1 2*s.* per acre (Rs. 5½ per *bigha*). There was, it was said, more land under cultivation at that time than the area entered in the returns, so that the actual incidence would be less than that shown above. According to another estimate framed at that time the average charge per acre was slightly in excess of £1 12*s.* (Rs. 8 per *bigha*), a rate levied only once in two years, the land being allowed to lie fallow every alternate season. The average yearly incidence of taxation in 1803 may, therefore, be roughly estimated at about sixteen shillings an acre (Rs. 4 per *bigha*).

Statement of additional exactions (1803).

To whom paid.	Amount of the levy.
	£
The revenue superintendent, *desái* .	2,190
The revenue accountant, *majmudar*	5,000
Share of fees, *sukhdi-chándlo*, kept by the village-head .	1,000
Village clerk, *mehta*	1,500
Interest and Surety fees .	6,754
Paid through the head of the village .	10,000
Alienations of land, 52,458 acres, at 16*s.* an acre (Rs. 4 a *bigha*)	41,967
Total ...	68,411

In 1805 the total revenue amounted to £115,061 (Rs. 11,50,610). This would seem to have been a good season. The collector wrote: "the bazár rates are high, the assessment in every respect moderate, and the people, by having advances made to them at one instead of at three per cent a month, will be able to pay the government dues with ease."

Balance sheet, 1824-1875.

The earliest year for which a copy of the balance sheet of the district is available is 1823-24. Since that time many changes have been introduced in the system of keeping accounts. But, as far as possible, the different items have been brought under their corresponding heads of account according to the system at present in force.

[1] The amounts of land revenue were in 1780-81, £64,000; in 1781-82, £61,414; and in 1782-83, £60,215.

Chapter X.

Revenue and Finance.

Balance sheet, 1824-1875.

Exclusive of £56,738 (Rs. 5,67,380), the adjustment on account of alienated land, the total transactions that appear in the district balance sheet amount to receipts, £314,167 (Rs. 31,41,670) in 1874-75 against £210,614 (Rs. 21,06,140) in 1823-24, and charges, £284,513 (Rs. 28,45,130) in 1874-75 against £180,261 (Rs. 18,02,610) in 1823-24. Exclusive of departmental miscellaneous receipts and sums received in return for services rendered, such as the receipts of the post and telegraph departments, the amount of revenue raised in 1874-75 under all heads—imperial and provincial services, local funds, and municipal revenues—amounted to £284,351 (Rs. 28,43,510), or, on a population of 350,322, an incidence per head of 16*s.* 2¾*d.* (Rs. 8-1-10). In 1823-24 the whole amount of revenue raised was £200,570 (Rs. 20,05,700), or, according to the population of the district at that time, 229,527 souls, an incidence of taxation per head of 17*s.* 1*d.* (Rs. 8-8-8). During the interval of fifty years the following changes have taken place under the chief heads of the district receipts and charges.

Land revenue.

Land Revenue.—The receipts under this head, which includes 85·5 per cent of the entire revenue of the district, have risen from £168,749 (Rs. 16,87,490) in 1823-24 to £218,394 (Rs. 21,83,940) in 1874-75. From the statement noted in the margin it will be seen that this increase is, at least in part, due to the enhancement of the state receipts arising from the large area of land brought under cultivation. Another cause of this increase has been the additional levies recovered since 1863 from all alienated lands, except the service lands held by certain village and district officers. The charges under this head show an advance from £8,825 (Rs. 88,250) to £18,348 (Rs. 1,83,480). This apparent increase in the cost of collecting the land-tax is partly due to an increase in the number and an enhancement of the salaries of officers employed in collecting the revenues, and in part is the result of the change in administration, under which the services of hereditary officers have been dispensed with, and stipendiary officers employed in their stead.

Statement of Area under cultivation and Land Revenue.

Year	Area under cultivation exclusive of fallows	Land revenue	
		In Rupees	In £ Sterling
1817-18	325,074*	1,966,640	196,664 0
1820-21	No returns	2,301,532	230,153 4
1831-32	289,783	1,502,164	150,216 8
1850-51	321,917	1,558,598	155,859 16
1859 60	340,108	1,770,763	177,076 6
1873-74	394,200	2,183,940	218,394 0

* This total is the average area under cultivation in the six years ending 1819

The following statement[1] contrasts the land revenue recovered for the years from 1830-31 to 1874-75 :—

[1] Figures for the years between 1830-31 and 1867-68 are taken from Statement No. 11 in Mr Bell's Excise report dated 1st October 1869. Figures for subsequent years are taken from the statements published with Government Resolutions No. 6092, dated 27th October 1875, and No. 6109, dated 26th October 1876.

Statement showing the yearly Land Revenue of the Broach District, 1830-1875.

Year.	Land revenue.	Year.	Land revenue	Year.	Land revenue.	Year.	Land revenue.
	£		£		£		£
1830-31 ...	138,854	1842-43 .	193,843	1853-54 ...	133,674	1864-65	152,527
1831-32 ..	129,646	1843-44	173,967	1854-55	162,088	1865-66 .	156,922
1832-33	133,613	1844-45	178,552	1855-56 .	162,493	1866-67	151,354
1833-34	148,771	1845-46 .	131,049	1856-57 .	135,267	1867-68	150,250
1834-35 ...	105,249	1846-47	138,260	1857-58	136,721	1868-69	195,859
1835-36 .. .	137,772	1847-48 .	146,583	1858-59	138,749	1869-70	197,828
1836-37 .. .	168,457	1848-49 .	125,866	1859-60	142 858	1870 71 .	213,223
1837-38	157,518	1849-50	153,378	1860-61 .	144,287	1871-72 ..	212,402
1838-39 . .	99,320	1850-51	155,758	1861-62 .	142,797	1872-73 .	218,004
1839-40 . . .	207,594	1851-52 .	159,558	1862-63	138,183	1873-74	215,196
1840-41	176,277	1852-53 .	160,338	1863-64 .	152,068	1874-75 .	220,557
1841-42 .	187,552						

Stamps.—Receipts have increased from £2,331 (Rs. 23,310) to £20,457 (Rs. 2,04,570) ; charges have fallen from £848 (Rs. 8,480) to £495 (Rs. 4,950). Stamps.

Excise.—Receipts have risen from £2,462 (Rs. 24,620) to £6,658 (Rs. 66,580), and charges, which is a new item, stood in 1875 at £168 (Rs. 1,680). The causes of the rise in the revenue are: i, the enhancement of the rate of duty; ii, the levy of a fresh tax in the shape of a shop licence; and iii, the introduction of more active competition at the auction sales of the right to manufacture and sell spirits and *tádi*.[1] The following statement shows the variations in the state revenue derived from the use of the different farms of intoxicating substances at intervals during the past forty-five years:— Excise.

Statement showing the yearly Excise Revenue of the Broach District, 1832-1875.

Year.	Country distilled Liquor					Fermented Liquor (*Tádi*)	
	Town Vendors.			Rural Vendors.			
	Number of shops.	Receipts from distillery and licence fees.	Rate of duty per gallon.	Number of shops.	Receipts from auction sales.	Number of taverns.	Receipts from auction sales.
		£ s.	s. d.		£ s.		£ s.
1832-33	19	1,744 18	1 3	24	65 2	2	175 12
1850-51	20	2,017 18	1 1½	25	104 10	2	56 12
1870-71	17	5,086 0	} 2 6 (a)	12	1,945 0	4	732 10
1874-75	17	4,446 16	}	12	1,457 0	4	570 0

(a) Besides fees varying from £5 to £20 (Rs. 50 to Rs. 200) for shop licences.

[1] The sale proceeds of the farm of the liquor and *tádi* shops, of the Ankleswar subdivision were raised from £1,040 (Rs. 10,400) in 1864-65 to £2,585 (Rs. 25,850) in 1867-68.—Government Resolution No. 3848, dated 14th October 1868.

Balance sheet, 1824-1875.

Statement showing the yearly Excise Revenue of the Broach District, 1832-1835—continued.

Year.	European Liquors		Intoxicating Drugs.		Opium.			
	Number of licences.	Receipts from licence fees	Number of shops	Receipts from licence fees.	Number of shops.	Receipts from licence fees	Quantity sold (Bengal *man* of 80 lbs)	Value of the quantity sold.
		£ s.		£ s.		£ s.	m. s. t.	£ s.
1832-33 . ..		...		...	...	...	...	.....
1850-51 ...	2	3 0	40	25 6	21	...	...	...
1870-71 ..	5	25 0	8	131 14	15	193 14	2 24 58	248 4
1874-75 ...	6	30 0	9	131 18	24	196 8	5 39 19	403 2

Transit duties.

Transit Duties, which in 1823-24 yielded £15,533 (Rs. 1,55,330), and cost to collect £272 (Rs. 2,720), have since been abolished.

Law and Justice.

Law and Justice.—Receipts have risen from £61 (Rs. 610) to £528 (Rs. 5,280). This amount is made up of fines levied on offenders. During the same time the charges have decreased from £12,813 (Rs. 1,28,130) to £8,237 (Rs. 82,370). This falling off is chiefly due to the removal of the judge's court, and to the entering of police charges under a separate head.

Assessed taxes.

Assessed Taxes.—The entry under this head represents the recovery of arrears of income-tax. The following table[1] shows the amount realized from taxes levied since 1860. Owing to the variety of their rates and incidence, it is difficult to make any satisfactory comparison of the results of the different taxes in force between 1860-61 and 1871-72 :—

Year.	Assessable incomes, exclusive of official salaries.				Amount realized, exclusive of official salaries.	
	Below £50		Above £50			
	£	Rs.	£	Rs.	£	Rs.
Income-tax—						
1860-61 .	89,208	8,92,080	143,706	14,37,060	9,321	93,210
1861-62	90,863	9,08,630	122,504	12,25,040	6,712	67,120
1862-63			118,597	11,85,970	4,744	47,440
1863-64 .	..	.	137,588	13,75,880	4,127	41,270
1864-65 . .	.		135,919	13,59,190	4,077	40,770
Licence-tax—						
1867-68 . ..	104,825	10,48,250	164,785	16,47,850	3,736	37,360
Certificate-tax—						
1868-69 .	...	...	194,296	19,42,960	1,908	19,080
Income-tax—						
1869	...	...	234,444	23,44,440	2,309	23,090
1869-70 . .	...	.	233,994	23,39,940	1,152	11,520
1870-71	...	...	237,880	23,78,800	4,642	46,420
1871-72 .. .	...	...	...	...	2,647	26,470

Customs.

Customs.—Receipts have fallen from £11,226 (Rs. 1,12,260) to £1,007 (Rs. 10,070), and charges from £69 (Rs.690) to £3 (Rs. 30). The decrease under this head is due chiefly to the falling off in the amount of traffic by sea.

[1] Broach collector's letter No, 1354, dated 2nd July 1877.

Salt.—Receipts have increased from £207 (Rs. 2,070) to £6,722 (Rs. 67,220),[1] and charges, of which there were formerly none, now amount to £887 (Rs. 8,870). The revenue derived from salt in 1823 was the state share of the proceeds of the salt works situated in the low sterile lands near the shores of the Gulf of Cambay. The pans of Dholia in Jambusar, Karodra in Wágra, and Katpor in Hánsot were closed in 1873. Under existing arrangements part of the salt consumed in the district is brought from the central salt work at Khárághora (sixty-five miles west of Ahmedábád) by rail to Broach. Sea salt is also imported by rail from works on the coast near Surat, and some sea salt from the Cambay works passes across the Mahi river into Jambusar.

Salt.

Transfers.—Receipts have risen from £8,657 (Rs. 86,570) in 1823 to £55,581 (Rs. 5,55,810) in 1874, and charges from £135,533 (Rs. 13,55,330) in 1823 to £227,828 (Rs. 22,78,280) in 1874. The increased receipts under this head of account are due chiefly (1) to the receipts on account of local funds, (2) to the remittances received from other treasuries, and the amount held as deposits on account of savings banks, and (3) to the recovery of loans made to *thákors* and others. The increased charges are due chiefly (1) to a large surplus balance remitted to other treasuries,[2] (2) to the expenditure on account of local funds, and (3) to loans made to private individuals.

Transfers.

The following statement shows, in tabular form, the contrasted details of the balance sheet of the years 1823-24 and 1874-75. The figures shown in black type on both sides of the balance sheet for 1874-75 are book adjustments. On the receipt side the total, £56,738 12*s.* (Rs 5,67,386), represents the additional revenue the district would yield had none of its lands been granted away by the state. On the debit side, the figures £11,496 6*s.* (Rs. 1,14,963) entered under the head of land revenue, represent the rental of the lands granted to village headmen (except such as are engaged solely on police duties) and to village watchmen; the entry, £44,839 12*s.* (Rs. 4,48,396), under the head 'Allowances and Assignments,' represents the rental of the lands granted to district hereditary officers, *garásiás*, and other non-service claimants; the entry, £402 14*s.*(Rs. 4,027), under the head 'Police,' represents the rental of the lands granted to village headmen employed solely on police duties. Cash allowances are, on the other hand, treated as actual charges, and debited to the different heads of account according to the nature of the grant. Thus grants of cash to village headmen (except such as are engaged solely on police duties) and village watchmen are included in £18,348 16*s.* (Rs. 1,83,488), the total of land revenue charges; grants of cash to non-service claimants are included in £5,073 8*s.* (Rs. 50,734), the total of allowance and assignment charges; and grants of cash to village headmen employed solely on police duties are included in £8,419 13*s.* (Rs. 84,196-8), the total of police charges:—

[1] As the salt used in the district is imported, and is paid for at the place of manufacture, this sum is no guide to the value of the salt consumed in the district.

[2] The Broach district treasury was able in 1874-75 to send £177,500 (Rs. 17,75,000 to other districts.

Chapter X.

Revenue and Finance.

Balance sheet, 1824-1875.

Comparative Statement in Pounds Sterling of the Balance

Class of Service.	No.	Receipts. Head of Account.	1823-24 £. s. d.	1874-75. £. s. d.
Imperial Service.				
(A). Supervised by the Collector.	1	Land Revenue	168,749 8 10	2,18,394 8 9 56,738 12 8
	2	Stamps	2,331 7 9	20,457 13 10
	3	Excise on Sprits and Drugs	2,462 1 2	6,658 12 7
	4	Transit Duties and Miscellaneous Cesses	15,532 13 5	....
	5	Law and Justice	61 2 6	528 16 11
	6	Forest	....	61 16 9
	7	Assessed Taxes	....	38 19 9
	8	Miscellaneous	499 13 9	92 11 2
	9	Interest on Advances and Loans and Instalments on arrears of Revenue, &c.	....	291 16 4
		Total	189,636 7 5	246,524 16 1 56,738 12 8
(B) Administered by Departmental Heads	10	Customs	11,226 9 4	1,007 19 5
	11	Salt	207 2 2	6,722 14 1
	12	Public Works	....	152 11 3
	13	Military	679 3 7	307 3 7
	14	Mint	....	10 6 6
	15	Post	208 4 1	1,746 7 8
	16	Telegraph	....	338 17 3
		Total	12,320 19 2	10,285 19 9
Provincial Service	17	Registration	....	1,219 10 4
	18	Education	....	288 6 7
	19	Police	....	82 1 6
	20	Medical Services	....	1 14 9
	21	Jails	....	0 9 10
	22	Sale of Books, Registration, &c.	....	1 2 1
	23	Miscellaneous	....	182 0 9
		Total	....	1,775 5 10
		Total of Imperial and Provincial Services	201,957 6 7	258,586 1 8 56,738 12 8
Transfers and Items of Account..	24	Deposits and repayments of Advances and Loans	623 14 5	10,646 12 7
	25	Remittances of Cash Balance	7,771 6 9	24,084 6 6
	26	Receipts in aid of Pension Funds	262 5 0	335 15 0
	27	Local Funds	....	20,514 19 4
		Total...	8,657 6 2	55,581 13 5
			210,614 12 9	314,167 15 1 56,738 12 8
		Grand Total..	210,614 12 9	370,906 7 9

Sheet of the District of Broach in the years 1823-24 *and* 1874-75.

No.	Head of Account.	1823-24. £ s. d.	1874-75. £ s. d.
	CHARGES.		
1	Land Revenue	8,825 15 10	18,348 16 4
			11,496 6 0
2	Stamps	848 2 5	495 14 7
3	Excise on Spirits and Drugs		168 1 10
4	Transit Duties and Miscellaneous Cesses	272 0 0	
5	Law and Justice { Civil / Criminal	12,813 11 1	3,782 16 10 / 4,454 15 11
6	Allowances and Assignments	2,925 0 3	5,073 8 0
			44,339 12 8
7	Pensions to Government Servants	...	838 1 3
8	Ecclesiastical	36 0 0	23 3 11
9	Profit and Loss	2,812 9 11	...
10	Miscellaneous	353 5 4	647 4 5
	Total	28,886 4 10	33,832 3 1
			56,335 18 8
11	Customs	69 1 2	3 17 1
12	Salt	...	887 7 0
13	Public Works	..	7,657 15 10
14	Military	14,655 1 10	418 4 0
15	Mint	..	31 13 0
16	Post	63 12 0	1,028 16 0
17	Telegraph	..	493 5 1
	Total	14,787 15 0	10,520 18 0
18	Registration	.....	737 6 9
19	Education	.	1,537 12 10
20	Police	.	8,419 13 4
			402 14 0
21	Medical Services	887 10 0	1,323 17 10
22	Jails	165 19 7	78 19 8
23	Cemeteries, Office Rents, &c	. ....	30 9 10
24	Printing	.	5 10 4
25	Miscellaneous	.	198 13 7
	Total	1,053 9 7	12,332 4 2
			402 14 0
	Total of Imperial and Provincial Services	44,727 9 5	56,685 5 3
			56,738 12 8
26	Deposits returned and Advances and Loans made	7,573 6 11	15,055 4 6
27	Remittances of Cash Balance	127,960 7 9	194,307 13 0
28	Interest on Government Securities	..	851 15 6
29	Local Funds	. .	17,613 17 1
	Total	135,533 14 8	227,828 10 1
		180,261 4 1	284,513 15 4
			56,738 12 8
	Grand Total	180,261 4 1	341,252 8 0

REVENUE OTHER THAN IMPERIAL.

Local funds.

Local Funds.—The district local funds, which since 1863 have been collected 'for the promotion of rural education and for the supply of roads, water, drains, rest-houses, dispensaries, and other useful objects affecting the every-day comfort and convenience of the rate-payers,'[1] amounted in the year 1874 to a total sum of £20,672 (Rs. 2,06,720), and the expenditure to £21,408 (Rs. 2,14,080). This revenue is drawn from three sources, a special cess of $\frac{1}{16}$th in addition to the ordinary land-tax, the proceeds of certain subordinate local funds, and some miscellaneous items of revenue. The special cess, of which two-thirds are set apart as a road fund, and the remainder for the promotion of education, yielded in 1874 a revenue of £17,154 (Rs. 1,71,540). Subordinate local funds, including a ferry fund, a toll fund, a cattle-pound fund, and a school fee fund, yielded £1,435 (Rs. 14,350). Government and private subscriptions amounted to £923 (Rs. 9,230), and miscellaneous receipts, including certain items of land revenue, to £1,160 (Rs. 11,600), or a total sum of £20,672 (Rs. 2,06,720).

For administrative purposes the local funds of the district are divided into two main sections, those set apart for public works, and those set apart for education. The receipts and disbursements during the year 1874-75 under those two heads were as follows :—

Local Funds Balance Sheet in Pounds Sterling, 1874-75.

PUBLIC WORKS SECTION

Receipts.			Expenditure.		
Head of Account	Amount		Head of Account.	Amount.	
	£	s.		£	s.
Balance, April 1st, 1874.	11,215	3	Establishment	2,931	19
One-anna cess, $\frac{2}{3}$.	11,435	18	New works . .	7,847	15
Tolls ...	281	13	Repairs	2,344	15
Ferries	319	9	Medical charges . .	571	6
Cattle-pounds	446	14	Miscellaneous .	198	16
Contributions	723	0	Balance, March 31st, 1875.	11,193	9
Miscellaneous	666	3			
	25,088	0		25,088	0

EDUCATIONAL SECTION.

	£	s.		£	s.
Balance, April 1st, 1874.	7,758	16	Supervision	558	18
One-anna cess, $\frac{1}{3}$ ...	5,717	18	School charges	4,854	14
School fee fund ...	388	1	Scholarships	160	9
Contributions (Government)	200	0	School-houses, new .	1,442	19
			Do. repairs ..	466	19
Miscellaneous	493	18	Miscellaneous	29	13
			Balance on March 31st, 1875.	7,045	1
	14,558	13		14,558	13

[1] Government Resolution No. 655, dated 26th February 1874.

According to the statement received from the collector of the district, the following works have, since the introduction of the system in 1863, been executed or repaired out of the local funds To open up communications, ninety-six miles of road have been made, furnished with eight bridges, and, along forty-three miles, planted with trees. To improve the water-supply, 245 wells and 274 tanks, eleven water-courses, and eleven water-troughs have either been made or repaired. To help village education twenty-six schools, and for the comfort of travellers fifteen rest-houses and sixty village offices,[1] *chora*, have been built or repaired. Besides these works twenty-four cattle-pounds and one hospital have been constructed and two town walls repaired. With regard to the increase of the water-supply, the most pressing want of the district, the collector (1874) writes: "A little more than one-fifth of the receipts has been devoted to water-supply, which every year receives the best attention of the committee. Much, however, remains to be done towards meeting the wants of the people of the sea-coast villages. This remark applies particularly to villages of this class in the Wágra sub-division, many of which stand in great need of a supply of fresh water."

Works carried out, 1863 1874.

Municipal Revenues.—In the year 1874 there were two municipalities in the district, one in the city of Broach, established in 1852, and the other in the town of Jambusar, established in 1856. In that year the revenue raised by both municipalities amounted together to £8,457 (Rs. 84,570). Of this sum, £3,563 (Rs 35,630) were recovered from octroi dues, £828 (Rs. 8,280) from a house-tax, £2,484 (Rs. 24,840) from a toll-tax and wheel tax, £400 (Rs. 4,000) from assessed taxes, and £1,182 (Rs. 11,820) from miscellaneous sources Under the provisions of the Bombay District Municipal Act (No VI. of 1873) Broach forms a city municipality, its funds, under the presidency of the collector, being administered by a body of commissioners, some official and others private, in the proportion of at least two of the latter to one of the former. Under the same Act Jambusar forms a town municipality administered by a body of commissioners, with the collector as president, and the assistant or deputy collector as vice-president, the commissioners being chosen in the proportion of at least two non-official to each official member.

Municipalities.

The following statement gives for each municipality the receipts, charges, and the incidence of taxation in the year ending 31st March 1874:—

Municipal Balance Sheet in Pounds Sterling, 1873-74.

Name of Municipality.	Receipts						Expenditure.								Incidence of taxation
	Octroi.	House-tax.	Toll and wheel tax.	Assessed taxes.	Miscellaneous	Total	Establishment	Safety.	Health	Instruction	Works		Miscellaneous	Total	
											Original	Repairs			
	£.	£.	£.	£.	£.	£.	£	£.	£.	£	£.	£	£	£.	s d.
Broach ...	3,375	828	2,160	400	925	7,689	624	1,085	1,490	90	721	1,013	296	5,320	4 1½
Jambusar	188	..	324		256	768	77	106	183		173	5	26	571	1 0½
Total ..	3,563	828	2,484	400	1,181	8,457	701	1,191	1 673	90	894	1,018	322	5,891	

[1] A part of the expenditure on village offices is met by government.

Chapter X.

Revenue and Finance.

Cotton.

Cotton.—At present (1874) an establishment in connection with the Cotton Frauds Act (Bombay Act No. IX. of 1863) for preventing the adulteration of cotton is, under the control of the collector of Broach, maintained at a total yearly cost of £1,627 (Rs. 16,270). This charge is met from the cotton improvement fund framed under the provisions of the Act. The establishment consists of an inspector, who is also inspector for Surat, drawing a monthly salary of £100 (Rs. 1,000), and three sub-inspectors, with monthly salaries varying from £8 to £12 (Rs. 80 to 120). Of the three sub-inspectors, one is placed at Jambusar, where there are three factories ; one at Broach, where there are nineteen factories; and one at Ankleswar, where there are three factories. The Broach sub-inspector also looks after the presses at Pálej and Chamárgám, and the Ankleswar sub-inspector after those at Pánoli and Iláv. Each sub-inspector has generally the assistance of one man. The district inspector, through the collector, licenses presses, travels through the district, examines cotton, and inspects the ginning-factories. Under his orders the sub-inspectors open cotton bales, testing about twenty per cent.

CHAPTER XI.

INSTRUCTION.

In the year 1873-74 there were 195 government schools, or, on an average, one school for every two inhabited villages, alienated as well as state, with an average attendance of 5,362 pupils (out of 7,357 on the rolls), or 3·07 per cent of 174,578, the entire population not exceeding twenty years of age. Government schools 1874.

Excluding charges for superintendence, the total expenditure on education, on account of aided as well as state schools, amounted in 1873-74 to £9,584 (Rs 95,840), of which £931 (Rs. 9,310) were debited to government and £8,653 (Rs. 86,530) to local and other funds. Cost of education.

Under the director of public instruction, and the educational inspector, northern division (Gujarát), the education of the district was in 1873-74 conducted by a local staff 340 strong. Of these, one was a deputy educational inspector, with general charge over all the schools of the district, drawing a yearly pay of £120 (Rs 1,200), and the rest were masters of schools with yearly salaries ranging from £240 to £3 12*s.* (Rs. 2,400 to Rs. 36). Local staff.

Of 195, the total number of government schools, in 184 Gujaráti only was taught, and in nine Urdu only. In one of the rest instruction was given both in English and in Gujaráti; and one was a high school, teaching English and one classical language (Sanskrit) up to the standard required to pass the university entrance test examination. Instruction.

In addition to the state schools there was in the year 1873-74 one aided private vernacular boys' school held in the town of Broach, with an average attendance of forty-eight pupils out of seventy-three enrolled. Established by Sir Jamsedji Jijibhái in 1850, this school received in 1865-66 from government a contribution of £8 (Rs. 80). Afterwards this grant was discontinued, and in its place, in 1873-74, £5 (Rs. 50) were allotted from the local cess fund. Aided schools.

Before the introduction of state education every large village had its private school taught by a Bráhman They could not, however, compete with schools helped or supported by state funds, and accordingly the number of this class of schools had, in 1873-74, fallen to thirty-three, with an average attendance of 1,480 pupils.[1] During the rainy season some stray Bráhmans venture to open temporary schools Private schools.

[1] Letter from the deputy educational inspector of Broach.

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Private schools.

in the larger villages that have not government schools of their own. But most of these villages can hardly supply an attendance of ten boys all the year round. The Bráhman teacher, for two or three months during the rains and at harvest time is paid generally in kind, and sometimes in money. His total receipts would probably vary from £5 to £7 10s. (Rs. 50 to 75). From the larger villages, now furnished with government schools, teachers of this class used, it is said, to earn as much as £15 (Rs. 150), and sometimes even more. Private schools in towns have generally been established by the forefathers of the present teachers. The owners of such schools have several sources of income. On entering, a boy offers one shilling (8 as.) to the goddess of learning, *Saraswati;* each school-day he brings for the master a handful of grain, *muthi;* on holidays he brings the master a half-penny (one pice or ¼ anna). At certain stages of the boy's course his parents pay a fee of one shilling (8 as.); when the pupil is going to be married, for teaching him the marriage songs he gives his master two shillings (1 Re.), or, if his parents are well off, the present will be as much as from six to ten shillings (Rs. 3 to 5). Boys seldom stay at these schools after twelve years old, and most of the pupils are under ten. Girls do not attend such schools. Boys of from six to eight are taught native tables, *ánk;* afterwards they learn to write by tracing letters, *mulákshar,* on a sanded board, and by writing characters, *náma,* with wet chalk on a black board. They seldom learn to write well; but mental arithmetic, *hisáb,* is taught in these schools to perfection, and this part of their teaching has been adopted in state schools. The boys go to their teachers' dwellings; and, as the house is often small, in the morning and evening the pupils may be seen grouped on the side of the street, in front of the door, working at their sums, or shouting out their tables. The position of the masters, and the religious element in some of their teaching, helps them in their competition with the purely secular instruction given in state schools.

State education, 1849-1874.

The following figures show the increased means for learning to read and write offered by government to the people during the last five-and-twenty years. From returns furnished by the educational department, it would seem that the first state vernacular school was opened in the town of Broach in 1826. Four years later a second vernacular school was opened in Jambusar town. But no detailed information is available for the years before 1849. In 1849 there were six state schools, with an average attendance of seventy-six pupils; at that time independent private (indigenous) schools were returned at fifty-four, teaching, it was estimated, about 2,044 boys;[1] the total average attendance was, therefore, 2,120, or, as shown by the returns of the census of 1846, 1·61 per cent of 130,878,[2] the total population not exceeding twenty years of age. In 1855-56 the number of state schools had risen to eight, with an average attendance of 398 pupils; and independent private (indigenous) schools to eighty-

[1] The figures for indigenous schools are only estimates. No regular returns are available.

[2] This number has been calculated from the total population in 1846 on the basis of the proportion given in the Census Report for 1872.

seven, with an estimated attendance of 2,840 pupils; the total average number of youths under instruction was, therefore, 3,238, or, as shown by the census of 1851, 2·23 per cent of 145,008,[1] the total population not exceeding twenty years of age. In 1865-66 the numbers, exclusive of those of independent private (indigenous) schools[2] and the pupils in them, had risen to thirty-seven schools, of which thirty-six were government; and one an aided private school, with an average attendance of 1,459 scholars, 1,413 of whom were being taught in government, and forty-six in aided private schools. The total average number under instruction was, therefore, 1,459, or, as shown by the census of 1851, one per cent of 145,008, the total population not exceeding twenty years of age. The figures for 1873-74 were, as shown above, 195 government, one aided private, and thirty-three independent private (indigenous) schools, with an average attendance of 5,362, forty-eight, and 1,480 pupils, respectively; the total average attendance was, therefore, 6,890, or, on the basis of the census of 1872, 3 94 per cent of the population not exceeding twenty years of age. A comparison with the returns for 1849 gives, therefore, for 1873-74, an increase in the number of schools from sixty to 229, or 281·66 per cent; while of 174,578, the entire population of the district, not exceeding twenty years of age, 3·94 per cent were under instruction in 1873-74 as compared with 1·61 per cent in 1849.

State education, 1849-1874.

Of the figures for the years shown above, in those for 1873-74 only do girls' schools appear. There were, in 1873-74, seven girls' schools, with an average attendance of 139 pupils.

Girls' schools.

The census returns for 1872 give for each of the chief races of the district the following information as to the proportion of persons able to read and write:—

Proportion able to read and write, 1872.

Of 49,744, the total Hindu male population not exceeding twelve years, 4,619, or 9·28 per cent; of 22,289 above twelve, and not exceeding twenty years, 4,651, or 20·86 per cent; and of 73,037 exceeding twenty years, 16,347, or 22 38 per cent,—were able to read and write, or were under instruction. Of 46,098, the total Hindu female population not exceeding twelve years, 124, or 0·26 per cent; of 20,126 above twelve, and not exceeding twenty years, 59, or 0·29 per cent; and of 65,738 exceeding twenty years, 103, or 0·15 per cent,—were able to read and write, or were under instruction.

Hindus.

Of 12,453, the total Musalmán male population not exceeding twelve years, 1,177, or 9·45 per cent; of 5,439 above twelve, and not exceeding twenty years, 1,160, or 21·33 per cent; and of 17,404 exceeding twenty years, 3,376, or 19·40 per cent,—were able to read and write, or were under instruction. Of 11,682, the total Musalmán female population not exceeding twelve years, 24, or 0·2 per cent; of 4,701 above twelve, and not exceeding twenty years, 11, or 0·23 per cent; and of 17,354 exceeding twenty years, 16, or 0·09 per cent,—were able to read and write, or were under instruction.

Muhammadans.

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[1] This number has been calculated from the total population in 1851 on the basis of the proportion given in the Census Report for 1872.

[2] Materials with regard to such schools for 1865-66 are not available.

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Instruction.

The returns in question do not give corresponding details with regard to Pársis.

Pupils by race, 1865-1875.

Before the year 1865-66 no returns, arranging the pupils according to race and religion, would seem to have been drawn up. The statement given in the margin shows that, of the three chief races of the district, the Pársis have the largest proportion of their boys and girls under instruction. Since 1865 a considerable advance has, it will be seen, been made by the Musalmáns. The increase under this head is, according to the deputy educational inspector, almost entirely due to the fact that the cultivating Bohorás, whose vernacular is Gujaráti, have, within the last ten years, begun to make use of the means offered them for teaching their children.

Race	1865-66	Percentage of the total population of the respective class.	1873-74	Percentage of the total population of the respective class	Increased percentage of population
Hindus	1,419	0·61	5,588	2 01	1 4
Muhammadans	312	0 54	1,474	2 13	1 59
Pársis	148	5 79	368	11 15	5 36
Total	1,879	0·64	7,430	2 12	1 48

Of 300, the total number of girls enrolled in the seven girls' schools spoken of above, 237, or 79 per cent, are Hindus; 62, or 20·66 per cent, Parsis; and 1, or 0 33 per cent, a Musalmán.

Of 7,865, the total number of pupils in government and aided private schools in the Broach district, there were in 1875, 763, or 9·7 per cent, Bráhmans; 451, or 5·73 per cent, Rajputs; 18 Káyasths and Parbhus; 865, or 10·99 per cent, of trading castes (Wániás and Bhátiás); 2,590, or 32 93 per cent, of cultivators (Kanbis); 408, or 5·18 per cent, of artizans (goldsmiths, blacksmiths, carpenters, tailors, and others); 334, or 4 24 per cent, of shop-keepers (such as oilmen, dealers in vegetables and betel-leaves); 216, or 2·74 per cent, of labourers (washermen, water-carriers, and others); 109, or 1·38 per cent, of low-castes (shoe-makers, sweepers, scavengers, and others); 146, or 1·85 per cent, miscellaneous (genealogists, grain-carriers, and others); 1,532, or 19·43 per cent, Musalmáns, of whom 986, or 12·58 per cent, were Bohorás, 393, or 4·99 per cent, Pársis; and forty of aboriginal and hill tribes.

Of 109, the total number of low-caste pupils, only five were boys of the Dher (sweeper) and Bhangia (scavenger) castes. In the three government schools where these boys attended, room was made for them on the verandas of the schools. As there were so few pupils belonging to these classes, no special arrangements were found to be necessary.

Statement of schools, 1855-1874.

The following tabular statement, prepared from the returns furnished by the educational department, shows in detail the number of schools and scholars with their cost to government:—

Return of Government and Aided Schools in the Broach District in the years 1855-56, 1865-66, *and* 1873-74.

Classification of Schools.	Number of Schools.			Number of Pupils.												Average Daily Attendance.		
				Hindus			Musalmáns.			Pársis.			Total.					
	1855-56.	1865-66.	1873-74.	1855-56	1865-66.	1873-74.	1855-56.	1865-66	1873-74.	1855-56.	1865-66.	1873-74.	1855-56	1865-66.	1873-74.	1855 56	1865-66.	1873-74.
Government.																		
High School			1			46			3			45	...	.	94			72
Anglo-Vernacular* . . .	1	3	1		258	89	.	20	2		52	33	66	330	174	47	254	140
Vernacular { Boys	7	33	186		1,161	5,143	.	292	1,468		27	178	512	1,480	6,789	351	1,159	5,011
Vernacular { Girls			7	.		237			1			62		.	300	.		139
Aided.																		
Vernacular—Boys		1	1		.	73					69		.	69	73		46	48
Total	8	37	196		1,419	5,588		312	1,474		148	368	578	1,879	7,430	398	1,459	5,410

Classification of Schools.	Schooling Fee.			Cost per Pupil			Receipts from								
							Government.			Local Cess.			Municipalities.		
	1855-56	1865-66	1873-74	1855-56	1865-66	1873-74	1855-56	1865-66	1873-74	1855-56	1865-66.	1873 74	1855-56	1865-66.	1873-74.
Government				£ s d	£ s. d.	£ s d	£	£	£	£	£	£	£	£	£
High School			3s			9 11 3½			470			57			60
Anglo-Vernacular*	1s.	Varying from ½d to 1s	2s.	2 13 3⅜	3 7 1½	2 6 10	120	300	149		565	27		..	
Vernacular { Boys	1½d	Varying from ½d to 3d	Varying from ½d to 3d.	0 10 2⅔	2 12 3⅝	1 13 5⅝	163	272	200		680	3,549			
Vernacular { Girls	.	. . .	.			1 10 4⅔						212			.
Aided.															
Vernacular—Boys		.			1 0 7½	0 2 0½		8			.	5			
Total	.	.		.		.	283	580	819	...	1,245	3,850			60

* This school forms the lower division of the high school, teaching from standard I. to III., both inclusive, the upper division teaching from standard IV to VII (Matriculation).

Return of Government and Aided Schools in the Broach District in the years 1855-56, 1865-66, *and* 1873-74—continued.

Classification of Schools.	Receipts from									Expenditure on								
	Private Individuals			School Fees, &c.			Total			Inspection and Instruction			Buildings.			Libraries.		
	1855-56	1865-66.	1873-74	1855-56	1865-66	1873-74	1855-56	1865-66.	1873-74.	1855-56	1865-66	1873-74	1855-56	1865-66.	1873-74	1855-56.	1865-66	1873-74.
Government.	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
High School						102			689			604						11
Anglo-Vernacular *	16	15		32	117	112	168	997	288	125	836	261						
Vernacular { Boys		4	44	32	87	365	195	1,043	4,158	180	794	3,991	..	2,150	4,233		87	166
Vernacular { Girls									212			212						
Aided.																		
Vernacular—Boys		40						48	5		48	5						
Total	16	59	44	64	204	579	363	2,088	5,352	305	1,678	5,073		2,150	4,233		87	177

Classification of Schools	Expenditure on						Cost to											
	Scholarships			Total			Government			Local Cess			Other Funds			Total		
	1855-56	1865 66	1873-74	1855-56	1865-66	1873-74	1855-56	1865-66	1873-74	1855-56	1865-66	1873-74	1855-56	1865-66	1873-74	1855-56	1865 66	1873-74
Government	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
High School			74			689			470			57			162			689
Anglo-Vernacular * . ..	.	17	27	125	853	288	120	360	261		553	17	5			125	853	288
Vernacular { Boys			..	180	3,031	8,390	164	272	200		2,759	8 146	16		44	180	3,031	8,390
Vernacular { Girls ..						212						212						212
Aided																		
Vernacular—Boys . .					48	5		8	..			5		40			48	5
Total		17	101	305	3,932	9,584	284	580	931		3,312	8,447	21	40	206	305	3,932	9,584

* This school forms the lower division of the high school, teaching from standard I to III, both inclusive; the upper division teaching from standard IV. to VII (Matriculation).

In conclusion, it may be useful to compare the present (1873-74) provision for teaching the town and the country population of the district.

Town education, 1873-74.

In the city of Broach there were in 1873-74 nine government schools, with an average attendance of 779 pupils. Of these, one was a high school and one a first grade anglo-vernacular school; three were vernacular schools for boys; one was a girls' school; one a Musalmán Urdu school; and two evening schools. The number of pupils enrolled was 1,149, or 3·11 per cent of 36,932, the entire population of the city as given in the census returns of 1872. The average total cost per pupil, calculated on the average attendance, was £1 17*s.* 1*d.* (Rs. 18-8-8). The English school, established in 1849, was in 1871-72 recognized as a high school. Since then six of its pupils have passed their university entrance test examination, three in 1872, and the rest in the year following. In addition to the above nine government schools, there was, besides fifteen independent private (indigenous) vernacular schools, one aided private school.

Broach.

Jambusar.

In the town of Jambusar there were in 1873-74 four government schools, with an average attendance of 210 pupils. Of these, two were vernacular schools, one for boys and the other for girls; one evening school; and one Musalmán Urdu school. The number of pupils enrolled was 381, or 2·55 per cent of 14,924, the entire population of the town as given in the census returns of 1872. The average total cost per pupil, calculated on the average attendance, was 18*s.* 5*d.* (Rs. 9-3-4). There was besides one independent private indigenous vernacular boys' school.

Village education.

Exclusive of the towns of Broach and Jambusar, the district of Broach was in 1873-74 provided with 182 schools, or, on an average, four schools for each nine inhabited villages. The following statement shows the distribution of these schools by sub-division:—

Statement of Village Schools, 1873-74.

Sub-divisions.	Number of inhabited villages	Population as per census returns for 1872	Number of Schools. 1855-56 English.	1855-56 Vernacular Boys	1855-56 Vernacular Girls.	1865-66 English	1865-66 Vernacular Boys	1865-66 Vernacular Girls	1873-74 English	1873-74 Vernacular. Boys	1873-74 Vernacular. Girls.
Jambusar	84	78,325		.	..		10		..	44	1
A'mod	51	40,260		2		1	7		.	26	1
Wágra . .	69	38,779		..			3	.		28	..
Broach . .	106	73,359	.	..		..	9	.	.	40	..
Ankleswar ...	102	67,713		2	...	.				39	3
Total	412	298,466		4		1	29			177	5

In Broach there is one library and one local newspaper.

Library.

The library, known as the 'Ráichand Dipchand Library,' was established in 1859. A donation from Mr. Hakumatrái Dolatrái, the Desái of Broach, and a present of 400 books by Mr. Sorábsha

Chapter XI. Instruction.

Library.

Dádábhái gave the institution a good start. In 1864-65 the library received two fresh donations—one from Mr. Ráichand Dipchand, a merchant of Bombay, of £400 (Rs. 4,000) and 1,000 books; and the other, the gift of £200 (Rs. 2,000), from another Bombay merchant, Mr. Kharsedji Káma. The total number of books in the library is 2,505. There are seventy-eight subscribers, of whom thirteen are first class, paying a yearly subscription of £1 4*s.* (Rs. 12); twelve are second class, paying 12*s.* (Rs. 6); and fifty-three are third class, paying 6*s.* (Rs. 3). The average annual revenue is £77 10*s.* (Rs. 775), of which £47 10*s.* (Rs. 475) are collected in subscriptions, and £30 (Rs. 300) are granted out of municipal funds. The library subscribes to two Bombay English daily, and to twenty-three English and vernacular weekly newspapers. Some monthly papers and magazines are also taken in.

Newspaper.

The local newspaper, which has been in circulation for fourteen years, is called the 'Broach Wartmán,' or News. It is lithographed, and published weekly at Broach.

Association.

In 1871 some of the inhabitants of Broach joined together for the purpose of forming themselves into an association to bring 'to the notice of government such subjects as stood in need of representing.' A committee was chosen, and there are said to be now about fifty-seven names on the roll. The subjects on which this association has addressed petitions to government are the municipal house-tax, the non-agricultural cess, the establishment of an assistant judge's court at Broach, and the new District Municipal Act (VI. of 1873). Since September 1874 no meeting has been held, and the association is now (1875) said to be in 'a state of chronic stupor.'

CHAPTER XII.

PUBLIC HEALTH.

Chief diseases.

Broach, although to Europeans a trying climate, seems to suit the constitution of the natives, and epidemics are rarely heard of. About the beginning of the present century severe attacks of small-pox, at intervals of three or four years, were common, and since that time the prevalence of sores, called the Broach boil, was noticed by some of the district officers. For some years past, however, both of those forms of sickness are much less common than was formerly the case. The types of disease most usually met in the district are said to be ague, skin diseases, bronchitis, conjunctivitis, and otitis.[1]

There were, according to the census returns, eighty-four persons engaged in the practice of medicine. Deducting fourteen as the number of those employed by government, there remain of native practitioners seventy, or one to every 5,000 persons of the population. These men belong to two classes—Hindus, generally Bráhmans of the Shrigod sub-division, and Musalmáns. The former are generally called *waid*, and the latter *hakim*. Besides these professional physicians, the village barber, and in some cases the potter, has knowledge enough to bleed or to set a dislocated limb. Even among those who earn a living as doctors, their acquaintance with medicine is said to be most limited. Their ruling idea is that every drug contains the properties either of heat or cold. This preparation they say is cooling, that heating, to the system. A powder is their favourite form of prescription, and this generally contains a variety of ingredients, the more the better. They also give their patients drugs to make up into decoctions. There are about ten or twelve native doctors, *hakim*, in the town of Broach. But none of them ever venture to perform an operation. Their surgical skill goes no further than the knowledge required to open boils, abscesses, and whitlows.[2] Among other medicines the native practitioners use opium, antimony, salts of silver, mercury, and copper. They also practise feeling the pulse, examining the tongue and urine, tapping the chest, and placing the ear in the neighbourhood of the heart. They have many specifics or charms. Of these, the following is used

[1] The endemic of the country is (1820) quartan fever, accompanied by disease of the spleen. The next most prevalent malady is tertian fever. For the rest, rheumatism, elephantasis, and diseases of the eye are common, while liver complaints, pectoral affections, and dropsies are rare.—Trans. Bom Lit. Soc, III., 383.

[2] There is a clumsy operation for the depression of cataract, and travelling lithotomists, also, sometimes pass through the country.—Trans. Bom. Lit. Soc., III., 383.

in cases of jaundice. A quantity of dried asses' dung is reduced to powder and placed in a closed bag. The bag is then hung in the neck of a deep earthen pot filled with cold water, and allowed to remain for one night. Next morning it is taken out, and, mixing sugar with the water, the patient drinks for a dose a pint, or even a quart.[1]

Medical institutions.

In the district there are four dispensaries, all of which have been established within the last five years, and one civil hospital at Broach. During the year 1873-74, 20,302 persons in all were treated in these hospitals, of whom 20,001 were out-door and 301 were in-door patients. Of these institutions, the Broach civil hospital and the dispensaries at Jambusar and Iláv are provided with special buildings, the others being located in houses rented for the purpose. The total amount expended in checking disease in 1874-75 was £1,894 (Rs. 18,940). Of this amount £1,323 (Rs. 13,230) were paid from state revenues, and £571 (Rs. 5,710) from local funds.

The following details of the working of these different institutions are taken from their annual administration report for 1873-74 :—

Broach civil hospital.

The returns and reports show that the total number of in-door cases treated in 1873-74 was 281 against 300 of the year 1872-73. There remained at the end of the year 1872-73 fifteen persons in hospital; 266 were fresh admissions. Of the total treated (281), 251 were discharged, fifteen died in hospital, one died out of hospital, and fourteen remained under treatment. There were 5,365 out-patients in 1873-74 against 6,730 in 1872-73.

Ankleswar dispensary.

The Ankleswar dispensary was opened in the year 1870. The number of out-patients under treatment in 1873-74 was 3,191. There were 1,300 cases of malarious fevers attended against 1,220 of the previous year. In 1873-74 the percentage of fevers to all other diseases was 40·73. Of other diseases, those of lungs, stomach, and intestines, and skin diseases were the chief. The average daily number of sick was 22·8 against 11·8 of the previous year. 124 minor operations were performed.

Iláv dispensary.

The Iláv dispensary was opened in 1870. The number of out-door patients treated in 1873-74 was 5,506. The number of malarious fevers in 1873-74 was 2,368; the percentage to all other diseases was 43 against 47·74 in 1872-73 and 33 in 1871-72. The chief other diseases treated were rheumatism, syphilitic affections, and skin diseases. The average daily number of sick was 58·7 against 44·5 of the previous year. 125 minor operations were performed. The village of Iláv is small, and, like the Hindus, the Pársi inhabitants, who form the largest part of the population, much prefer out-door treatment.

Hánsot dispensary.

The Hánsot dispensary was opened in 1870. The number of out-patients in 1873-74 was 3,926. Malarious fevers were the chief diseases treated, there being of these 1,136 against 913 of the pre-

[1] The details of chief diseases and native practitioners are from a paper by B. C. Keelan, Esq., civil surgeon of Broach (1874).

vious year; the ratio of fevers to all other diseases was 28·93 against 32·65 of the preceding year. The chief other diseases were of the respiratory system, of the stomach and bowels, and affections of the cellular and cutaneous systems. The average daily number of sick was 36·8.

Jambusar dispensary.

The number of out-patients treated in the Jambusar dispensary in 1873-74 was 1,513. There were 321 cases of malarious fevers, giving a percentage of 21·21 on all other diseases treated. Of the other diseases, the chief were rheumatism, diseases of the nervous system, respiratory and alimentary affections, ulcers, skin diseases, and injuries. The average daily number of sick was 14·5 against 10·4 of the preceding year.

Vaccination.

Vaccination would seem to have been first introduced into the district of Broach in 1812. At that time epidemics of small-pox are said[1] to have swept through Gujarát on an average about once in four years. The disease twice, during the years from 1812 to 1820, visited the Baroda territories to the east of Broach; but in the vaccinated villages it is said to have caused comparatively little injury. During the progress of the survey, 1811 to 1819, an assistant surgeon was attached as a vaccinator to the survey department. By this agency 29,747 persons in all were operated upon. In the year 1873-74 the work of vaccination was, under the supervision of the superintendent of vaccination for the eastern Gujarát circle, carried on by five vaccinators, with annual salaries varying from £16 16*s.* to £28 16*s.* (Rs. 168 to 288). Of the operators, four were distributed over the rural parts of the district: one to Jambusar sub-division; a second to A'mod and Wágra; a third to the villages of the Broach sub-division; and the fourth was entrusted with Ankleswar and Hánsot. The duties of the fifth vaccinator were confined to the city of Broach. In the year 1873-74, 9,707 operations were performed, as compared with 9,266 in 1869-70.

The following abstract shows the chief points of interest connected with the age and the race of the persons vaccinated: —

Comparative Summary of Vaccination Operations in the District of Broach during the years 1869-70 *and* 1873-74.

Year	Number vaccinated arranged by							
	Sex		Religion.				Age	
	Males	Females.	Hindus	Muhammadans	Parsis	Others	Under one year	Above one year
1869-70	4,964	4,302	7,592	1,578	89	7	6,397	2,869
1873-74 .	5,015	4,692	8,011	1,635	58	3	5,515	4,192

The total cost of these operations was in 1873-74 £350 18*s.* (Rs. 3,509), or about 9*d.* (6 as.) per each successful case. The entire

[1] Statistical Account of Jambusar.—Trans. Bom. Lit. Soc., III., 489.

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charge was made up of the following items: supervision and inspection, £200 6*s.* (Rs. 2,003); establishment, £143 14*s.* (Rs. 1,437); and contingencies, £6 18*s.* (Rs. 69). Of these, the supervising and inspecting charges were met from provincial funds, and of the remainder, the expense of the rural vaccinator was in each sub-division borne by its local funds, while in Broach the municipality paid for the services of the town vaccinator.

Cattle diseases.

The following particulars of the forms of cattle disease occasionally prevalent in the district of Broach have been obtained by the collector from the cultivators. In forwarding them, Mr. White expressed the fear that in some points the details were inaccurate.[1]

Sitla or sili, rinderpest, literally small-pox. The symptoms are purging, discharge from the mouth, and refusal of food. The duration of the attack varies from eight to fifteen days, or even a month. This form of disease is not generally fatal.—*Rumdo*, a form of rinderpest. This disease affects the chests of cattle, causing their breathing to be laboured and preventing their eating. It is generally fatal.—*Mowáso or kharchan*, foot-and-mouth disease. The symptoms are trickling at the mouth, and formation of matter in the hoofs. This disease is not generally fatal, and can, it is said, be cured within ten or fifteen days by an application of *bábul* (Acacia arabica) leaves and other cooling medicines.—*Malvi, glasandi, and jerbaj*, inflammation of the throat and chest. The symptoms are swelling of the throat and chest, straining eyes, and refusal of food. It usually lasts for three days, and is seldom fatal.

Vital statistics.

The total number of deaths in the six years ending 1874 was, as shown in the sanitary commissioner's annual reports, 40,409, or an average yearly mortality of 6,735, or, assuming the figures of the census of 1872 as a basis, of 1·92 per cent of the total population. Of the average number of deaths, 4,854, or 72·07 per cent, were returned as due to fever; 278, or 4·12 per cent, to bowel complaint; 77, or 1·14 per cent, to small-pox; 199, or 2·95 per cent, to cholera; and 1,214, or 18·02 per cent, to miscellaneous diseases. Deaths from accidents or violence averaged 113, or 1·67 per cent of the average mortality of the district. During the four years ending 1874 the number of births is returned at 19,546 souls, of whom 10,550 are entered as male and 8,996 as female children, or an average yearly birth-rate of 4,886 souls; or, on the basis of the census figures, a birthrate of 1·39 per cent of the entire population of the district.

These figures are incorrect; for, while the population of the district is increasing, the returns show a birth-rate less by 1,349 than the death-rate. The explanation probably is, that while the mortality is pretty accurately known, not nearly all of the births are recorded.

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[1] Collector's letter No. 1745, dated 15th September 1870. For details of treatment the Manual of the most Deadly Forms of Cattle Diseases in India, by Mr. J. H. B. Hallen, Inspecting Veterinary Surgeon, Bombay Army, might be consulted.

CHAPTER XIII.

SUB-DIVISIONAL ACCOUNTS.

Jambusar Sub-division.—The Jambusar sub-division is bounded on the north by the river Mahi; on the east by Baroda territory; on the south the Dhádhar river separates it from the A'mod sub-division of the Broach district; and on the west it stretches to the Gulf of Cambay. The total area is 378 square miles, and the population was in 1872 returned at 93,249 souls, or an average density of 246·69 to the square mile. The realizable land revenue in 1874-75 amounted to £44,541 (Rs. 4,45,410).

Area.

Of the total area of 378 square miles, six miles are occupied by the lands of alienated villages. The remainder contains 155,830 acres, or 65·38 per cent, of occupied land; 2,123 acres, or 0·89 per cent, of culturable waste; 68,003 acres, or 28·53 per cent, of unculturable waste; and 12,376 acres, or 5·19 per cent, occupied by village sites, roads, tanks, and rivers. From 157,953 acres 66,515 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 91,438 acres, the actual area of culturable state land, 89,466 acres, or 97·84 per cent, were in the year 1873-74 under cultivation.

Aspect.

The country consists of two tracts of level land differing in appearance. Towards the west a barren plain, and in the east a well-wooded stretch of light, *gorát*, soil.

Climate.

The average rain-fall is about 23½ inches.

Water-supply.

There are only two rivers,—the Mahi and the Dhádhar,—and these skirt the sub-division; the former on the north, and the latter on the south. In the light soil portions good and sweet springs are available, but in other parts the supply of water is defective.

Soil.

The soils are, as noticed above, black and light.

Survey details.

The sub-division has not been brought as yet (1875) under the survey revision, and is therefore wanting in assessment and occupancy details.

Resources, 1874.

The returns for 1874 show a population of 81,364 souls lodged in 25,966 houses, provided with 700 wells and 323 tanks, and owning the following stock: 5,927 ploughs, 5,036 carts, 17,092 oxen, 2,448 cows, 18,645 buffaloes, 656 horses, and 9,191 other animals.

Value of land.

From statistics furnished by the registration department, it would seem that in the year 1867, 1,172$\frac{2}{40}$ acres of land were purchased at a total cost of £6,889 7*s.* 6*d.* (Rs. 68,893-12), or £5 7*s.* 6$\frac{1}{8}$*d.* (Rs. 58-12-1) per acre. In the year 1874 the corresponding figures

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show 2,122$\frac{24}{40}$ acres transferred at a cost of £10,770 16*s.* 4½*d.* (Rs. 1,07,708-3), or an average value per acre of £5 1*s.* 5¾*d.* (Rs. 50-11-10).

JAMBUSAR.

Produce, 1873-74.

Of 89,466 acres, the total area of cultivated land, 3,009 acres, or 3·36 per cent, were in the year 1873-74 fallow or under grass. Of the 86,457 acres under actual cultivation, grain crops occupied 36,041 acres, or 41·68 per cent, of which 11,781 acres were under *juwár* (Sorghum vulgare); 9,209 under *bájri* (Holcus spicatus); 9,269 under wheat, *ghau* (Triticum æstivum); 2,877 under rice, *dángar* (Oryza sativa); and 2,905 under *kodra* (Paspalum scrobiculatum). Pulses occupied 3,870 acres, or 4·47 per cent, of which 2,473 acres were under *tuver* (Cajanus indicus), and 1,397 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); and peas, *watána* (Pisum sativum). Oil seeds occupied 223 acres, or 0·25 per cent, all of which were under caster-oil seeds, *divela* (Ricinus communis), and *tal* (Sesamum indicum). Fibres occupied 40,393 acres, or 46·72 per cent, all of which were under cotton, *kapás* (Gossypium indicum) Miscellaneous crops occupied 5,967 acres, or 6·9 per cent, of which 326 acres were under tobacco, *tambáku* (Nicotiana tabacum); four under sugar-cane, *serdi* (Saccharum officinarum); 552 under indigo, *gali* (Indigofera tinctoria); and 5,085 under miscellaneous vegetables and fruits.

Population, 1872-1875.

The census returns for 1872 show that of a total population of 93,249, 78,957, or 84·67 per cent, were Hindus; 14,202, or 15·23 per cent, Musalmáns; 30 Pársis; and 60 others. The special census returns furnished by the collector show that of a total population of 83,596 souls in 1875, 70,074, or 83 82 per cent, were Hindus; 13,505, or 16·15 per cent, Musalmáns; 8 Pársis; and 9 others. The Hindu population would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 3,329; Brahma-Kshatris, 35; Káyasths, 25; Wániás, 2,558, Shrávaks, 68; Bhátiás and Luwánás, 572; Kanbis, 10,177; Rajputs, 4,793; Káchhiás, 1,571; Mális, 65; Ghánchis (oil-pressers), 151; Chhipás (calenders) and Bhávsárs (calico-printers), 253; Sonis (gold and silversmiths), 480; Suthárs (carpenters), 649; Kansárás (coppersmiths), 21; Luhárs (blacksmiths), 399; Darjis (tailors), 304; Chunárás (bricklayers), 38; Saláts (masons), 13; Kumbhárs (potters), 1,170; Ods (diggers), 203; Hajáms (barbers), 1096; Dhobhis (washermen), 181; Bharwáds and Rabáris (herdsmen and shepherds), 804; Khárwás (seamen), 107; Máchhis (fishermen), 950; Golás (rice-pounders), 305; Bhádbhujás (grain-parchers), 26; Pakhális (water-drawers), 12; Purabiás and Maráthás, 439; Wághris (fowlers and hunters) and Rávaliás (cotton-tape-makers), 2,049; Kolis, 25,186; Bhils and Taláviás, 4,144; Mochis (shoe-makers), 200; Khálpás (tanners), 999; despised low castes, Dhers and Bhangiás, 6,126; and religious beggars, 576. According to the same returns the occupation of the whole population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 1,336 souls. ii. Professional persons, 1139. iii. Persons in service, or performing personal offices, 19,432. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 12,047; (*b*) labourers,

337; and (*c*) herdsmen and shepherds, 100—in all 12,484. v. Persons engaged in commerce and trade, 158. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 8,696. vii Miscellaneous persons not classed otherwise—(*a*) women 8,485, and children 30,412—in all 38,897; and (*b*) miscellaneous persons, 1,454—total 40,351.

Public health.

The total number of deaths in the three years ending with 1874-75 was 6,303, or an average yearly mortality of 2,101, or, assuming the figures of the census of 1872 as a basis, of 2·25 per cent of 93,249, the total population of the sub-division. Of the average number of deaths, 1,757, or 83·62 per cent, were returned as due to fever; 132, or 6·28 per cent, to diarrhœa and dysentery; 9, or 0·42 per cent, to small-pox; 11, or 0·52 per cent, to cholera; and 162, or 7·71 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 30, or 1·42 per cent of the average mortality of the sub-division. During the same period the number of births is returned at 4,111 souls, of whom 2,232 are entered as male and 1,879 as female children; or an average yearly birth-rate of 1,370, or 1·46 per cent of the total population of the sub-division.

A'MOD.

A'mod Sub-division.—The A'mod sub-division is a compact tract twenty-two miles long by thirteen broad. It is bounded on the north by the river Dhádhar, which separates it from Jambusar; on the east by Baroda territory; and on the south by the Broach and the Wágra sub-divisions, the latter separating it towards the west from the Gulf of Cambay, to which the A'mod sub-division originally extended. The total area is 176 square miles, and the population was in 1872 returned at 40,260 souls, or an average density of 228·75 to the square mile The realizable land revenue in 1874-75 amounted to £25,586 (Rs. 2,55,860).

Area.

There are no alienated villages in this sub-division. The total area of 176 square miles consists of 91,479 acres, or 81·06 per cent, of occupied land; 4,085 acres, or 3·61 per cent, of culturable waste; 9,021 acres, or 7·99 per cent, of unculturable waste; and 8,264 acres, or 7·32 per cent, occupied by village sites, roads, tanks, and rivers. From 95,564 acres 18,134 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 77,430 acres, the actual area of culturable state land, 71,845 acres, or 91 49 per cent, were in the year 1873-74 under cultivation.

Aspect.

In the neighbourhood of the Dhádhar river the country is wooded, but towards the salt tracts it becomes gradually barer.

Water-supply.

The only river is the Dhádhar, the northern boundary of the sub-division. The water-supply is deficient, the wells few, and the tanks of but little capacity.

Soil.

The soil consists chiefly of the black cotton soil, richer towards the east; but towards the west, beginning with a poor black, it shades off into a grey soil, so salt as to be unculturable.

Survey details.

This sub-division has not been brought as yet (1875) under the survey revision, and is therefore wanting in assessment and occupancy details.

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The returns for 1874 show a population of 37,107 souls lodged in 11,367 houses, provided with 302 wells and 84 tanks, and owning the following stock: 3,388 ploughs, 2,600 carts, 8,785 oxen, 1,823 cows, 7,954 buffaloes, 610 horses, and 3,429 other animals.

Value of land.

From statistics furnished by the registration department, it would seem that in the year 1867, $24\frac{7}{40}$ acres of land were purchased at a total cost of £174 18*s.* (Rs. 1,749), or £7 4*s.* 8¼*d.* (Rs. 72-5-6) per acre. In the year 1874 the corresponding figures show $1{,}641\frac{29}{40}$ acres transferred at a cost of £6,051 (Rs. 60,510), or an average value per acre of £3 13*s.* 8½*d.* (Rs. 36-13-8).

Produce, 1873-74.

Of 71,845 acres, the total area of cultivated land, 12,722 acres, or 17·7 per cent, were in the year 1873-74 fallow or under grass. Of the 59,123 acres under actual cultivation, grain crops occupied 19,721 acres, or 33·35 per cent, of which 10,306 acres were under *juwár* (Sorghum vulgare); 1,419 under *bájri* (Holcus spicatus); 3,371 under wheat, *ghau* (Triticum æstivum); 4,434 under rice, *dángar* (Oryza sativa); and 191 under *kodra* (Paspalum scrobiculatum). Pulses occupied 9,351 acres, or 15 81 per cent, of which 3,071 acres were under *tuver* (Cajanus indicus), and 6,280 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); and peas, *watána* (Pisum sativum). Oil-seeds occupied 119 acres, or 0·2 per cent, all of which were under castor-oil seeds, *divela* (Ricinus communis), and *tal* (Sesamum indicum). Fibres occupied 29,106 acres, or 49·22 per cent, all of which were under cotton, *kapás* (Gossypium indicum). Miscellaneous crops occupied 826 acres, or 1·39 per cent, of which 133 acres were under tobacco, *tambáku* (Nicotiana tabacum), and 693 under miscellaneous vegetables and fruits.

Population, 1872-1875.

The census returns for 1872 show that of a total population of 40,260, 32,134, or 79·81 per cent, were Hindus; 7,836, or 19·46 per cent, Musalmáns; 4 Pársis, and 286, or 0·7 per cent, others. The special census returns furnished by the collector show that of a total population of 37,385 souls in 1875, 29,478, or 78·84 per cent, were Hindus; 7,903, or 21·13 per cent, Musalmáns; and four Pársis. The Hindu population would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 1,449; Brahma-Kshatris, 156; Káyasths, 11; Parbhu, 1; Wániás, 514; Shrávaks, 977; Bhátiás and Luwánás, 247; Kanbis, 5,926; Rajputs, 2,321; Káchhiás, 907; Mális, 96; Ghánchis (oil-pressers), 197; Chhipás (calenders) and Bhávsárs (calico-printers), 26; Sonis (gold and silversmiths), 312; Suthárs (carpenters), 269; Kansárás (coppersmiths), 92; Luhárs (blacksmiths), 219; Darjis (tailors), 150; Chunárás (bricklayers), 9; Kumbhárs (potters), 503; Ods (diggers), 77; Hajáms (barbers), 548; Dhobhis (washermen), 121; Bharwáds and Rabáris (herdsmen and shepherds), 236; Khárwás (seamen), 21; Golás (rice-pounders), 59; Bhádbhujás (grain-parchers), 13; Purabiás and Maráthás, 55; Wághris (fowlers and hunters) and Rávaliás (cotton-tape-makers), 341; Kolis, 7,483; Bhils and Taláviás, 2,364; Mochis (shoe-makers), 203; Khálpás (tanners), 492; despised low castes, Dhers and Bhangiás, 2,839; and religious beggars, 244. According

to the same returns the occupation of the whole population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 794 souls. ii. Professional persons, 302. iii. Persons in service, or performing personal offices, 261. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 5,721; (*b*) labourers, 4,781; and (*c*) herdsmen and shepherds, 81—in all 10,583. v. Persons engaged in commerce and trade, 497. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise prepared for consumption, 1771. vii. Miscellaneous persons not classed otherwise—(*a*) women 8,633, and children 14,146—in all 22,779; and (*b*) miscellaneous persons, 398—total 23,177.

Public health.

The total number of deaths in the five years ending with 1874-75 was 4,438, or an average yearly mortality of 887, or, assuming the figures of the census of 1872 as a basis, of 2·2 per cent of 40,260, the total population of the sub-division. Of the average number of deaths, 650, or 73·28 per cent, were returned as due to fever; 40, or 4·5 per cent, to diarrhœa and dysentery; 6, or 0·67 per cent, to small-pox; 28, or 3·15 per cent, to cholera; and 157, or 17·7 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 6, or 0·67 per cent, of the average mortality of the sub-division. During the same period the number of births is returned at 3,616 souls, of whom 1,950 are entered as male and 1,696 as female children; or an average yearly birth-rate of 729, or 1·81 per cent of the total population of the sub-division.

WA'GRA.

Wa'gra Sub-division.—The Wágra sub-division of the Broach district is bounded on the north by the A'mod and Jambusar sub-divisions, both in the district of Broach; on the east by A'mod and Broach; on the south by the Broach sub-division and the river Narbada; and on the west by the Gulf of Cambay. The total area is 308 square miles; and the population was in 1872 returned at 38,779 souls, or an average density of 125·9 to the square mile. The realizable land revenue in 1874-75 amounted to £33,570 (Rs. 3,35,700).

Area.

On the total area of 308 square miles, four are occupied by the lands of alienated villages. The remainder, according to the returns of the revenue survey, contains 124,921 acres, or 64·11 per cent, of occupied land; 12,533 acres, or 6·43 per cent, of culturable waste; 50,549 acres, or 25·94 per cent, of unculturable waste; and 6,845, or 3·51 per cent, occupied by village sites, roads, tanks, and rivers. From 137,454 acres, 34,960 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 102,494 acres, the actual area of culturable state land, 90,008 acres, or 87·81 per cent, were in the year 1873-74 under cultivation.

Aspect.

The eastern part of this sub-division resembles Broach, but the west, with the exception of a small fertile tract of light soil, forms an unfruitful salt plain.

Climate.

For the last ten years the average rain-fall has been 26 inches.

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WA'GRA.

With the exception of the Bhukhi creek on the east, and the Narbada skirting its southern boundary, this sub-division is without any large rivers. The water-supply is deficient in quantity, and of inferior quality, a very large proportion of all the wells being brackish.

With the exception of the small tract mentioned above, the soil is almost entirely black, *regar*.

Assessment, 1872.

The following statement shows the area occupied in the state villages and the assessment imposed under rates guaranteed by government in the year 1872-73 :—

Statement showing the Area occupied and the Assessment imposed, 1872-73.

Tenure.	Description of land	Occupied			Unoccupied arable waste			Total		
		Acres	Assessment.	Average rate per acre	Acres	Assessment	Average rate per acre	Acres	Assessment	Average rate per acre
			Rs	Rs a p		Rs	Rs a p		Rs	Rs a p.
Government	Dry-crop	89,565	3,13,134	3 7 11	12,532	26,584	2 9 11	102,097	3,39,718	3 6 6
	Garden	82	492	5 15 8				82	492	5 15 8
	Rice	314	1,950	6 3 3	21/40	3½	6 3 1	315	1,954	6 3 3
	Total	89,961	3,15,576	3 8 2	12,553	26,588	2 9 11	102,494	3,42,164	3 6 8
Alienated	Dry crop	34,910	1,19,078	3 6 7				34,910	1,19,078	3 6 7
	Garden	26	137	5 5 9				26	137	5 5 9
	Rice	24	151	6 3 3				24	151	6 3 3
	Total	34,960	1,19,366	3 6 8				34,960	1,19,366	3 6 8
Total	Dry-crop	124,475	4,32,212	3 7 7	12 532	26,584	2 9 11	137,007	4,58,796	3 6 6
	Garden	108	629	5 13 3				108	629	5 13 3
	Rice	338	2,101	6 3 4	21/40	3½	6 3 1	339	2,105	6 3 4
	Grand Total	124,921	4,34,942	3 7 8	12,533	26,588	2 9 11	137,454	4,61,530	3 6 8

	Rs. a p.	£ s. d.
Total assessment on government and alienated lands	4,61,530 0 0	46,153 0 0
Deduct—Valuations of alienations	1,19,366 5 8	11,936 12 8½
Remains realizable	3,42,163 10 4	34,216 7 3½
Add—Realizable quit-rents, &c	32,554 9 1	3,255 9 1⅛
Add—Sale of grazing farms, beds of rivers, &c	27,161 14 7	2,716 3 9⅝
Total realizable revenue	4,01,880 2 0	40,188 0 3

The current rates of assessment introduced in 1872-73 remain in force until 1901-2.

Resources, 1874.

The returns for 1874 show a population of 32,794 souls lodged in 9,580 houses, provided with 240 wells and 86 tanks, and owning the following stock: 4,213 ploughs, 2,970 carts, 9,985 oxen, 1,797 cows, 8,900 buffaloes, 605 horses, and 5,986 other animals.

Occupancy.

In 1872-73, the year of settlement, 7,033 distinct holdings, *kháta*, were recorded, with an average area of $16\frac{37}{40}$ acres, and a rental of

£4 13*s.* 3½*d.* (Rs. 46-10-4). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of 13$\frac{1}{40}$ acres, at a yearly rent of £3 14*s.* 1$\frac{3}{4}$*d.* (Rs. 37-0-11). If distributed among the whole population of the sub-division, the share per head would amount to 3$\frac{5}{40}$ acres, and the incidence of the land-tax to 17*s.* 2$\frac{3}{4}$*d.* (Rs. 8-9-9).

Value of land.

From statistics furnished by the registration department it would seem that in the year 1867, 573$\frac{28}{40}$ acres of land were purchased at a total cost of £2,088 3*s.* 6*d.* (Rs. 20,881-12), or £3 12*s.* 9½*d.* (Rs. 36-6-4) per acre. In the year 1874 the corresponding figures show 3,105$\frac{1}{40}$ acres transferred at a cost of £2,914 7*s.* 6*d.* (Rs. 29,143-12), or an average value per acre of 18*s.* 9¼*d.* (Rs. 9-6-2).

Produce, 1873-74.

Of 90,008 acres, the total area of cultivated land, 11,315 acres, or 12·6 per cent, were in 1873-74 fallow or under grass. Of the 78,663 acres under actual cultivation, grain crops occupied 39,795 acres, or 50·58 per cent, of which 18,096 acres were under *juvár* (Sorghum vulgare); 2,323 under *bájri* (Holcus spicatus); 19,127 under wheat, *ghau* (Triticum æstivum); 240 under rice, *dángar* (Oryza sativa); and nine under *kodra* (Paspalum scrobiculatum). Pulses occupied 9,693 acres, or 12·32 per cent, of which 1,629 acres were under *tuver* (Cajanus indicus), and 8,064 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); and peas, *watána* (Pisum sativum). Oil-seeds occupied 144 acres, or 0·18 per cent, all of which were under castor-oil seeds, *divela* (Ricinus communis), and *tal* (Sesamum indicum). Fibres occupied 28,593 acres, or 36·34 per cent, all of which were under cotton, *kapás* (Gossypium indicum). Miscellaneous crops occupied 443 acres, or 0·56 per cent, of which 263 acres were under tobacco, *tambáku* (Nicotiana tabacum), and 180 under miscellaneous vegetables and fruits.

Population, 1872-1875.

The census returns for 1872 show that of a total population of 38,779, 33,706, or 86·91 per cent, were Hindus; 5,058, or 13·04 per cent, Musalmáns; 14 Pársis; and one native convert to Christianity. The special census returns furnished by the collector show that of a total population of 34,102 souls in 1875, 29,309, or 85·94 per cent, were Hindus; 4,791, or 14·04 per cent, Musalmáns; and two Pársis. The Hindu population would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 1,043; Brahma-Kshatris, 17; Káyasth, one; Wániás, 386; Shrávaks, 285; Bhátiás and Luwánás, 56; Kanbis, 2,061; Rajputs, 3,910; Káchhiás, 212; Ghánchis (oil-pressers), 145; Chhipás (calenders) and Bhávsárs (calico-printers), 10; Sonis (gold and silversmiths), 112; Suthárs (carpenters), 213; Luhárs (blacksmiths), 176; Darjis (tailors), 201; Kadiás (bricklayers), 13; Saláts (masons,) 7; Kumbhárs (potters), 715; Ods (diggers), 217; Hajáms (barbers), 474; Dhobhis (washermen), 198; Bharwáds and Rabáris (herdsmen and shepherds), 452; Khárwás (seamen), 105; Máchhis (fishermen), 9; Purabias and Maráthás, 5; Wághris (fowlers and hunters) and Rávaliás (cotton-tape-makers), 506; Kolis, 7,619; Bhils and Taláviás, 6,689; Mochis (shoe-makers), 69; Khálpás (tanners), 451; despised low castes, Dhers and Bhan-

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giás, 2,669; and religious beggars, 283. According to the same returns, the occupation of the whole population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 497. ii. Professional persons, 341. iii. Persons in service, or performing personal offices, 259. iv. Persons engaged in agriculture and with animals—(*a*) cultivators, 5,596; and (*b*) labourers, 714—in all 6,310. v. Persons engaged in commerce and trade, 5. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 8,693. vii. Miscellaneous persons not classed otherwise—(*a*) women 6,091, and children 11,347—in all 17,438; and (*b*) miscellaneous persons, 559—total 17,997.

Public health.

The total number of deaths in the five years ending 1874-75 was 4,003, or an average yearly mortality of 800, or, assuming the figures of the census of 1872 as a basis, of 2·06 per cent of the total population. Of the average number of deaths, 627, or 78·7 per cent, were returned as due to fever; 74, or 9·25 per cent, to diarrhœa and dysentery; 8, or one per cent, to small-pox; 16, or two per cent, to cholera; and 36, or 4·5 per cent, to miscellaneous diseases. Deaths from accidents or violence averaged 39, or 4·87 per cent, of the average mortality of the sub-division. During the same period the number of births is returned at 2,883 souls, of whom 1,494 are entered as male and 1,389 as female children, or an average yearly birth-rate of 576 or 1·48 per cent of the total population.

Broach.

Broach Sub-division.—The Broach sub-division, containing the city of Broach, is bounded on the north by the A'mod sub-division; on the north-east and east by the territories of the Baroda state; on the south-east by those of the Rája of Rájpipla; on the south by the Ankleswar sub-division, and on the west by the sub-division of Wágra, both in the district of Broach. The total area is 303 square miles; and the population, exclusive of 36,932 souls in the city of Broach, was in 1872 returned at 73,359 souls, or an average density of 242·10 to the square mile. The realizable land revenue in 1874-75 amounted to £62,443 (Rs. 6,24,430).

Area.

Of the total area of 303 square miles, fourteen are occupied by the lands of alienated villages. The remainder, according to the returns of the revenue survey, contains 125,321 acres, or 67·55 per cent, of occupied land; 10,406 acres, or 5·6 per cent, of culturable waste; 29,593 acres, or 15·95 per cent, of unculturable waste; and 20,182 acres, or 10·87 per cent, occupied by village sites, roads, tanks, and rivers. From 135,727 acres 19,974 acres have to be substracted on account of alienated lands in state villages. Of the balance of 115,753 acres, the actual area of culturable state land, 106,531 acres, or 92·03 per cent, were in the year 1873-74 under cultivation.

Aspect.

Almost the whole of the sub-division is a flat rich plain of black soil stretching towards the north bank of the Narbada. The remainder consists of a few islands in the bed of the river, and a narrow strip of land on the southern bank nearly opposite the city of Broach.

The rivers of the sub-division are the Narbada, forty-three miles of whose course lies within the limits of the sub-division, and the Bhukhi, a tidal creek, and in the rainy months a small tributary of the Narbada that falls into the main stream on its right bank about fifteen miles below the city of Broach. The supply of tank and well-water in the sub-division is defective.

Soil.

The soil is chiefly black, *káli;* and only a few villages near the banks of the Narbada have any considerable quantity of light, *gorát,* soil.

Assessment, 1871.

The following statement shows the area occupied in the state villages and the assessment imposed under rates guaranteed by government in the year 1870-71 :—

Statement showing the Area occupied and the Assessment imposed, 1870-71.

Tenure.	Description of land.	Occupied.			Unoccupied arable waste			Total.		
		Acres.	Assessment.	Average rate per acre.	Acres	Assessment.	Average rate per acre.	Acres.	Assessment.	Average rate per acre
			Rs	Rs a p		Rs	Rs. a. p		Rs	Rs a p.
Government.	Dry crop	96,618	4,78,432	4 15 3	5,113	19,813	3 14 0	101,731	4,98,245	4 14 4
	Garden	8,721	73,616	8 7 1	5,293	17,037	7 8 4	14,014	90,653	8 4 0
	Rice ..	8	85	10 10 7	⅛	1	12 8 0	8	86	10 10 11
	Total ..	105,347	5,52,133	5 3 10	10,406	36,851	4 15 11	115,753	5,88,984	5 3 7
Alienated	Dry-crop	19,413	93,033	4 12 8		...	.....	19,413	93,033	4 12 8
	Garden	561	6,294	11 3 6	.		. .	561	6,294	11 3 6
	Rice						. .			
	Total	19,974	99,327	4 15 7	..		...	19,974	99,327	4 15 7
Total	Dry-crop	116,031	5,71,465	4 14 10	5,113	19,813	3 14 0	121,144	5,91,278	4 14 1
	Garden	9,282	79,910	8 9 9	5,293	17,037	7 8 4	14,575	96,947	8 6 4
	Rice ..	8	85	10 10 7	⅛	1	12 8 0	8	86	10 10 11
	Grand Total	125,321	6,51,460	5 3 2	10,406	36,851	4 15 11	135,727	6,88,311	5 3 0

	Rs. a. p.	£ s. d.
Total assessment on government and alienated lands .	6,88,310 1 0	68,831 0 1½
Deduct—Valuations of alienations	99,326 2 0	9,932 12 3
Remains realizable	5,88,983 15 0	58,898 7 10½
Add—Realizable quit-rents, &c.	24,815 10 5	2,481 11 3⅝
Add—Sale of grazing farms, beds of rivers, &c.	66,313 9 1	6,631 7 1⅛
Total realizable revenue. .	6,80,113 2 6	68,011 6 3¾

The rates of assessment introduced in 1870-71 remain in force until 1899-1900.

Resources, 1874.

The returns for 1874 show a population of 64,606 souls, exclusive of the town of Broach, lodged in 18,290 houses, provided with 597 wells and 161 tanks, and owning the following stock: 5,793 ploughs,

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4,325 carts, 13,561 oxen, 2,823 cows, 12,579 buffaloes, 594 horses, and 9,977 other animals.

Occupancy.

In 1870-71, the year of settlement, 9,017 distinct holdings, *kháta*, were recorded, with an average area of $13\frac{38}{40}$ acres, and a rental of £6 7*s.* $11\frac{8}{9}d.$ (Rs. 63-15-9). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of $3\frac{19}{40}$ acres, at a yearly rent of £1 11*s.* $11\frac{3}{4}d.$ (Rs. 15-15-10). If distributed among the whole population of the sub-division, the share per head would amount to $2\frac{19}{40}$ acres, and the incidence of the land-tax to £1 $8\frac{1}{2}d.$ (Rs. 10-5-8).

Value of land.

From statistics furnished by the registration department, it would seem that in the year 1867, $3,455\frac{37}{40}$ acres of land were purchased at a total cost of £22,553 16*s.* (Rs. 2,25,538), or £6 10*s.* $6\frac{1}{4}d.$ (Rs. 65-4-2) per acre. In the year 1874 the corresponding figures show $7,375\frac{13}{40}$ acres, transferred at a cost of £45,563 6*s.* $1\frac{1}{2}d$ (Rs. 4,55,633-1), or an average value per acre of £6 3*s.* $6\frac{5}{8}d.$ (Rs. 61-12-5.)

Produce, 1873-74.

Of 106,531 acres, the total area of cultivated land, 19,919 acres, or 18·69 per cent, were in the year 1873-74 fallow or under grass. Of the 86,612 acres under actual cultivation, grain crops occupied 35,063 acres, or 40·48 per cent, of which 17,251 acres were under *juwár* (Sorghum vulgare); 1,239 under *bájri* (Holcus spicatus); 5,622 under wheat, *ghau* (Triticum æstivum); 10,467 under rice, *dángar* (Oryza sativa); and 484 under *kodra* (Paspalum scrobiculatum). Pulses occupied 10,731 acres, or 12·38 per cent, of which 6,081 acres were under *tuver* (Cajanus indicus), and 4,650 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus); and peas, *watána* (Pisum sativum). Oil-seeds occupied 237 acres, or 0·27 per cent, all of which were under castor-oil seeds, *divela* (Ricinus communis), and *tal* (Sesamum indicum). Fibres occupied 37,279 acres, or 43 04 per cent, of which 37,251 acres were under cotton, *kapás* (Gossypium indicum), and 28 under hemp, *san* (Crotalaria juncea). Miscellaneous crops occupied 3,320 acres, or 3·83 per cent, of which 1,357 acres were under tobacco, *tambáku* (Nicotiana tabacum); 89 under sugar-cane, *serdi* (Sachharum officinarum); and 1,874 under miscellaneous vegetables and fruits.

Population, 1872-1875.

The census returns for 1872 show that of a total population of 110,291, inclusive of the city of Broach, 77,087, or 69·89 per cent, were Hindus; 30,249, or 27·41 per cent, Musalmáns; 2,169, or 1·96 per cent, Pársis; and 786 others. The special census returns furnished by the collector show that of a total population of 102,374 souls in 1875, 70,614, or 68·97 per cent, were Hindus; 29,754, or 29·06 per cent, Musalmáns; 1,961, or 1·91 per cent, Pársis; and 45 others. The Hindu population would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 5,345; Brahma-Kshatris, 238; Káyasths, 3; Parbhus, 20; Wániás, 3,463; Shrávaks, 1,122; Bhátiás and Luwánás, 249; Kanbis, 8,396; Rajputs, 4,659; Káchhiás, 1,479; Mális, 180; Ghánchis (oil-pressers), 1,717; Chhipás (calenders) and Bhávsárs (calico-printers), 542; Khatris (weavers of silk

and cotton), 925 ; Sonis (gold and silversmiths), 868 ; Suthárs (carpenters), 802 ; Kansárás (copper and brasssmiths), 154 ; Luhárs (blacksmiths), 531 ; Darjis (tailors), 830 ; Kadiás (bricklayers), 13 ; Saláts (Masons), 4 ; Kumbhárs (potters), 1,144 ; Ods (diggers), 155 ; Hajáms (barbers), 1,152 ; Dhobhis (washermen), 433 ; Bharwáds and Rabáris (herdsmen and shepherds), 629 ; Khárwás (seamen), 1,001 ; Máchhis (fishermen), 4,545 ; Golás (rice-ponders), 778 ; Bhádbhujás (grain-parchers), 179 ; Márwáris, 116 ; Purabiás and Maráthás, 436 ; Wághris (fowlers and hunters) and Rávaliás (cotton-tape-makers), 805 ; Kolis, 10,479 ; Bhils and Taláviás, 9,494 ; Mochis (shoe-makers), 392 ; Khálpás (tanners), 803 ; despised low castes, Dhers and Bhangiás, 6,002 ; and religious beggars, 531. According to the same returns, the occupation of the whole population of the sub-division is as follows : i. Persons employed under government, or municipal, or other local authorities, numbering in all 2,540 souls. ii. Professional persons, 1,222. iii. Persons in service, or performing personal offices, 1,133. iv. Persons engaged in agriculture and with animals, 14,070. v. Persons engaged in commerce and trade, 9,857. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 10,821. vii. Miscellenous persons not classed otherwise—*(a)* women 23,305, and children 37,392—in all 60,697 ; and *(b)* miscellaneous persons, 2,034—total 62,731.

Public health.

The total number of deaths in the four years ending 1874-75 was 7,327, or an average yearly mortality of 1,832, or, assuming the figures of the census of 1872 as a basis, of 2·49 per cent of the total population exclusive of the city of Broach. Of the average number of deaths, 1,438, or 78·49 per cent, were returned as due to fever ; 132, or 7·2 per cent, to diarrhœa and dysentery ; 34, or 1·85 per cent, to small-pox ; 53, or 2·59 per cent, to cholera ; and 164, or 8·95 per cent, to miscellaneous diseases. Deaths from accidents or violence averaged 11, or 0·6 per cent of the average mortality of the sub-division. During the same period the number of births is returned at 5,061 souls, of whom 2,724 are entered as male and 2,337 as female children, or an average yearly birth-rate of 1,265 or 1·72 per cent.

ANKLESWAR.

Ankleswar Sub-division.—The Ankleswar sub-division, comprising the subordinate division, *peta máhál* of Hánsot, is bounded on the north and west by the river Narbada and the Gulf of Cambay ; on the south the river Kim separates it from the Olpád sub-division of the Surat district ; and on the east it is bounded by the Rájpipla and Baroda territories. The total area is 293 square miles, and the population was in 1872 returned at 67,743 souls, or an average density of 231·2 to the square mile. The realizable land revenue amounted in 1874-75 to £50,359 (Rs. 5,03,590).

Area

Of the total area of 293 square miles, seven are occupied by the lands of alienated villages ; the remainder, according to the returns of the revenue survey, contains 136,404 acres, or 74·32 per cent, of occupied land ; 8,395 acres, or 4·57 per cent, of culturable waste ; 30,510 acres, or 16·62 per cent, of unculturable waste ; and 8,213 acres, or 4·47 per cent, occupied by village sites, roads, tanks, and

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Climate.

rivers. From 144,799 acres, 35,592 acres have to be subtracted on account of alienated lands in state villages. Of the balance of 109,207 acres, the actual area of culturable state land, 99,956 acres, or 91·52 per cent, were in the year 1873-74 under cultivation.

The climate is in some small degree better than that of Broach. The average rain-fall for the last nine years is nearly 32 inches.

Water-supply.

The tanks are small, and used for drinking purposes.

Soil.

The soil is for the most part black, *regar*; but there is a large tract of light soil, *gorát*, said to be the former bed of the river Narbada.

Assessment, 1872.

The following statement shows the area occupied in the state villages and the assessment imposed under rates guaranteed by government in the year 1871-72 .—

Statement showing the Area occupied and the Assessment imposed, 1871-72.

Tenure	Description of land	Occupied.			Unoccupied arable waste			Total.		
		Acres	Assessment	Average rate per acre	Acres	Assessment.	Average rate per acre.	Acres	Assessment.	Average rate per acre.
			Rs.	Rs a p		Rs	Rs a. p		Rs	Rs a p.
Government	Dry-crop	97,396	3 95,612	4 1 9	8,088	23,554	2 14 7	1,05,424	4,19,196	4 0 4
	Garden	1,295	10,954	8 7 4	152	759	4 13 2	1,447	11,713	8 6 8
	Rice	2,181	18,185	8 5 5	155	767	4 15 2	2,336	18,952	8 1 10
	Total	1,00,812	4,24,781	4 4 2	8,395	25,080	3 0 1	1,09,207	4,49,861	4 2 8
Alienated	Dry-crop	34,733	1,46,538	4 3 6				34,733	1,46,538	4 3 6
	Garden	357	2,980	8 5 6				357	2,980	8 5 6
	Rice	502	4,271	8 8 2				502	4,271	8 8 2
	Total	35,592	1,53,789	4 5 2				35,592	1,53,789	4 5 2
Total	Dry-crop	132,069	542,150	4 2 3	8,088	23,554	2 14 7	140,157	5,65,731	4 1 1
	Garden	1,652	13,934	8 6 11	152	759	4 13 2	1,804	14,693	8 6 5
	Rice ..	2,683	22,456	8 5 11	155	767	4 15 2	2,838	23,223	8 2 11
	Grand Total	1,36,404	5,78,570	4 4 5	8,395	25,080	3 0 1	1,44,799	6,03,650	4 3 4

	Rs.	a.	p.	£	s.	d.
Total assessment on government and alienated lands	6,03,649	4	3	60,364	18	6¾
Deduct—Valuations of alienations	1,53,788	8	3	15,378	17	0⅜
Remains realizable	4,49,860	12	0	44,986	1	6
Add—Realizable quit-rents, &c ...	61,917	5	11	6,191	14	8⅞
Add—Sale of grazing farms, beds of rivers, &c	54,242	6	3	5,424	4	9⅜
Total realizable revenue ...	5,66,020	8	2	56,602	1	0¼

The rates of assessment introduced in 1871-72 remain in force until 1900-1901.

Resources, 1874.

The returns for 1874 show a population of 63,257 souls lodged in 18,355 houses, provided with 721 wells and 314 tanks, and owning the following stock : 7,871 ploughs, 5,150 carts, 18,147 oxen, 6,898 cows, 10,384 buffaloes, 746 horses, and 6,701 other animals.

In 1871-72, the year of settlement, 13,789 distinct holdings, *kháta*, were recorded, with an average area of $9\frac{21}{40}$ acres, and a rental of £4 3*s.* 11*d.* (Rs. 41-15-4). These holdings would represent, if divided in equal parts among the agricultural population, for each person, an allotment of $4\frac{17}{40}$ acres, at a yearly rent of £1 18*s.* $11\frac{1}{4}$*d.* (Rs. 19-7-10); if distributed among the whole population of the subdivision, the share per head would amount to $2\frac{2}{40}$ acres, and the incidence of the land-tax to 18*s.* $\frac{7}{8}$*d.* (Rs. 9-0-5).

Value of land.

From statistics furnished by the registration department it would seem that in the year 1867, $711\frac{38}{40}$ acres of land were purchased at a total cost of £3,449 4*s.* 6*d.* (Rs. 34,492-4), or £4 16*s.* $10\frac{3}{4}$*d.* (Rs. 48-7-2) per acre. In the year 1874 the corresponding figures show $1,842\frac{8}{40}$ acres transferred at a cost of £7,821 7*s.* 9*d.* (Rs. 78,213-14), or an average value per acre of £4 4*s.* 11*d.* (Rs. 42-7-4).

Produce, 1873-74.

Of 99,956 acres, the total area of cultivated land, 16,611 acres, or 16·61 per cent, were in the year 1873-74 fallow or under grass. Of the 83,345 acres under actual cultivation, grain crops occupied 39,440 acres, or 47·32 per cent, of which 21,167 acres were under *juwár* (Sorghum vulgare); 1,897 under *bájri* (Holcus spicatus); 13,448 under wheat, *ghau* (Triticum æstivum); 2,311 under rice, *dángar* (Oryza sativa); and 587 under *kodra* (Paspalum scrobiculatum). Pulses occupied 2,135 acres, or 2·56 per cent, of which 996 acres were under *tuver* (Cajanus indicus), and 1,139 under miscellaneous pulses, comprising *wál* (Dolichos lablab); gram, *chana* (Cicer arietinum); *mag* (Phaseolus radiatus), and peas, *watána* (Pisum sativum). Oil-seeds occupied 213 acres, or 0·25 per cent, all of which were under castor-oil seeds, *divela* (Ricinus communis), and *tal* (Sesamum indicum). Fibres occupied 40,890 acres, or 49·06 per cent, all of which were under cotton, *kapás* (Gossypium indicum). Miscellaneous crops occupied 878 acres, or 1·05 per cent, of which 342 acres were under tobacco, *tambáku*, (Nicotiana tabacum); 34 under sugar-cane, *serdi* (Saccharum officinarum); and 502 under miscellaneous vegetables and fruits.

Population, 1872-1875.

The census returns for 1872 show that of a total population of 67,743, 55,148, or 81·4 per cent, were Hindus; 11,688, or 17·25 per cent, Musalmáns; 899, or 1·32 per cent, Pársis; and eight others. The special census returns furnished by the collector show that of a total population of 66,840 souls in 1875, 54,459, or 81·47 per cent, were Hindus; 11,335, or 16·95 per cent, Musalmáns; 1,043, or 1·56 per cent, Pársis; and three others. The Hindu population would seem to consist of the following castes, which, to a great extent, also serve as a guide to occupation: Bráhmans, 3,252; Brahma-Kshatris, 32; Káyasths, 4; Wániás, 2,130; Shrávaks, 391; Bhátiás and Lu.wánás, 10; Kanbis, 1,320; Rajputs, 2,748; Káchhiás, 1,262; Mál'ls, 56; Ghánchis (oil-pressers), 784; Chhipás (calenders) and Bhávsárs (calico-printers), 41; Khatris (weavers of silk and cotton), 42; Sonis (gold and silversmiths), 468; Suthárs (carpenters), 586; Kansárás (copper and brass smiths), 8; Luhárs (blacksmiths), 270; Darjis (tailors), 480; Saláts (masons), 160; Kumbhárs (potters), 1,079; Ods (diggers), 54; Hajáms (barbers), 540; Dhobhis (washermen), 179;

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Pakhális (water-drawers), 6; Bharwáds and Rabáris (herdsmen and shepherds) and Bhandáris (toddy-drawers), 695; Khárwás (seamen), 536; Máchhis (fishermen), 160; Golás (rice-pounders), 231; Bhádbhujás (grain-parchers), 92; Purabiás and Maráthás, 155; Wághris (fowlers and hunters) and Rávaliás (cotton-tape-makers), 232; Kolis, 13,999; Bhils and Tálaviás, 16,178; Mochis (shoe-makers), 217; Khálpás (tanners), 723; despised low castes, Dhers and Bhangiás, 5,003; and religious beggars, 336. According to the same returns, the occupation of the whole population of the sub-division is as follows: i. Persons employed under government, or municipal, or other local authorities, numbering in all 1,867. ii. Professional persons, 280. iii. Persons in service, or performing personal offices, 1,141. iv. Persons engaged in agriculture and with animals—*(a)* cultivators, 12,716; *(b)* labourers, 10,116; and *(c)* herdsmen and shepherds, 116—in all 22,948. v. Persons engaged in commerce and trade, 280. vi. Persons employed in mechanical arts, manufactures, and engineering operations, and engaged in the sale of articles, manufactured or otherwise, prepared for consumption, 7,331. vii. Miscellaneous persons not classed otherwise—*(a)* women 7,325, and children 24,615—in all 31,940; and *(b)* miscellaneous persons, 1,305—total 32,993.

Public health.

The total number of deaths in the five years ending with 1874-75 was 8,313, or an average yearly mortality of 1,662, or, assuming the figures of the census of 1872 as a basis, of 2·45 per cent of 67,743, the total population of the sub-division. Of the average number of deaths, 1,300, or 78·21 per cent, were returned as due to fever; 46, or 2·76 per cent, to diarrhœa and dysentery; 16, or 0·96 per cent, to small-pox; 34, or 2·04 per cent, to cholera; and 243, or 14·62 per cent, to miscellaneous diseases. Deaths from accidents and violence averaged 23, or 1·38 per cent, of the average mortality of the sub-division. During the same period the number of births is returned at 6,273 souls, of whom 3,384 are entered as male and 2,889 as female children; or an average yearly birth-rate of 1,254, or 1 85 per cent of the total population of the sub-division.

CHAPTER XIV.

PLACES OF INTEREST.

A'mod, north lat. 21° 59′, and east long. 72° 54′. A town, situated about a mile to the south of the Dhádhar river, twenty-one miles north of Broach, and thirty miles south-west of Baroda. In 1874 it contained 1,812 houses and a population of 5,325 souls, as compared with 1,922 houses and 4,944 inhabitants in 1848. A'mod is the residence of a *thákor*, who owns about 21,214 acres of land, and has a yearly income of £8,000 (Rs. 80,000). The town was originally surrounded by a wall, which, as early as 1848, had almost entirely disappeared. At that time there was a small fortress, on the north-east corner, overhanging the tank, and the neighbourhood was said to abound in ruined mosques and tombs. A'mod is a place of but little trade, chiefly in cotton. There are workers in iron, who make good-edged tools, such as knives and razors. Besides the ordinary sub-divisional revenue and police offices, Amod is provided with a post office.

A'MOD.

Ankleswar, north lat. 21° 37′, east long. 73° 2′. A town on the line of the Bombay, Baroda, and Central India railway, about six miles south of Broach. It had in 1874 a population estimated at 8,865 souls. Since the opening of the railway the trade of the town has increased. Connected with Hánsot, twelve miles to the west, and provided with a road running for nine miles eastward towards Nándod in Rájpipla, Ankleswar has of late years become the chief mart of a considerable area of country. By this route timber, firewood, and bamboos for building purposes, wax, honey, hides, drugs, and jungle produce, find their way to the Ankleswar market and railway station, and piece-goods, metals, hardware, salt, and other necessaries of life, reach Nándod. Cotton is the staple article of trade, and during the last thirteen years the town has been supplied with three ginning-factories. There is also a timber trade in rafters and bamboos brought from the Rájpipla forests, and a small manufacture of country-soap, paper,[1] and stone hand-mills. Besides the ordinary sub-divisional revenue and police offices, the town is provided with a subordinate judge's court, a post office, and a dispensary.

ANKLESWAR.

Ba'wa Rustam.—There are two places of Musalmán resort dedicated to the saint Báwa Rustam, one about a mile distant from

BA'WA RUSTAM.

[1] Ankleswar was in 1855 celebrated for its paper manufacture, which gave employment to 400 people.—Dr. Burnts' notes of a visit to Gujarát in Trans. Bom. Geo. Soc., XIII., 77.

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the village of Pariej, in the Broach sub-division, and the other, also called Ganjalsháh, at the town of Jambusar.

BA'WA RUSTAM.

The fair near Pariej lasts three days, and is held annually, on the 22nd day of Jumádi-ul-awal; about three thousand people are estimated to attend. It is not connected with any course of pilgrimages. There are rest-houses here, but capable of holding very few persons.[1] The water-supply is defective. There are no enclosures to the mosque. There are two rooms, one of them being the ante-chamber: it is forty feet by thirty. The other room is thirty feet long, twenty feet wide, and six feet high. The Darga holds $76\frac{36}{40}$ acres of land, assessed at £20 10*s.* 9*d.* (Rs. 205-6). No outbreak of cholera is recorded in connection with this place.

The fair at Jambusar lasts two days, and is held once a year (on the 13th day of Rajab). About three thousand people are estimated to attend. It is not connected with any course of pilgrimages. There are rest-houses, but capable of holding very few persons. The water-supply is defective. The Darga is encompassed by a mud wall, and the only room is thirty feet square. The Darga holds $5\frac{36}{40}$ acres of land, assessed at £1 9*s.* 4*d.* (Rs. 44-10-8), and receives a yearly cash allowance of £3 16*s* 4*d.* (Rs. 38-2-8). No outbreak of cholera is recorded in connection with this fair.

BHA'DBHUT.

Bha'dbhut, a Hindu place of pilgrimage in the Broach sub-division, on the north bank of the Narbada, about eight miles from Broach, is a small village of 249 houses, and a population of 796 inhabitants. This fair is in honour of Mahádev, under the name of Bhádeshwar. It takes place when Bhádarvo (August-September) is the intercalary month—an event that happens once in every nineteen or twenty years. The ceremonies continue throughout the entire intercalary month. On the last occasion, in 1871, the fair began on the 17th August, and went on till the 14th September.[2] Few pilgrims, however, came before the 25th August, the *agiáras* (11th day); during the next five days, or till the full moon, there was a steady increase, the numbers ranging from ten or twelve thousand on the 25th, to fifty or sixty thousand on the 30th. There was then a falling off; but on the last day, *amás*, of the holy month, large numbers again flocked in. An apothecary was placed in medical charge of the fair, and though the weather was hot, the health of the people was good. Only fourteen cases of sickness—twelve of dysentery, and one each of diarrhœa and fever—were recorded. A special police party, consisting of two mounted police, seven head-constables, and twenty-eight constables, was posted at the fair. There was but little crime. The property stolen was estimated at £1 4*s.* (Rs. 12), and of this all but 2*s.* (Re. 1) was recovered. The ceremonies at Bhádbhut are special. They do not form part of a

[1] The details of the accommodation at this and other places of pilgrimage are from a report to the Revenue and Police Commissioner, N. D., No. 1126, dated 24th October 1864.

[2] Report of the Superintendent of Police, 23rd September 1871.

course of pilgrimages, and, after the holy month comes to an end, the visitors return to their homes. During the time of the fair the pilgrims live partly in the houses of the villagers, and partly in tents and temporary sheds. The water is drawn from the Narbada, and the supply is sufficient. There is a temple at Bhádbhut, the ante-chamber of which is eleven and a half feet square; and the inner room, entered through a door five feet high and two and a half feet wide, is eleven feet long by ten and a half broad. The temple receives a yearly grant from the British government of 18*s.* (Rs. 9).

Bha'dbhut.

Broach, north lat. 21° 42′, east long. 73° 2′, with a population of 36,932 souls and a yearly municipal revenue of £7,689 (Rs. 76,890), is the fourth city of Gujarát, and the ninth of the Bombay presidency exclusive of Sind. Covering with its suburb a strip of land about two and a half miles long and three quarters of a mile broad, Broach is, by its own inhabitants, commonly spoken of as *jibh*, or the tongue. From the south bank of the Narbada, its buildings crowning the top and clustered on the southern slope of a high mound, the massive stone wall lining the river bank for about a mile, and the ruined fortifications passing up the sides and encircling the top of the hill, give the town of Broach a marked and picturesque appearance. From the high ground in the fort, on every side stretches a wide open plain. Close at hand, to the south, the Narbada, nearly a mile across, and broadening as it grows more distant, passes westwards to the sea. To the west the groves of the well-wooded suburb of Vejalpor, and northwards a group of two hills, relieve the line of the level plain. To the north-east rows of tamarind trees mark where, a hundred years ago, was the nawáb's garden, 'with summer pavilions, fountains, and canals, and abundance of oriental fruits and flowers.' To the east are the spots that, to a Hindu, give the town a special interest—the site of king Bali's sacrifice, and the temple of Bhragu Rushi, the patron saint of Broach.

Broach.
Description.

The fortifications, ascribed by tradition to Sidh Ráj Jaisinghji of Anhilwára (1094-1143), were stregthened and rebuilt by Bahádur Sháh (1526-1536). In 1660, under the orders of the emperor Aurangzeb, parts of the walls were thrown down; but, twenty-five years later, the same monarch was forced to rebuild them to save the city from Marátha assaults. Of late years, except the river wall, which, built of large blocks of stone, is still in good repair, the fortifictions have been allowed to fall into disrepair, and in some places almost every trace of them has disappeared. Broken bricks and other *débris* would seem to show that, at least in parts, the high ground enclosed by the city walls is of artificial construction. At the same time its position, with reference to the line of small hillocks to the north, favours the opinion that it was the rising ground on the river bank that tempted the early colonists to settle at Broach. In the city the streets are narrow, and some of them steep. The houses are plain, generally two stories high, with walls of brick and tiled roofs. Some large family mansions, said to have been built in 1790, the year of the great famine, ornament the eastern part of the city. Of these, the residence of Lallubhái, the

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Places of Interest.
BROACH.

farmer of the Broach revenue, is, perhaps, the finest, with a front of carved wood, for richness of design, equalled by but few private buildings in Surat or Ahmedábád. In the suburbs the houses are meaner in appearance, many of them not more than one story high, and with walls of wattle and daub. These suburbs extend over an area of more than two and a half square miles, including in all six villages—Vejalpor to the west; Dungri to the north-west; Á'li to the north; Kanbiwaga and Kasak to the north-east; and Mojampor to the east. Near the villages of Vejalpor, the western suburb, where, in Mr. Forbes' time (1780), several of the factors had their country-houses, three or four of the European residents of Broach at present live. Here, too, is the Musalmán Idga, and near the river bank several of the early cotton-factories, built before the opening of the railway. This suburb is connected with the town by a road running eastward, which, passing through the Katappor market-place, enters the city of Broach by a steep, paved ascent. Another road, skirting the north of the suburb, passes on a high level eastwards for about a mile and a half towards the railway station. Beyond Vejalpor this line continues for about half a mile to the west, turning down towards the river, where, at a high point on the northern bank, seats have been placed—a favourite evening resort for the European and richer class of native townsmen, especially Pársis. Eastward from the town a road passes along the bank of the river, through the village of Mojampor, towards Sukaltirth. The eastern suburb has almost entirely a religious character, consisting of the resting-places provided for the devotees who come to visit the different shrines. On the way to this suburb is a handsome reservoir, the Ratan tank, repaired about a century ago during Lallubhái's administration.

History.

The city of Broach was, according to the local legend, originally founded by the sage Bhragu, and so was called Bhragupor, or Bhragu's city. To their patron saint the people of the town owe a lasting debt of gratitude, for, by the exercise of his power, he induced the waters of the Narbada to leave their old bed, about three miles to the south, and come to flow close by the new settlement. In the first century of the Christian era, the sage's settlement had given its name to a large province,[1] and the colony had become one of the chief ports in Western India. Two hundred years later it was the capital of a Rajput king, by religion a Jain; and, in the early part of the seventh century, is said by the Chinese pilgrim, Hiouen Thsang, to have contained ten convents with 300 monks, and ten temples. Half a century later Broach was a town of sufficient importance to attract some of the earliest of the Musalmán expeditions against Western India. Under the Rajput rulers of Anhilwára (746-1300), Broach (Bhragupor) was one of the ports of that kingdom.[2] Early in the eleventh century Broach is mentioned as one of the capitals of Lardesa,[3] and about the middle of the twelfth century (1153) is described as a station for ships coming from China and Sind, a large city, beautiful,

[1] Vincent's Periplus, II., 395.
[2] Reinaud's Fragments, 182, 207, 212.
[3] Al Biruni (1030) in Reinauds' Fragments, 245.

and well built in bricks and plaster; its people rich, trading, and enterprising in speculation and distant expeditions.[1] During the troubles that followed the overthrow of the Anhilwára kings, the city would seem to have changed hands on more than one occasion. But, with the exception of two years (1534-1536), during which it was held by the officers of the emperor Humáyun, Broach remained for about two hundred years (1391-1572) under the Musalmán kings of Ahmedábád. During the sixteenth century the city was twice (1536 and 1546) plundered by the Portuguese, who, in 1546, except for its streets, 'so narrow that two horsemen could not pass through them at the same time, admired the city, with its castle-like Lisbon, its magnificent and lofty houses with their costly lattices; the famous ivory and black-wood workshops; and its townsmen well skilled in mechanics, chiefly weavers, who made the finest cloth in the world.'[2] In 1573 Broach passed into the hands of the emperor Akbar. Ten years later-Muzafar Sháh recovered the city, but held it only for a few months, when it again came into the possession of the emperor of Delhi. In 1614 Broach was for a third time plundered by the Portuguese.[3] In 1616 a British factory and in 1617 a Dutch factory, were established at Broach. In 1660 a portion of the fortifications of the city was razed to the ground by the order of the emperor Aurangzeb. In this defenceless state it was twice, in 1675 and 1686, plundered by the Maráthás. After the second exploit, Aurangzeb ordered the walls to be rebuilt and the city named Sukhábád. In 1736 the Musalmán commandant of the port was, by Nizam-ul-mulk, raised to the rank of 'nawáb.' His family continued to maintain themselves in a position of almost complete independence till, in 1772, the city was captured by the English. The considerable demand for its cloth, and the recently established export trade in raw cotton to China, combined, during the first period of English rule, to make Broach the centre of a large and prosperous trade. Five years after its transfer to Sindia (1788), though 'not so flourishing as it had been under the English,' Broach was still a place of much trade, the streets 'swarming with Arabs, Moghals, and many tribes of Gentoos.' Cloth of various kinds was the great manufacture and export.[4] Though, after its final acquisition by the English (1803), its trade continued gradually to decline, Broach remained for many years a place of consequence. About the year 1820 began a period of depression that lasted for about twenty-five years. At its close Broach was almost without trade, its chief export nearly unsaleable, and both its cultivators and traders, for the most part, sunk in debt. In 1850 the value of its exports began to increase, and, from different causes, continued to rise till, in 1864, comfort, wealth, and extravagance had spread to almost all classes. During the past ten years, though the wealth of its people has greatly declined, Broach is still a place of active trade, distinguished by the number and the success of its cotton-spinning and other steamfactories.

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[1] Jaubert's Edresi (1153), 176.
[2] Decadas de Couto, V., 325.
[3] Farria, in Kerr, VI., 499.
[4] Hové's Tours—Bom. Govt. Sel XVI., 172.

Chapter XIV.

Places of Interest.

BROACH.

Population.

The earliest recorded census was taken in 1777, when the town contained 50,000 inhabitants, of whom 30,000 lived within and 20,000 without the walls.[1] In 1812 the total population had fallen to 32,716, of whom 19,836 were Hindus, 9,888 Musalmáns, and 2,992 Pársis.[2] In 1846 the corresponding returns give a total population of 31,550 souls, of whom 19,374 were Hindus, 9,729 Musalmáns, 1,823 Pársis, and twenty-four Christians. In 1851 there were 31,700 souls, of whom 21,071 were Hindus, 8,772 Musalmáns, 1,835 Pársis, and twenty-two Christians. In 1872 the total population had risen to 36,932 souls, of whom 23,971 were Hindus, 10,733 Musalmáns, 2,173 Pársis, and fifty-five Christians. Of the population, the only classes calling for special notice are, among Hindus, the Bhárgav Bráhmans, who are said to be descendants of the sage Bhragu. Pársis, also, from the number and age of their towers of silence, would seem to have settled at Broach soon after their arrival in Gujarát (11th century). Formerly ship-builders and skilled weavers, they suffered from the decay of both trades, and many have abandoned Broach for Bombay. The Brahma-Kshatris are influential and prosperous. The greater number and most wealthy of the mercantile classes are Shrávaks. The Musalmáns are, for the most part, in a very poor condition.

Houses.

Of a total of 10,443 buildings, the town and suburbs contain seventy-one superior dwellings of three and more than three stories; 661 substantial buildings of two stories; 3,221 fairly substantial buildings of one story; 2,838 fairly substantial buildings with a ground-floor only; and 2,354 common mud buildings and huts. Besides dwelling-houses, there were nineteen factories and 1,278 shops.[3]

Manufactures.

Hand-loom weaving is still, to a small extent, carried on. The workmen are chiefly Musalmáns and Pársis, and the goods manufactured are napkins, and coverlets of cotton and silk. The weaving of silk sashes, indigo-dyeing, and calico-printing, almost exhaust the list of the older industries of the town of Broach. The new occupations developed by the introduction of steam are, however, the chief industrial interest of the town.

Trade.

For the last 100 years Broach trade has been almost entirely local. The traffic by sea has greatly fallen off; the returns for 1874 showing a total value of exports and imports of £227,409 (Rs. 22,74,090), as compared with £497,383 (Rs. 49,73,830), the corresponding yearly average from 1865 to 1870, with £764,156

YEARS	INWARD		OUTWARD		TOTAL	
	Goods	Passengers.	Goods	Passengers	Goods	Passengers.
1868	11,264	93,890	26,356	90,892	37,620	184,782
1869	9,368	114,699	18,031	112,792	27,399	227,491
1870	14,234	122,185	20,470	120,143	34,704	242,328
1871	10,893	118,820	16,533	117,532	27,426	236,352
1872	13,777	107,525	20,588	105,572	34,365	213,097
1873	16,726	116,290	20,317	124,094	37,043	240,384
1874.	20,203	107,743	22,710	108,467	42,913	216,210

[1] Letter from Chief and Factors to Special Commission.
[2] Letter from Judge and Magistrate of Broach, 6th June.—(Judicial Diary 62 of 1812).
[3] Report No. 6, dated 27th March 1875, of the Broach city survey officer.

(Rs. 76,41,560) from 1856 to 1862, and with £449,177 (Rs. 44,91,770) from 1837 to 1847. On the other hand, since the opening of the railway, the land traffic has increased, the returns for the Broach station showing an advance in passenger traffic from 184,782 in 1868 to 216,210 in 1874, while during the same time a rise from 37,620 tons to 42,913 tons in the quantity of goods carried.

Public buildings.

The principal public buildings within the fort are the collector's office; the civil courts; the Dutch factory; the jail; the civil hospital; the English church; the municipal office and Broach library; the English school; the vernacular school; the municipal market, outside of the fort, to the west, near the middle of the Kattapor market-place; the custom-house, not far from the market, on the bank of the river, near the south-western corner of the city; the head-quarter (*sadar*) distillerys on the river bank, in the village of Vejalpor; travellers' rest-house, not now used, within the limits of the A'li suburb; and the railway station and rest-house to the north-east of the town.

Hospitals.

Of medical institutions the chief is the civil hospital, one of the finest buildings in Broach, situated on the high ground towards the western side of the fort. This hospital was completed in the year 1872 at a cost of £6,700 (Rs. 67,000), and is provided with accommodation for thirty-five in-door patients. The total amount expended in erecting this building was made up of a grant of £3,500 (Rs. 35,000) from government; £2,500 (Rs. 25,000) from Mr. Sorábji Jamsedji Jijibhái, a well known Bombay merchant; £400 (Rs. 4,000) from the local fund committee; and £300 (Rs 3,000) from municipal funds. There are four institutions for feeding beggars. Of these, one is supported by a Wánia, one by Khedáwál Bráhmans, one by the trade guild, or *mahájan*, and one by Pársis. The only hospital for animals in the district is the *pánjrápol* at Broach. With the exception of asses, which are rarely sent, all domestic animals, and such as are not of a venomous or cruel nature, when maimed, diseased, or considerably advanced in age, are received in this hospital. Should a mare foal, or a cow or a she-buffalo calf, while she is in the hospital, the young animal is never sold, but, when grown up, it is made to do some light work. The Broach hospital was established in 1790, when Lallubhái, the *majmudár*, farmed the revenues of the district. He made this an excuse for levying a special hospital cess, the receipts of which are said to have been considerably more than the amount actually spent on the charity. At present (1875) the hospital contains 239 animals. Of these, four are horses, twenty-six cows, thirty-four calves, fifty-five bullocks, seven bulls, forty-three buffaloes, one camel, twenty-two goats, and thirty-seven fowls. Besides there is a great store of grain-infesting vermin, *kida*, which a man daily collects from house to house, and brings to the hospital, where they are let loose in a granary, with a small quantity of grain for them to eat and live upon. It is said that, formerly, bugs were allowed to remain in unused cots for about six weeks at a time, the limit, it was supposed, of their power

[1] Bombay Secretariat Records, Diary 45 of 1805.

Chapter XIV. Places of Interest. Broach.

of supporting life without food; and then Kolis or other low-caste men were paid from 6*d.* to 1*s.* (4 as. to 8 as.) to lie on the cots for hours together for the hungry insects to feed upon.[1] Green grass and hay, grain, oats, and millet of the common sort are used in the hospital. The average daily consumption is said to be 1,700 bundles of grass and forty pounds of grain. Animals that can eat neither grass nor grain are fed with a mixture of millet-flour, molasses, and clarified butter, called *kuler*. The yearly cost of this establishment is said to be £530 (Rs. 5,300). These charges are met by receipts from various sources as shown below :—

	Rs.	£.
Cess, at ¾*d.* (½ anna) per cotton bale and other articles of merchandize	3,700	370
Contribution from Bombay hospital for animals	500	50
Admission fees, rents on land, and sale proceeds of milk and other articles	800	80
Total ..	5,000	500

Gifts of grass, cotton-seeds, oil-cake, and grain are also occasionally received, and when the expenditure exceeds the income, the deficit is made up by donations. The institution is generally managed, as an honorary task, by one of the chief merchants of the town. The admission fee, which is, as a rule, compulsory only in the case of quadrupeds brought to the hospital by Hindus, is fixed at 2*s.* 6*d.* (Rs. 1-4) to meet their burial expenses. Birds and fowls are admitted free of charge. Animals are received, however sick they may be. All possible care is taken of them, and proper medicines administered by the hospital attendants until the animal becomes better, or dies.

The lodges, or *wádis*, in which caste dinners are given, the only places of entertainment in Broach, are twelve in number, of which nine belong to Hindus, two to Pársis, and one to Bohorás of the Dávdi class. These lodges can accommodate from 200 to 1,500 guests, and have an an average room for a party of 450 persons. They are chiefly used during the rainy months.

Musalmán mosques.

Within the walls the chief places of interest are the Jama Masjid, a magnificent specimen of an early mosque, composed almost entirely of pillars taken from Hindu temples on the site of one of which it stands. At present the building is falling into decay, and is used chiefly as a rest-house for Muhammadan mendicants.[2] Another Musalmán building of some interest is the Idrus mosque. This building was raised over the tomb of an ancestor of Syed Hussein Idrus, C.S.I., of Surat. Besides the principal tomb, there is, in the south of the enclosure, a small mausoleum, where lie the remains of some of the nawábs of Broach. The tombs are surrounded by lattice-work

[1] This is the same story as Ovington tells (Voyage to Surat). Its truth has been denied (Heber's Travels), but it is generally believed both in Surat and Broach.

[2] After the capture of Broach in 1803 some European troops were quartered in the Jama Masjid. One or two of their names scratched in the marble door-way are still legible.

covered with plates of silver, which would seem to be the origin of the title 'silver,' formerly applied to this mosque.[1] The only other building of antiquarian interest is the Madresa Darga, of which the pillars are Hindu.

Wedderburn's tomb.

About two hundred yards from the bastion, at the north-west corner of the fort, is the tomb of Brigadier David Wedderburn, who was killed at the siege of Broach on November the 14th, 1772. The tomb is of brick, seven feet eleven inches long, three feet three inches broad, and three feet high. A large slab placed over the grave bears the following inscription: "Here lies the body of Brigadier-General David Wedderburn, Commander-in-Chief of the Honourable Company's Forces under the Presidency of Bombay. The following letter from one of the first Generals of the age is a most honourable testimony of his very superior military abilities":—

"*St. James, July 26th*, 1861. This day at noon arrived Major Wedderburn, dispatched by Prince Ferdinand, on Thursday last, the 6th instant, with the following letter from His Most Supreme Highness to His Majesty: 'I have the honour to congratulate your Majesty upon a very signal advantage which your Majesty's Arms have this day gained. It is impossible for me to set down every particular of this glorious day. The bearer of this, an officer of distinguished merit, and who has greatly contributed to the happy success of this day, will give your Majesty an exact account of it. I have the honour to recommend him to your Majesty's Royal favour. (Dated) Upon the field of Kirk Denkun (?), not far from the Hillock, the 16th July 1761, at 11 o'clock in the forenoon.—Ferdinand, Duke of Brunswick and Luxenburg.' As a proof of His Royal Master's entire approbation of his services in Germany, he received a purse of a thousand pounds, was made Major Commandant of a Battalion when little more than of age. He was made Lieutenant-Colonel in 1762, Colonel and Brigadier-General in India in March 1770. Honourable, candid, just, and sincere, his conduct throughout life in his public and private capacity reflects the highest honour on his memory; the very essential advantages which the Company here reaped from the exertion of his talents, since he has had the chief command of the troops, are incontestable proofs of his abilities in his public capacity; in his private character words would poorly describe the excellence of his heart. Replete with virtues, which did honour to humanity, he lived loved, revered, and respected by his friends and acquaintances, and he fell most sincerely and universally regretted and lamented by all degrees of people. He was killed under the walls of Broach, November 14th, 1772, Ætat 32 years and 8 months. With the deepest sorrow for his death, the sincerest veneration, regard, and attachment to his memory, the above is inscribed by his Aide-de-Camp and Secretary.

(Signed) ALEXANDER MACLELLEN.
(Signed) JOHN MACKENZIE."

[1] Forbes' Oriental Memoirs, II., 111.

Chapter XIV.

Places of Interest.

BROACH.

The chief places of interest in the suburbs and country near Broach are outside of the eastern gate on the bank of the river, the temple of Bhragu Rushi, said to be older than the foundation of the town. The old temple of Somnáth, near the Jáhádeshvar gate, is the site[1] of king Bali's ten-horse sacrifice. This is the Hindus' most sacred burning-ground.

Báwa Rahan.

On a rising ground, about a mile to the north of the city, stands the mausoleum of Báwa Rahan or Bába Rahan. This tomb, which is said to have been built about the end of the eleventh century, is now rapidly falling into decay. "This grand mausoleum," writes Mr. Forbes, "is in the Saracenic or Moorish style of architecture, where columns and arches form corridors, and support several large domes, and smaller cupolas, richly ornamented, which cover the marble tombs."[2]

Pir Chatar.

East of Báwa Rahan, and about one and a half miles to the north-east of the city, is another old Musalmán tomb sacred to Pir Chatar. This shrine was formerly famous for a miraculous cistern of water,

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[1] On this spot, it is said, Balirája performed the ceremony of a ten-horse sacrifice, and gained so much merit that the gods feared he would take from them the whole of the universe. To prevent this, the deity appeared in the form of Wáman, a Bráhman dwarf, and asked the king for as much land as he could step across in three and a half paces. The king granted his wish, and the god, with his first pace, included the whole earth; with his second the sky; and with his third the parts under the earth. There remained, therefore, the half pace unprovided for. For this deficiency Balirája offered his head as forfeit. Wáman placed his foot upon Balirája's head, and drove him under the ground. Balirája pleaded his former merit, and prayed the god to grant him some favour. Wáman, accordingly, promised that when Indra's term of rule should come to an end Balirája should succeed him. Wáman further agreed to come and stay with Balirája for four months in each year—the season of the rains—from A'shád Shud 11th to Kártak Shud 10th. During these months, therefore, Hindus perform no marriage or thread ceremonies. The place where Balirája is said to have been forced beneath the ground is not marked by any special temple or shrine. On two days in each month—the Agiáras 11th day, and on the Somwati Amás (when the last day of a month falls on a Monday)—the spot is considered especially sacred.

[2] Forbes' Oriental Memoirs, II., 252. The following is the story of the saint, whose life the building and fair commemorate: "In the year 1078 of the Christian era, and 492 of the Muhammadan Hijra, while the government of the Hindu kings remained undisturbed in this part of Hindustán, a Musalmán saint, called Báwa Rahan, came into the Broach country from Bagdád, accompanied by a number of *fakirs* and *dervises* to convert the Hindus to Islám. But the saint, like many other Muhammadan champions, not trusting to the persuasive powers of eloquence, drew the sword of intolerant zeal to increase the number of true believers, and caused such disturbances in the province that the rája of Broach sent his son Ráikaran to oppose him with a considerable force. Báwa Rahan, not thinking it prudent to contend with so powerful an antagonist, entered into a treaty with the young prince, and in a few days converted him to the tenets of the Korán, and gave him the name of Malek Muhammad. By their united endeavours the princess Bhaga, the rája's daughter, embraced the new religion, and many other Hindus, following the example of the royal converts, left the shrine of Brahma, and became disciples of Báwa Rahan. But as the most pure and peaceable of all religions has been too often perverted to the most cruel purposes, when ambition, interest, or misguided zeal have spread their pernicious effects, so it was with these Muhammadans; for the prince of Broach, forgetting every moral and filial duty, took up arms against his father, and was killed in an engagement on the site of the present tomb, where the bodies of himself, his sister, and a number of converts, who fell in the action, were interred. Soon after this catastrophe Báwa Rahan made his peace with the king, and, on his death, was buried on the sacred mount."

which, though of no great size, only five feet long by two feet wide, remained always full to the brim, however much water was taken from it. Several elephants, it is said, were once brought to drain the cistern dry, but to no purpose.

Tombs.

In the western suburb, near the village of Vejalpor, are two tombs. One of them is the tomb of Captain William Sempie, who was killed at the seige of Broach in 1803. The tomb is of brick, strongly built. In length it is six feet seven inches, in breadth seven feet two inches, and in height three feet eight inches The inscription is as follows :—

Beneath this stone
are deposited the remains of
Captain William Sempie,
of Her Majesty's 86th Regiment,
who was killed by a
cannon shot
at the siege of
Broach
on the 25th of August
1803.
Universally and most sincerely
regretted by his
brother officers.

The other tomb is in a Bohora's garden, behind the Idga. It is erected to a Portuguese officer, who would also seem to have taken a part in the siege of Broach in 1803. Over the grave is a small marble slab with the following inscription :—

Monsieur Francois Montreaux,
Capitáo e Comandante de hum
Partido de Pessua Empunem,
Filho de Agostin.
Ho Bossui Montriaux Mahor fui sipul-
tado Emos 14 de Octobre 1803.[1]

About a mile west of the village of Vejalpor are a few rather large and massive tombs, raised to members of the Dutch factory. These monuments bear dates ranging from 1654 to 1770.

Towers of silence.

Beyond the Dutch tombs are the Pársi towers of silence. Of these there are five,—four old and disused, and the fifth lately built by a rich Pársi merchant of Bombay.

City survey.

A survey of the city of Broach was in 1866 undertaken with the view of determining what lands belonged to private individuals and what were the property of the state. The following statement shows in detail the distribution of the lands contained within the municipal limits :—

[1] Translation.—Mr. Francis Montreaux, Captain and Commander of the battalion of the Peshwa in Poona, son of Agostin Bossui Montriaux, Major, was buried here, 14th October 1803.

Statement showing the distribution of the Surveyed Lands.

Total area surveyed	Private Land.		Government Land.		
	Building sites, &c.	Lands paying summary settlement	Official sites, i.e., Government and Railway buildings.	Occupied or assigned land.	Vacant, for sale or lease.
Sq yds.	Sq. yds.	Sq. yds.	Sq. yds	Sq. yds.	Sq. yds.
5,218,367	1,163,045	1,096,970	126,963	2,632,987	198,402

This survey, begun on the 1st February 1866, was completed, on the 15th October 1874, at a total cost of £10,784 (Rs. 1,07,840), of which £5,711 8*s*. (Rs. 57,114) were paid by the state and £5,072 12*s*. (Rs. 50,726) by the Broach municipality. The profits from the levy of title-deed fees and the value of the state land reclaimed from private possession up to 15th February 1875 amounted altogether to £15,383 4*s* (Rs. 1,53,832), showing a balance in favour of the survey operations of £4,599 4*s*. (Rs. 45,992).

Broach.

Municipality.

In the year 1852 a municipality was established at Broach, including the suburbs, as well as the portions of the city lying within the line of the walls. The total income of the municipality amounted in 1875 to £7,689 4*s* (Rs 76,892), and the expenditure during the same year to £5,320 6*s* (Rs. 53,203), The incidence of taxation was 4*s*. 1¾*d*. (Rs. 2-1-2) per head of the population. The chief works carried out by the municipal authorities have been the high level road running from the railway station at the north-east of the town, westwards, to the river bank, about half a mile beyond the village of Vejalpor, a distance of about two miles. This road, which was constructed at a cost of £8,300 (Rs. 83,000), was completed in the year 1869, and has proved of much service to the cotton trade. The other large works on which municipal funds have been spent, are the Katappor slope, the main entrance to the fort on the north side, and the Katappor road between the village of Vejalpor and the fort. A municipal market, containing 288 stalls, has also been established in Katappor. The chief streets are watered and lighted with kerosine lamps, and six fire-engines are distributed over five stations. For sanitary purposes twelve public latrines have been established. The drinking-water of the inhabitants of the intra-mural parts of the town is almost all taken from the Narbada. There are but few wells in this part of the city, and few house cisterns for the storage of rain water.

Dehegá'm.

Dehega'm, on the left bank of the Mahi, about a mile from the mouth of the river, contains 691 houses and a population of 2,331 souls. Dehegám is mentioned in the Ain-i-Akbari as one of the ports of Broach. The average annual value of trade of the port of Dehegám for five years ending 1871-72 is returned at £5,135 (Rs. 51,350) of export and £8,972 (Rs. 89,720) of import.

Dehej.

Dehej, on the right bank of the Narbada, about three miles from the river and twenty-six miles west of Broach, contains 618 houses and a population of 2,092 souls. Dehej was the chief town of a small revenue division of twelve villages that came under British

rule in 1780. It was restored to the Maráthás in 1783, and in 1817, under the terms of the treaty of Poona, was again recovered by the English. The port of Dehej, opening from the Gulf of Cambay on the west of the town, though convenient of approach, does not admit boats of more than 53½ tons (150 *khándis)* burden. Dehej is mentioned in the Ain-i-Akbari as one of the ports of the Broach district, but for many years its trade has become very small. In 1804 the port was closed, and opened again in 1819. The average annual value of trade at the port of Dehej for five years ending 1871-72 is returned at £6,774 (Rs. 67,740) of export and £53 (Rs. 530) of import.

DEHEJ.

Devjagan, a place of Hindu pilgrimage in the Jambusar subdivision, about three-fourths of a mile distant from the village of Nára, at the mouth of the Dhádhar river. This village contains 300 houses and 1,200 inhabitants. There are no special municipal arrangements in connection with the fair. The fair lasts one day, and is held twice a year, in November (Kártak Shud 15) and April (Chaitra Shud 15). About 2,000 people are estimated to attend on each occasion. It is not connected with any course of pilgrimages. There are rest-houses for a few of the visitors only, and, being near the sea, the supply of drinking water at Devjagan is defective. What there is, is drawn from wells situated in the villages near the place of pilgrimage. At Devjagan the temple is enclosed by a wall measuring eighty feet from north to south, and 100 feet from east to west. It consists of one room, about twenty-five feet by eighteen. The temple holds land free of rent 1,561¾ acres in area, and assessed at £34 7*s.* (Rs. 343-8). The fairs at Devjagan have, as far as is known, been free from any outbreak of cholera.

DEVJAGAN.

Gajera, on the north-eastern frontier of the Broach district, about six miles north-east of Jambusar, contains (1874) 1,349 houses with a population of 4,037 souls. In 1788 Gajera, then protected by a wall, was described as 'the first town in these districts for elegant houses and magnificent buildings.'[1] In 1849 the place contained 1,175 houses, of which 329 were deserted, and a population of 3,654 souls. At that time the walls had already been allowed to fall into decay, though the memory of attacks of freebooters was still fresh in the people's minds.[2]

GAJERA.

Gandha'r, on the left bank of the Dhádhar river, about four miles and a half from the Gulf of Cambay, though now a village of only 240 houses, with a population of 810 souls, is said at one time to have been a maritime city of some consequence. This is perhaps the Kandhár on the Gulf of Cambay, said to have been attacked by the Musalmáns in one of their early expeditions against Western India, when the temple '*bodd*' was destroyed, and a mosque built in its place.[3] At the close of the sixteenth century Gandhár (Kandhár) is mentioned as one

GANDHA'R.

[1] Hové's Tours, 91.

[2] Mr. Richardson's report, dated February 2, 1848.

[3] Reinaud's Fragments, 212.

Chapter XIV.
Places of Interest.

GANDHA'R.

of the ports connected with the emporium of Broach.[1] About the same time (1546) the city was taken without any resistance; and destroyed by the Portuguese in one of their pillaging expeditions along the shores of the Gulf of Cambay.[2] After the destruction of the town by the Portuguese, the people of Gandhár are said to have gone and settled at Jambusar. According to a local legend the rája of Gandhár, by his devotion to the worship of the sea, gained a promise that, if he ever stood in need of help, the sea-god would come to his assistance. After some time the king, wishing to test whether the god would keep to his promise, called upon him to come. The god appeared, but, enraged with the king's want of faith, sent a mighty flood, which overflowed the whole city. Towards the end of the eighteenth century the place was plundered and burnt by pirates from near Cambay, and in 1790 the lands were overflowed by a very high tide. Owing to the failure of the rains in the next season, the salt was not washed out, and, sinking into the land, did it lasting harm. When surveyed in 1820 the village lands were said to have been uncultivated for fifty years.[3] At the town itself elevated mounds of brick and stone, as well as innumerable foundations excavated for building material, or in the hope of finding treasure, were found scattered over a space three miles in circumference. Remains of former prosperity were also noticed in noble tanks at the neighbouring village of Keswán, as well as of a stone bridge and rich tombs of Chanchwál. At Gandhár and in its neighbourhood salt was formerly manufactured, but the salt-pans have been closed since 1868. As far back as 1820 trade had almost entirely deserted the port of Gandhár. During the eleven years before the territory came into the possession of the British, only six vessels had, on an average, in each year visited the port. The average yearly amount of customs for the same period was £65 18*s*. (Rs. 659).

GANGWA.

Gangwa is a place of Hindu pilgrimage in the Jambusar subdivision, about one and a half miles distant from the village of Dehegám There are no special municipal arrangements in connection with this fair. The idols have no specified names. As the sea in this place is held sacred, pilgrims do not bathe in it, but make use of the water of wells. The fair, like that at Devjagan, lasts one day, and is held twice a year, in November (Kártak Shud 15) and April (Chaitra Shud 15). About 2,000 people are estimated to attend on each occasion. It is not connected with any course of pilgrimages. There are rest-houses for only a few of the visitors; but the water-supply from wells is said to be sufficient. At Gangwa the temple is enclosed by a wall measuring 200 feet from north to south, and 150 from east to west. The building consists of one room, twenty feet by fifteen. The temple of Gangwa holds land free of rent

[1] Gladwin's Ain-i-Akbari, II, 66 (1596).

[2] 'Many rich clothes were captured, as in Gandhár the most beautiful cloth of Cambay is made.'—Decadas De Couto, V., 295.

[3] Colonel Williams's Memoir, II.—Also Remark Book of Survey Officers, 1818 to 1820, Broach record-room.

196$\frac{28}{40}$ acres in area, and assessed at £32 6*d.* (Rs. 320-4). No outbreak of cholera is recorded here.

HA'NSOT.

Ha'nsot, north lat. 21° 32′, east long. 72° 50′. About four miles from the left bank of the Narbada, and about fifteen miles south-west of Broach, contains (1874) 1,322 houses and a population of 4,102 souls. Hánsot, which was formerly the chief town of the sub-division of that name, was first brought under British rule in 1775, was given back to the Peshwa in 1783, and was again restored to the British in 1803 under the terms of the treaty of Bassein. The seat of an independent revenue officer till 1869, Hánsot was in that year, for fiscal purposes, made a part of the Ankleswar sub-division. In the end of the sixteenth century there was a park near Hánsot, abounding with deer and other game, eight kos (twelve miles) long and four kos (six miles) broad, perfectly level, and covered with verdure.[1] As the chief town of the subordinate division Hánsot contains the office of a máhálkari, a post office, and a dispensary.

JAMBUSAR.

Jambusar, in north lat. 22° 6′ and east long. 73° 3′, covering an area of about two miles, contained in 1872 a population of 14,924 inhabitants. The town is situated about five miles north of the Dhádhar river on a slight elevation. The soil in the neighbourhood is of the light, *gorát*, variety, and the town is surrounded by groves of rich and well-grown trees. To the north of the town is a lake of considerable size sacred to Nágeshwar, or the snake-god, with richly-wooded banks, and in the centre of the water a small island about forty feet in diameter overgrown with mango and other trees. Formerly the town was protected by a wall built partly of brick and partly of mud. But as early as 1849 the wall was in ruins, and now the traces of it have almost entirely disappeared. In the town is a strong *thána*, or native-built fort, erected by Mr. Callender when Jambusar was held by the British from 1772 to 1783. This fort furnishes accommodation for the treasury, the civil courts, and other government offices. The houses, of which there are 4,275 in all—including 2,690 of the first, 1,360 of the second, and 225 of the third class—are well built, and some of them are large and lofty.

Jambusar, which is said to have been a place of trade from very early times, was, together with the lands of the sub-division of the same name, first handed over to the British in 1775 by Raghunáthráv. Afterwards when, under the terms of the treaty of Purandhar, the alliance between Raghunáthráv and the British came to an end, Jambusar was continued to the British by the government at Poona as security for the payment by the Peshwa of a sum of twelve lakhs (£120,000). As this money was not paid, Jambusar remained in the possession of the British till, in 1783, it was restored to the Peshwa. The town remained under Marátha rule till, in 1817, under the terms of the treaty of Poona, it was finally handed over to the British.

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[1] Gladwin's Ain-i-Akbari, II., 66.

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JAMBUSAR.

Since it first came under British rule, the importance of Jambusar as a centre of trade would seem, on the whole, to have fallen off. In 1777 Mr. Callender, at that time collector of Jambusar, estimated its population at from twenty to twenty-five thousand souls, but this was only a rough calculation, as no special enumeration had then been made. In 1788 Dr. Hové described the streets as containing 'elegant houses, some no less than three stories high, and very neat in regard to cleanliness.' Indigo was then one of the chief articles of trade.[1] In 1817 the survey officers found that the town contained 3,658 houses and a population of 10,474 souls. Of the population three-fourths were said to be Hindus and the remainder Musalmáns. Of the Hindus, Bráhmans numbered 1,278; Kanbis and Káchhiás (market-gardeners), 1,826; and Wániás, 'the most numerous, wealthy, and apparently flourishing' class of the inhabitants, 2,569. The Wánias were at that time the conductors of, and agents for, the extensive trade carried on with the interior parts of the country through the port of Tankári. The town was then (1817) said to be compact and well built, the population apparently wanting for space. In 1849 the population was returned at 12,051 souls, and the town was said to contain 3,460 houses, 2,365 of the better and 1,095 of the inferior sort. Though the population would seem since 1817 to have increased, a considerable number of the houses were said to be deserted.[2] The census returns of 1872 showed a total population of 14,924 souls, of whom 12,052, or 80·74 per cent, were Hindus; 2,841, or 19·03 per cent, Musalmáns; and thirty-one belonged to other classes, of whom four were Christians.

In former times when Tankári, ten miles south-west of Jambusar, was a port of but little less consequence than Broach, Jambusar was a town of considerable trade. Of late years, since the opening of the railway (1861), the traffic by sea at Tankári has much fallen off, the returns showing an estimated value of the goods exported and imported in 1874 of £163,888 (Rs. 16,38,880) as compared with £700,914 (Rs. 70,09,140), the corresponding average yearly estimate between 1837 and 1847. On the other hand, Jambusar is only eighteen miles distant from the Pálej station on the Bombay, Baroda, and Central India railway, and as roads have recently been made connecting Jambusar both with Pálej and Broach (twenty-seven miles), a traffic by land has to some extent taken the place of the old sea trade. The chief industries of the town are connected with the export of raw cotton. The exports in a half-pressed state, during the past five years, have on an average amounted to 14,963 bales (2,672 tons).[3] In preparing this cotton three ginning-factories were employed in 1874. Besides the trade in cotton, tanning and the manufacture of leather and calico-printing are carried on to a small extent, and there are also manufactures of ivory, armlets, and toys.

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[1] Hové's Tours, 91.

[2] Mr. Davies' Statistical Account, 1849.

[3] This includes the quantity of cotton from places other than Jambusar booked from the same station (Pálej).

The tank and the fort are the chief places of interest at Jambusar. About a mile north of the town is a large religious building called the *A'chárjí's bethak*, the residence of the preceptor of the walabháchári sect. The government buildings in Jambusar are the offices of the mámlatdár and the chief constable, the subordinate judge's court, the municipal and post offices, and a dispensary. Of charitable institutions, besides the dispensary, is one almshouse, *sadáwarat*, where beggars are daily fed, and three rest-houses, *dharamsháláś*. The chief traders of the town are associated together in a *máhájan*, with the view of settling questions of trade and carrying out certain charitable objects. JAMBUSAR.

A municipality was established at Jambusar in 1856. The income derived from octroi dues, a toll and wheel-tax, and other miscellaneous items, amounted in 1874 to £767 14*s.* (Rs. 7,677). The incidence of taxation was 1*s.* ½*d.* (Rs. 0-8-2) per head of the population. The chief improvements the municipality have carried out are the building of a retaining wall at the Jogeshwar Owára, and paving the Kansára and the Bharuchi slopes. The chief streets are watered and lighted with lamps. The water-supply is chiefly from the tank.

Ka'nwa, is a place of Hindu pilgrimage in the Jambusar sub-division, at a village of the same name, containing 2,634 inhabitants. There are no special municipal arrangements in connection with the fair. The objects of worship at Kánwa are the wooden shoes, *páduka*, of a saint by name Kalándásji. The fair lasts three days, and is held once a year, in October (A'so Shud 15). About 3,000 people are estimated to attend on the occasion. It is not connected with any course of pilgrimages. There are rest-houses for a very few of the visitors only; the supply of water from wells situated in the neighbouring villages is said to be sufficient. The water of a well at Kánwa is held to act as a cure in cases of snake-bite and hydrophobia. At Kánwa the temple is enclosed by a wall measuring 223 feet from north to south and 234 from east to west. The building consists of one room sixteen feet by fifteen, with a door six feet by three. This temple holds no land, nor does it receive any cash allowance. No outbreak of cholera is recorded in connection with the Kánwa fair. KA'NWA.

Karod, is a place of Hindu pilgrimage in the Broach sub-division on the right bank of the Narbada, about half way between the town of Broach and Sukaltirth. The site of the fair is a very small hamlet, with only fifteen houses and a population of forty-four souls. The ceremonies, which occur once in every twenty years when Waisháklı (April-May) happens to be the intercalary month, are in honour of Mahádev, under the name of Koteshwar or Kotilingeshwar, and last for a whole month. Mr. Williams, in his Memoir on Broach, mentions that one of the periodical gatherings took place[1] in 1812. In KAROD.

[1] From a correspondence between the Collector and the Bombay Government, in connection with the fair of 1812, it would seem that at that time, both at Sukaltirth and at Karod a tax was levied on shops.—Dairies of 1812, Vol. 78, 614).

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KAROD.

that year the total number of visitors was estimated at 200,000, and the greatest order and good conduct is said to have been maintained by the crowd. In 1869, the last occasion of the fair, people began to collect on the 13th April, and all was not over till the 11th May; the greatest attendance at any one time was estimated at 100,000, and the total throughout the whole month at 500,000. Along the bank of the river the shops and temporary resting-sheds were arranged in three rows, about 150 yards apart, and nearly a mile in length. A temporary hospital was erected, and the services of a second class hospital assistant and a medical pupil were engaged. These precautions were not unnecessary. Cholera broke out on the 25th April, and thirty-four cases occurred, of which nineteen proved fatal. Besides this, in the villages near the site of the fair, there were ninety-four seizures and thirty-three deaths.[1] As at Bhádbhut the ceremonies at Karod are special, and the visitors, when they have finished them, return to their homes. During the time of the fair the pilgrims live in sheds and temporary huts. The Narbada flows close by the site of the fair. But as the gathering takes place in the hot weather, and below the limit of the tide, fresh water is hard to find. During the last fair the people were forced to dig pits near the bank of the river, and much inconvenience is said to have been felt. There is a temple at Karod consisting of one chamber about eleven feet square, and entered by a door five feet two inches high, and three feet three inches wide. The Karod temple holds about half an acre of land, assessed at 7*s.* (Rs. 3-8), and receives from the state a yearly cash allowance of 7*s.* 6*d.* (Rs. 3-12).

KA'VI.

Ka'vi, a place of Jain, *Shrávak*, pilgrimage in the Jambusar sub-division, on the left bank of the Mahi river, was formerly a town of some importance. It is now a village with 1,500 houses and a population of 4,500 souls. In addition to the remains of old buildings there are two temples of comparatively recent date. They are said to have been erected by merchants of Cambay in honour of two marriages; one of them is called, after the mother-in-law, *sásu*, and the other, after the daughter-in-law, *vahu*. The inner chamber of the mother-in-law's temple is twelve feet square and twenty-five feet high. It is entered by a door seven feet high and four feet wide. The daughter-in-law's temple has a chamber fourteen feet by twelve and forty feet high. It has a door about six feet high and three and a half feet wide. Both of these buildings are surrounded by walls. There is no special day for visiting Kávi. Jain pilgrims, sometimes singly, sometimes in bands of from fifty to 200, pass through Kávi generally on their way to Pálitána, Girnár, and Gogo. The Kávi temples receive no grant from government. They are managed by the Jain community. The revenues are kept by a banker in Jambusar, who meets any charge that may be required for repairs. The story about the origin of the two temples at Kávi, is, that the mother-in-law of a rich Cambay merchant built the first temple. When finished, she went with her daughter to see it. But

[1] Collector's report No. 822 of 1869.

the daughter was tall, and as she entered struck her head against the gate. She reproached her mother with the meanness of the entrance, who, in reply, advised her to build something better. On her return to Cambay the daughter went to her father and asked him to let her have money to build a temple. He agreed, promising to give her the profits of the cargoes of seven ships. The profits turned out to be £110,000 (Rs. 11,00,000), and with this sum the second temple was built.

PIR PA'RDI.

Pir Pa'rdi, in the Ankleswar sub-division, is a place of Musalmán pilgrimage; a yearly fair is held here in honour of the saint, whose tomb is no less than fifteen yards long. Pilgrims are said occasionally to go there, taking with them a sheet of this length. If the cloth exactly covers the tomb, they leave satisfied that their wish will be accomplished.

SUKALTIRTH.

Sukaltirth.—Perhaps the most important of the fairs in the Broach district is that held at Sukaltirth,—a village with 616 houses and a population of 2,447 souls,—in the Broach sub-division, situated, on the northern bank of the Narbada, ten miles above the town of Broach. This fair is held every year, about November, on the occasion of the full moon of the month Kártak. It lasts for five days, and, on an average 25,000 people are estimated to attend. At Sukaltirth, within a short distance of each other, are three sacred waters, *tirth*,—the Kávitirth, the Hunkáreshwartirth, and the Sukaltirth. Ofthese three places, only at the Hunkáreshwara water is there a god to be visited. The temple itself is without an enclosure, and has nothing special or remarkable in its appearance. The worshipper enters an ante-room about twenty-three feet long and seven wide, passes through an inner room about eleven and a half feet square, and is then, through a door-way about five and a half feet high and three and a half feet wide, admitted into the inner temple, a chamber ten and a half feet long and seven wide. The image of the god is of white stone, about five feet high, in a standing position, and with four arms. In each hand there is one of the four emblems of Vishnu—the war shell, *shankh*; the disc, *chakra*; the mace *gada*; and the lotus, *padma*. On either side of the chief statue are small images of Brahma and Mahádev, the whole representing the trinity, *triguńátma*, of Brahma, Vishnu, and Maheshwar. The name of Hunkáreshwar is said to have been given to the god, because, with a cry of '*hun*,' the image came up from the water of the Narbada. The affairs of the temple are managed by Bráhman priests or ministers. These men are appointed by the committee, *panch*, of the Sukaltirth village. The revenue of the temple is derived from two sources—state grants and the gifts of pilgrims. Under the first head, the managers of the temple hold from the British government seven and a half acres of land, assessed at £2 16*s.* 2*d.* (Rs. 28-1-4) a year. They also receive a yearly cash allowance of £1 9*s.* 1½*d.* (Rs. 14-9) from the British government and of £2 10*s.* (Rs. 25) from the Baroda state. Besides these grants the temple is enriched by gifts from pilgrims. But as the value of the gift depends on the feeling of the worshipper, it is impossible to estimate the income derived from this source. All presents placed by the worshipper at or near the image are considered

Chapter XIV. Places of Interest. SUKALTIRTH.

the property of the god, and expenses connected with the management of the temple have to be met from these offerings. The surplus is kept by the ministers for their own use. These men also increase their incomes by providing accommodation and food for the pilgrims, for which they receive special payments. During the time of the fair some of the pilgrims live in the houses of the villagers, and others in tents and temporary sheds in the dry bed of the river. There is a plentiful supply of water from the Narbada. No outbreak of cholera is known to have taken place at Sukaltirth during the celebration of the fair. The fair of 1874 began on the 21st, and ended on 24th November; about 25,000 people attended. As a rule, the high-caste and well-to-do Hindu visitors live in Bráhmans' houses in the village; their hosts generally supply them with beds and cooking-pots, receiving presents in return. The poorer pilgrims encamp in the sandy bed of the Narbada, some under temporary sheds, and others on the open ground. Besides Hindus, Pársis and Musalmáns also attend the fair, not from any religious feeling, but simply for pleasure and amusement, or curiosity. During the fair 475 shops were opened, of which thirty-nine were for the sale of copper vessels. The ground rent realized from the owners of these shops, at the rate of from 6*d.* to 2*s.* (annas four to one rupee) per shop, amounted to £21 18*s.* (Rs. 219).[1]

The following is the account of the discovery of Sukaltirth. In former times, says the legend, men were aware that somewhere on earth was a spot holy enough to purify from all sin. But where this place was to be found, none, even the wisest, could tell. It happened that a certain king of Ujain, Chánakya by name, grew old, and, thinking over the evil of his life, longed to find out this Sukaltirth, or purifying spot. To draw out their secret from the gods, the king told the crows, whose feathers were at that time white, and who alone of birds had leave to enter the realms of the gods, to fly to Yam, the ruler of the infernal regions, and to tell him that king Chánakya was dead. The crows were then to listen to the plans of the god Yam for the treatment of the king's soul, and were to try and learn, from what was said, where the wished-for Sukaltirth was to be found From what the birds heard they were able, on their return, to tell the king to start down the stream of the Narbada in a black-sailed boat, and that when the blackness left his sail and it became white, he might know that he had reached the Sukaltirth. The king obeyed the words of the crows. After passing down with the stream for several days, looking in vain for a change in the colour of his sail, on a sudden it flashed white in his eyes, and he knew that his journey was over. Leaving his boat, he went on shore, bathed, and was purified. Yam, however, hearing of the deception practised upon him, was angry, and forbidding the crows to appear again in the realms of the gods, the guilt of king Chánakya, cleaving to the deceitful birds, tarnished their plumage with stains, from which, till this day, they have failed to free themselves. There is more than one instance in ancient history of men in high position

[1] Report of Mr. Chunilál V., district deputy collector, No. 3 of 1875.

coming to Sukaltirth to be made pure from sin. Perhaps the best-known example is that of Chandragupta and his minister Chánakya, coming to be cleansed from the guilt of the murder of Chandragupta's eight brothers.[1] So, also, in the beginning of the eleventh century, Chámund, king of Anhilwára, heart-broken at the loss of his eldest son, came as a penitent to Sukaltirth, and remained there till he died.[2] The ceremony of launching on the Narbada a boat with black sails to become white, in token that the sins of the penitent are taken from him, is, as noticed by Mr. Forbes,[3] still practised at Sukaltirth. But now the pilgrims, not being kings, use, instead of a boat, a common earthen jar. This they set afloat, having set inside of it a lighted lamp, and, as it drifts down the stream, it carries away with it their sins.

TANKA'RI.

Tanka'ri, the second port in the district of Broach, is situated on the east side of a small creek, which, for about five miles strikes northward from the right bank of the Dhádhar about seven miles from the mouth of that river. Though difficult of approach, the creek on which it stands being, even for the smaller country craft, unnavigable, except at high tide, Tankári was once the port, for a considerable tract of country, for the opium of Málwa as well as for the cotton and grain of Jambusar and A'mod. Though, since the introduction of the railway, trade has to a large extent left Tankári, the returns for the past year (1874-75) show a total of exports £135,790 (Rs. 13,57,900), imports £28.098 (Rs 2,80,980), amounting to £163,888 (Rs. 16,38,880). The marginal statement shows the state of trade at the port of Tankári at intervals during the past forty years.

Year.	Yearly average.		
	Import	Export.	Total.
	£	£	£
1837-1847 . .	51,901	649,013	700,914
1856 1862	37,837	168,346	206 183
1865.1870	25,130	111,856	136,986

WA'GRA.

Wa'gra, north lat. 21° 50', and east long. 72° 53', the seat of the office of the máinlatdár and of the court of the subordinate judge of the Wágra sub-division, is a village with 408 houses and a population of 1,228 souls.

[1] Elphinstone's History, 153 (Cowell's Edition).

[2] Wilford's Essay on the Kings of Magadha.—As. Res., IX., 96, quoted in note to page 70 of the Rás Mála, Vol. I.

[3] Forbes' Oriental Memoirs, II., 234.

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