Chapter V.

Conclusion.

The northern end of the west coast of India includes the Baroda, Broach and Surat districts of the central and southern Gujarat. The whole area of Gujarat is physically cut off from the rest of India by the deserts of Rajasthan; the Aravallis and the Western Ghats with their heavy forests. But, due to a few openings in this barrier, in the northern, central and southern parts; this region is connected with the sub-continent of India. This particular geographic factor has left a deep imprint on the culture of Gujarat. The great continental cultural movement of India have effected this region; but, due to its geographic position, and semi-isolation from the rest of India, certain isolated development of cultural traits are seen along with the infiltration of cultural aspects from other parts of India. These factors have contributed to the distinct culture of this region, within the main culture of India.

Eventhough, this area is away from the main transcontinental system of communication, its long coast line, with convinient harbours on the river mouths have attracted much trade and commerce of India. The large cities like Broach, Cambay, and Surat were great emporiums of trade which formed the connecting links of the chain of sea-borne trade of India with other countries.
Behind this valuable coast line of Gujarat stretches the fertile plain which supports large agricultural population. Here numerous cities and towns like Baroda, Miyagm, Palej, Kosamba, Kathor, Kamrej; and numerous flourishing villages exist. They form the main bulk of the population of this region, and live by agriculture, trade or service. This fertile plain has throughout the history attracted many cultivators and other settlers from neighbouring regions.

To the east of this fertile belt is the hilly forested tract which serves as a border of semi-isolation and cul-de-sacs for the weak and displaced inhabitants of the fertile plain. Here these tribes live on poor soil, and under many hardships.

In the Baroda, Broach and Surat districts man lived from the Mid-Pleistocene period up to the present day with occasional gaps; when there was no human habitation.

Prehistoric Period.

Paleolithic Period.

Early man began to live in this region from the Mid-Pleistocene period as noted above. F.E. Zeuner who studied this period of Gujarat suggests from the available evidence in the rivers Sabarmati, Mahi, Narmada and Karjan the following climatic and environmental changes that took place during

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1 Zeuner, F.E., _Stone Age and Pleistocene chronology in Gujarat_, p. 26 ff.
this time.

Wet phase I.

The evidence on Sabarmati indicates that the climate in the beginning was more humid than at present. This lateritic formation is still not traced in the Mahi and Narmada, probably because it is not exposed.

Dry phase I.

Above these deposits Sabarmati reveals the existence of Mottled clay and cemented gravels. The same sequence is noted on Mahi. But the Mahi sections show a series of alternating layers of mottled clay and gravels; suggesting that the formations are intimately connected. The Orsang and the Karjan also show similar phenomena. In this period the river was aggrading, pointing to the decreasing river activity (dry phase I). The sections of the rivers of South Gujarat show less evidence of wind activity, suggesting thereby more weather conditions. It may incidentally be pointed out that these relative differences are similar to those of today.

Wet phase II.

This phase is represented by red soil phase on Sabarmati, Mahi, Orsang and Karjan. This phase was more humid than previously, a dry forest climate as on Sabarmati. Here also a difference is noted. The red soil phase (T) on Mahi is more conspicuous than that on Sabarmati. On Karjan the
sections are comparable to those of Sabarmati, and Mahi and Orsang. Here buried soil is suspected. If this buried soil be identified with the red weathering of other rivers it will mean that a regur type of weathering was prevailing in Rajapipla area. These facts again suggest a slight climatic difference between the North; and central and southern Gujarat.

Dry phase II.

Once more the rivers begin to aggrade and deposits of yellowish-brown sandy silt with kankary conglomerations and of aeoline appearance is observed in the cliffs of Mahi and Orsang. At this period wind activity seems to have prevailed here, but the loess-like silts of Orsang suggests that it was nearer the margin of the dry zone. The section on Sankheda side has faint indication of greyish brown horizon possibly due to weathering. But the one or two dry epiphases (W and Y) of the Sabarmati have left no traces in the Orsang. This may mean that the climate here was slightly damper than on Sabarmati and just able to prevent the blowing about of the sand during phases W and Y. In the Karjan the final episode seems to be different; coarse gravels spread over the surface of the sands in sheet like fashion. They might have formed by floods coming from the nearby mountains during a period when good seasonal supply of water was available, but the climate was sufficiently dry to prevent erosion, so the gravels spread in sheet on deltic formations at the foot of mountains. The top gravels at Rajpipla indicates comparatively dry conditions and of a climate drier than the present.
Wet phase III.

It is represented by modern soils indicating a return to modern climatic conditions. The surface soil on Mahi is of much lighter colour, whereas that on the Orsang, Karjan and Tapi is much darker and cotton soil. The difference in the colour is due to the combined effect of the rocks from which it is formed, and dampness of the climate.

The study of these climatic fluctuations by Zeuner, suggests that the climate of North and South Gujarat has shown variations of the same nature, but in South Gujarat slightly damper condition was prevalent throughout the period of this study.

During the period (Dry phase I) when the implementeferous gravels and mottled clay were forming stone age man was living; but, so far any evidence of his existence in the wet phase, or in the major part of dry phase II is not found. Possibly towards the end of it, when damper conditions returned in Wet Period III, we get again the evidence of human habitation. This represents the Microlithic phase of Gujarat.

The earlier evidence of the stone age man consists in the rolled, semi-rolled and fresh stone tools that were discovered from the implementeferous gravels at Pratappura, Kanora, Bahadarpur, Sankheda, Nadgam, Narkhari and Ramgadh on the rivers Mahi, Orsang, Narmada and Krjan. This industry belongs to the I wet and the beginnings of the succeeding dry period. Typologically it is Abbevillo-Aehaelian in
character. There are some typical Sohan chopper and other tools. In spite of these typological differences, there is no evidence of any vertical division within the industry.

This is very characteristic of the Peninsular paleolithic industry as a whole. The presence of these choppers has lead to the speculation by V.O. Krishnaswamy that the Madrasian handasee and Sohan industries met in Gujarat.¹ Lal, in his Beas, recent study has ably pointed out that at Guler in the two handasees were obtained at a later stage. From the Potwar region in Pakistan, both the chopper-chopping tools and handasees occur simultaneously in the stage represented by Terrace 1 and assignable to the Interglacial.²

At Vadamadurai also in the earliest implementeferous deposits also a similar situation can be noted. But the chopper industry tends to decrease in percentage as one moves southwards. While studying the industries in the South and North one gets on impression that both Madrasian handasee and Sohan chopper industries are different, due to the varying percentages of these tools. But with the evidence cited above it appears that much detailed work in necessary before any conclusions could be reached, on the relation of both those industries.

1 Krishnaswamy, V.O., Stone Age in India. Ancient India, Vol.3, p. 32.
2 Lal, B.B., Paleoliths from The Beas and Banaganga Valleys, Punjab, Ancient India, No.12, p. 85 ff.
3 Hede-Terrasse and T.T. Paterson, Studies on the Ice-age in India and Associated Human Cultures, p. 295.
So far as the chronology of this culture in Gujarat is concerned, the implementerous deposits have not shown the existence of any fossils so far. Hence it is difficult to date the deposits on their basis. The only method open for dating them is the paleolithic. Zeuner has based his arguments on the study of the North West of India and suggested that the industry of Gujarat could be related with the late Sohan industry, which is contemporary with the Penultimate Glaciation. He also argues that if one chooses to correlate the Sabarmati cemented gravel with the upper cemented gravel on the Godavari at Nandur, the industry would be contemporary with Elephas namadicus, a fossil also known from the upper gravels of the sequence of the middle Narmada. This zone, too, is correlated by De Terra with Penultimate Glaciation and the tentative age obtained by the first method is thus confirmed. This assemblage of Gujarat industries is typologically and stratigraphically very close to the Godavari sequence at Sangamner and Nevasa. At the later site, it is associated with Bos Namadicus, hence we may attribute these industries to Mid-Pleistocene as in the Narmada and Godavari.

But Zeuner has suggested a slightly later date for the Gujarat paleolithic industries. "Assuming that the Penultimate Glaciation of the Himalayas is contemporary with that of Europe". Zeuner argues that "the age in years of the

1 Zeuner, op.cit., p. 42-44.
2 Zeuner, op.cit., p. 43-44.
Sabarmati industry may be estimated in a very tentative way applying either Penek’s geological dating method or the Astronomical Theory. According to either it would be of the order of 150–200,000 years."

The Man of this period was essentially a hunter and a food gatherer. He lived in open camps on the banks of rivers. Even though the data of contemporary fauna such as elephas Namadicus, Bos indicus etc. are available in the Narmada, Pravara, and the Himalayas, no such evidence is found from the region under consideration.

**Microlithic Period.**

In this region traces of the 'Middle stone age' artefacts characterized by blades, burins, scrapers, have not been traced so far. This industry is found from the Bombay area, Nevasa, Narmada Valley, Adilabad, Bijapur and Dharwad. At Khandivli they are found in the layers that overlie—possibly with a time gap—those marked by Palaeolithic artefacts at the base. At Nevasa this second industry preceded by Palaeolithic tools, consisting of "comparatively small cores, flakes, scrapers, blades and burins of Jasper, Carmelian and other fine-grained stones." From Narsinghpur on the Narmada

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1 Ibid.
3 *Archaeology in India, 1953-54.*
similar evidence is found. But Zeuner has suggested that the II wet phase was not of a very intensive type and we can only see a slight break in the aggradation of the deposits. In view of the much larger evidence of wind activity in the upper section, it is likely that the fossil crescentic dunes of North Gujarat, which spread upto the Narmada in the Baroda district were formed in the Dry phase II. Hence it is possible that the gap in the lithic sequence noted already may be due to the very dry climate which made human habitation difficult.

In Gujarat the upper levels of the cliffs of the Sabarmati, Mahi, Orsang and other rivers have not been completely investigated with a view to verify the occurrence of this smaller industry, which looking to the climatic evidences might not occur. Therefore the next phase of human settlement in the Baroda, Broach and Surat districts may be characterised by the microliths.

From the Baroda, Broach and Surat districts more than sixty sites bearing this culture have been noted so far. The industry is characterised by the use of 'Geometric' tools of fine grained stones like agate, chert, carnelian, chalcedony, quartz etc. These sites are discovered from the river cliffs, or from small dunes in the Savali and Baroda talukas

1 De Terra and Paterson, Studies in the Ice-age in India and Associated Human Culture, p. 320.
of Baroda district. From the available evidence it appears that the man of this period preferred to live on light well drained soils. Another important consideration for choosing a site was the vicinity of the raw material for tools. In the Mahi valley the remains of this period are found near the veins of the raw material; whereas, in the lower Narmada Valley the sites show nodules of agate, chalcedony and other stones strewn in large numbers, besides the retouched implements, cores and flakes.

Typologically these geometric microliths show close affinity with those of the well-known Langhanaj industry, and hence they may be ascribed to the same culture. This Langhanj industry, therefore, has wide distribution in Gujarat, as the rivers Banas, Sarswati, Mahi, Narmada, Kim Tapi and Mindhola, has shown its existence. From a study of the material from Langhanaj the type-site for this culture, some interesting evidence for the technology, fauna and the human types of this period as detailed below is obtained.

1 Zeuner has shown how the shoulder blades of Rhinoceros were used as anvils for the preparation of the microliths. He noticed a number of artificial pits 10 mms x 25 mms across on the large shoulder blade of a Rhinoceros found by Sankalia. While studying these pits he found that they are not natural,

but might have developed due to the cuts received by the bone when it was used as an anvil for producing the flakes from the core.

The study of the remains of animals by the same author revealed the existence of Indian Rhinoceros (Rhinoceros Unicornis L), Hog deer (Hystrix porcimus Zimm), Indian buffalo (probably wild), Antelope (Boselaphus tragocamelus Pall), Black Buck (Antelope cervipra linn.) and dogs. Most of these animals are wild. According to Zeuner the predominance of the game fauna, and the absence of the remains of the domesticated animals suggested from the available evidence that these microlithic people must have been mostly hunters.

All the human skeletons discovered from Langhanaj have still not been studied; but, a preliminary report of Iravati Karve states that "The capacity of the skulls, to judge from the length and breadth measurements, compares with that of the modern Europoid. The supra orbital ridge, the well rounded occiput showing the ruggedness of the muscle relief, the pre vasal fossa and the intra orbital breadth suggest primitive features. The slight prognathism of one skull with the smooth and rounded forehead suggests negroid affinities which belief is strengthened by the smallness of the cross section as compared to the long bones of the upper and lower extremities."¹

The evidence from Langhanaj and Akhaj point out that the main culture belongs to the buried soil phase, the (X) horizon of the Sabarmati section according to Zeuner. This suggests that the 'microlithic man' occupied the dunes when there was an interruption in the wind activity during this phase, and sufficient rainfall was available for the development of Swamp Jungles preferred by the Rhinoceros or wild buffalo. Probably with the resumption of the drier period and wind activity, suggested by further accumulation of earth these sites were gradually abandoned. The preliminary study of Zeuner has shown that the two epiphases W and Y preceding and succeeding the microlithic horizon were not traced in Baroda and Broach districts. With rather damper conditions in these districts it is probable that the microlithic man might have continued to live for a longer period.

This consideration of climatic fluctuations and existence of microlithic man during it, leads one directly to consider the chronology of this culture. As most of the microlithic occupations are one period sites, it is difficult to fix their chronology. The evidence for estimating it,

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however, is available from Akota, Timbarva and Rangpur. At Akota microliths were found underlying a sterile natural layer on which the cultures of early historic period II characterised by Red polished ware, Ksatrapa coins, crude-red-and-black ware etc. was overlying. It suggests that there is a gap between them. At Timbarva about twenty-two miles to the south of Akota, remains of a still earlier period preceding the early historic period II of Akota, were found. As the area around Akota is full of microlithic sites, it is quite possible that the microlithic period may precede the early historic period I, characterised by the N.B.P., red-and-black-ware, iron implements etc. Thus the combined evidence of Akota and Timbarva suggest that the microlithic period is earlier than the later part of the first millenium B.C. The evidence from Rangpur, however, helps one to date the beginnings of the microlithic culture to a still earlier period. Here the excavations conducted by S.R.Rao has shown that the microliths typologically similar to those under consideration were obtained from the gravel lens found below the natural soil on which the proto-historic "Harappan culture" started. This fact suggests that the beginnings of the microlithic culture here is earlier than the "Harappan culture"

1 Supra, p. 152
2 Mehta, R.N., Excavations at Timbarva (April 1953).
3 Indian Archaeology, 1953-54.
of 2nd or 3rd millennium B.C. It is not unlikely that this stone age culture might have survived along the flanks of the eastern hill and forest belt, till it was replaced by the higher culture. These stratigraphic considerations are the pointers to the antiquity of the microlithic culture, but to come to more definite conclusions various modern chemical and radio-activity tests are necessary.

Geometric microliths, similar to those found from the Baroda, Broach and Surat district have been found from many parts of Gujarat as shown above. Another area from which microliths of high antiquity are discovered is the Tinnevelly district. Here the microliths are found in the teri deposits of definite aeoline origin, though they are considered by capillary action. This phenomena has given them a reddish tinge, due to the oxidization of the iron contents of the earth. The whole group of the implements of quartz or crystal have a red staining. Zeuner feels that some of these tools were deposited on the 'lateritic pan'.

Another group of microlithic sites have been discovered by Krishnaswamy in the Singrauli basin. Stratigraphically this culture is lying at a depth of four feet below the upper alluvium on the southern banks of Balia nadi " where

1 O.H.K.Spate, India and Pakistan, p. 227.
2 Krisnaswamy V.O., Ancient India, No.9, p.36.
the evidence is in conformity with the provisional dating assigned to the early microlithic sites. Similar microliths are found in the Baned, Bundelkhand and Baghelkhand. The general nature of the Singrauli microliths backed blades, parallel sided blades, benates, cores, scrapers and arrowheads in milky quarts - reminds us of a degenerate upper paleolithic blade tradition and the entire industry devoid of any associated pottery can probably be ascribed to an early mesolithic industry.

From the rest of India a large quantity of collection, with an incomplete record is scattered in various Indian and foreign museums. It is very difficult to attempt a general classification or chronology of these Indian microliths due to the complex problem of the later survivals of the industry.

In the old world, microliths have wide distribution in time and space, but there might be some typological and certain technological differences. Zeuner has pointed out how the asymmetrical points, common in various parts of India are "one of the few items that distinguish the Indian microlithic 'hunting' industries from the Wilton of South Africa." Similarly bi-facial retouch and bi-facial points are almost absent in the Indian Industries. But, they are very common in Africa, Ceylon and Australia. A few of them have been reported by Mrs. Allehin from the teri sites at

1 Zeuner, *op. cit.*
the southern tip of the Indian peninsula, so close to Ceylon. The dearth of 'micro-burins' that are supposed to be the bye-product of the pen-knife blade, lunate and trapeze industry by the use of the technique of preparing a notch and twisting\(^1\) is interesting. Does it mean that a different technological tradition was followed in India? These problems require much further work for their solution.

**Early Historic Period I.**

In the Baroda, Broach and Surat districts one does not come across any cultures after the microlithic period, till we come across the iron using folk in the later part of the first millennium B.C. The neolithic, chaleolithic and Harappan cultures that are seen in other parts of India have still not been traced in these districts.

The iron using people were living in the central fertile belt of these districts. The cultural material consists of pottery: N.B.P., red-and-black-ware, plain-red-ware, and black-ware, terracotta objects such as beads, figurines; stone objects comprising of beads, querns, pestles; and iron objects, coins etc.

This culture underlies that of the early historic period II at Timbarva; hence, its stratigraphic position is

\(^1\) Clake, J.D.C., *The Mesolithic Age in Britain*, Appendix 1, p. 97 ff.
well established. It has strong affinity to those found in the contemporary Malwa, Maharastra and Orissa, as can be gathered from the discovery of at least two pottery types: the N.B.P. and the red-and-black ware.

The N.B.P. ware is a typical pottery type for the later part of the first millennium B.C. Its origin is tentatively placed in about fifth century B.C. "It is unlikely that future research will bring this dating forward; on the contrary, the possibility lies in the other direction." This ware was used in India from about fifth century B.C. and "there is no evidence that N.B.P. ware persisted in India after 2nd century B.C." This ware has been found from a number of sites in India. It was attributed to the Pre-Alexandrian levels at Taxila. At this site a hoard of coins with one of Alexander, in mint condition occurred at the depth of 6'; whereas, the N.B.P. was found from the depth of 6' to 13'. At Kausambi it occurs from the earliest levels contemporary with the mud ramparts; and has been placed to the beginning of the 6th century B.C., because of its thick deposit below the main monastery of Ghositarama, dated in 3rd century B.C.

From the available evidence at Kausambi, Patna and Rajgir, it seems that the focus of this ware was the Gangetic

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1 Mehta, R.N., op.cit.
3 Ibid.
basin from which it spread to other parts of India. It could reach Taxila in the 5th century B.C; and at Maheshwar its earliest occurrence suggests the same date. The discovery of this ware about two hundred miles down stream on the Narmada, at Timbarva can, therefore be dated to about 400 B.C., at the latest.

This ware is found in association with the red-and-black ware. This wheel made pottery has very wide distribution in time and space. It was first found from the numerous megaliths of South India, hence it received the name 'Megalithic Ware', but the recent work at Maheshwar, Timbarva, Somnath, Ahad, Nagada and other sites in Gujarat, Rajasthan, Malwa and Saurashtra has clearly demonstrated that it is not always associated with the Megaliths. After a close study of the fabrics, forms and decorations B. Subba Rao states that "our present knowledge supports a hypothesis of this fabric belonging to a single complex."

The evidence from the excavations in Saurashtra, Gujarat, Malwa, Rajasthan, Maharashtra, Orissa and other parts of India suggest that this ware was also widely used in 1st millennium B.C.

The wide distribution of these wares over large parts of India suggest the development of rapid communication

1 Subba Rao., B., The Personality of India, p. 76.
system resulting in the occurrence of some unity at least of the material culture. The Numismatic evidence showing some common forms of coins supports this. The literary evidence; pointing to the brisk trade through the port of Broach, and the legend of Canda Pradyota in the early part of this period, and the political unity brought by the Maurya rule, over a large part of India are quite interesting in the light of the close affinity of the Material culture of the various parts of India as shown above.

This is possibly the formative period of the culture of this region. The sites of these period-Karvan, Timbarva, Kamrej, Salad, Broach etc. are found in the central fertile plain of Gujarat. Their small area, in comparison to those sites in Malwa, U.P., Maharashtra, Saurashtra and other parts point that the population here was less; the great distance of these sites also suggest that large tracts of land would be uninhabited. The general humidity in this region, at this period would not have differed from, that of the present day conditions, as here we do not find sand dunes as in North Gujarat. Instead of blowing sand, here the area would be full of thick summer deciduous forests, that persist up to this day in the Songadha, Vyara, Rajpipla, and other taluks in the eastern part of the Baroda, Broach and Surat districts.

This assumption is further supported by the place-name study by Sankalia. After studying the place-names in the Baroda Prants of the old Baroda State he concludes that "There is a fairly large number of place-names after trees,
found principally in Sinora, Sankheda and Tilakwada Mahals which are comparatively more wooded than the rest of the Mahals in this Prant, or in the north. For the Surat district also he has studied the place-names in the Navasari Prant (old area under Gaekwads of Baroda) and have corroborated the existence of large wooded parts. After the general study of this region he notes that in the older names the percentage of the names after trees, lakes or ponds is very large.

Thus the place-name study and archaeological investigation of this region point to the conclusion that in the early historic period, this area would have been more wooded and was slowly being developed.

The literary evidence of this age as noted above refers to great commercial activity. The Ports of Broach and Sopara were great emporiums of trade on the west coast of India. Broach, being much nearer the hinterland of Malwa and U.P., might have developed due to the enterprise of the traders of this region. The settlements here might have been on the route to the hinterland, and the sites either represent the caravan stations or the colonies of the immigrants coming from the immigrants from the other parts

2 Ibid., p. 79.
of India. The unity of material culture suggests the impact of cultures from Malwa, Maharastra and Indo-Gengetic plain. The political history of this period leads one to infer that the foreigners like the Greeks, Sakas and Iranians might have also influenced this area. This evidence suggests that the population of this region would have been varied, with Indian and foreign elements from this early period.

**Early Historic Period II.**

In this second period larger and more sites are discovered from the central fertile belt or on the large rivers. These sites, therefore, suggest the development more villages, towns and perhaps of population.

The place-names in this area are mentioned for the first time by Uṣavadāta, the son-in-law of Nahapāna. These earliest reference and the discovery of the coins of the Ksatrapas and Āndhras prove the existence of their power over the Baroda, Broach and Surat.

During the early centuries of Christian era, the port of Broach was very important for the trade with the Roman Empire. The Jain tradition preserved in the Āvasyakācūrṇī already mentions that Nabhovāhana of Broach had much income

1 Sevart, E., Uṣavadatt's Inscription from Nasik, E.I.VIII, p. 73-ff.
2 Sandesara, B.J., Jain Āgama Sahitya MañjúśrīGUjarat, p. 91-92.
from the sea-borne trade. In this connection the reference of Periplus of the Erythrean sea about the policy of the rulers of Gujarat to bring the foreign vessels to Broach, and not allow them to go to Kalyan is very interesting. It may suggest the Naval blockade and capture of advantageous trade for their benefit by the Ksaharāta and Ksatrapa rulers. This loss of trade might have been one of the reasons of the long drawn struggle between the Āndhras and the Ksatrapa rulers.

This trade of the Romans for obtaining luxuries of the Imperial Court, received additional impetus by the discovery of the monsoons by Hippalus. The strained relations of the Romans and the Parthians might have further helped this sea-borne trade. It is in quite likely that this situation was exploited by the Kusānas and Ksatrapas to further their commerce across the Arabian sea. The fervent activity of the Romans brought much gold, bronze vessels, small cameos, wine jars etc. to the Indian coast. The remnants of such objects discovered from the sites like Akota, Karvan, Nagadhara, Kamrej, Variav, Ankelshwar etc., including Bronze handle, Cameos, coin of lucius virus, terracotta seals and

4 Supra p.,
fragments of pottery.

The large quantity of the red-polished-ware with the affinity to the provincial Roman Samian ware, suggest that some technical aspects of this ware might have been adopted in India. Numerous Indian forms in this ware, however, prove that they might have been manufactured in India.

The discovery of many Roman objects, and this red-polished-ware from almost all parts of India point to the magnitude of this trade in this age. Broach gave an important contribution in this trade, and through it the Baroda, Broach and Surat districts made their own contribution to the general trade and commerce of India.

The other ceramic form, the crude-red-and-black-ware, which is an insufficiently fired, gritty, porous pottery with black interior and exterior varying from light brown to red tinges, links up the whole region. This ware is found in association with the red-polished-ware at Akota, Timbarva and Vadnagar. It does not occur in the later periods; but is associated with other cultural material such as: coins, seals etc. of the Kshatrapa and Gupta period. This crude-red-and black ware have been discovered from the sites in Gujarat

1 Subba Rao, B., op.cit., p. 35-36.
2 Mehta, R.N., op.cit.
and Saurashtra, but it has not been discovered from Rajasthan, Malwa or Maharashtra. In view of this position it is very likely that this ware might have been one of the local wares in Gujarat.

One interesting difference in the ceramic forms of North and South Gujarat during the Ksatrapa period is absence of the black-on-red-ware in Baroda, Broach and Surat districts. At Vadnagar together with the common crude-red-and-black and Red-polished ware, a large quantity of red pottery with designs in black occurs in large quantities. This ware has not been found in any measurable quantity at Baroda, Akota or Timbarva. This fact suggests some difference in the pottery tradition in this part of Gujarat.

In this period large brick structures were erected. The cementing material was mud. Bricks were occasionally used for flooring. Flat, rectangular terracotta tiles with grooves on them and two holes on one side might have been the roofing material. Similar tiles from Maharashtra and Saurashtra suggest that this was one of the common roofing material in Gujarat, Maharashtra and Saurashtra. Similar affinity in the brick size measuring 15 to 16" x 2½ x 3" x 10½ to 11" of this age and constructional details of mud, cement, arrangement of headers and stretchers, are the evidences of a common architectural tradition.

The sculptures in stone and bronze discovered from the Baroda, Broach and Surat districts also point to the impact
from other parts of India. The Nağa figure from Pavi, the
Visnu from Ten, the Siva linga from Broach, and the head
from Karvan show close affinity to some of the sculptures
from Mathura Museums, and Visnu from Bhinnamala, suggest that
the sculptors in this region received a strong impetus from
the Mathura School of the early centuries of the Christian
era. Some of the Tīrthaṅkara figures from the bronze hoard
from Akota point out some well marked Gupta traits in
anatomical proportions and workmanship. These facts suggest
that some of the All India movements in Arts have been well
reflected in them. From the Sabarakantha district numerous
Schist sculptures have been discovered. A close study of this
group, now preserved in the Baroda Museum, clearly indicates
in the facial features of the head in the lower right hand of
the cāmunda, and drapery of a few other figures resemblance
with the Gandhara style. A small bronze figure of a couple,
also in the Baroda Museum, obtained from a local curio-dealer
has strong affinity with the Amaravati school. Thus the
stylistic study of these early sculptures from the Baroda,
Broach and Surat districts, and the neighbouring regions of
Gujarat clearly indicates that certain features of different
art traditions have been well reflected by the collection
from this area. With this common fund from different sources
the artists in Western India developed certain anatomical,
facial and decorative traits which, when combined, clearly
distinguish the sculpture of this region from other parts of
India.
The coins discovered from the Baroda, Broach and Surat districts suggest the succession and conflicts of the rulers. The Ksaharātas, Andhras, Ksatrapas and Guptas ruled in this area. Interesting evidence of the conflict of these rulers have been supplied by the restruck coins discovered from the area. The earliest copper plates are also found from this period. The study of the script suggest that it belongs to the Southern variety of Brāhmī. Thus the collective evidence of the archaeological material suggests a complex situation in which numerous parallels with the general Indian tradition and certain well-marked local features are well-marked, distinguished.

The study of the distribution of the settlements suggests that the central plain between the sea-coast and the eastern hills was occupied. The easternmost sites so far discovered are Limodra and Jetpur, that are situated almost at the edge of the central plain. Even though more and larger sites in comparison to the preceding period are found over a large area, they are still separated by long distances. This dispersion of the sites does not materially change the situation of the preceding period. Only the region was further developed but there were sufficiently large undeveloped tracts that might have been responsible for the use of such epithets as Satātāvi.
During the next period in the Baroda, Broach and Surat districts more epigraphical evidence is available. It suggests that there were many small kingdoms of the Traikutakas, Kataceuris, Çālukyas, Gurjaras, Çāhmāns, Rāṣṭrakutas and Çālukyas of Lāta. The contemporary rule of the Çālukyas and Gurjaras and later on the rule of the Çāhmāns, Rāṣṭrakutas and other rulers affirm that political conditions were not stable. The changing dynasties and constant warfare might have an adverse effect on the population. The rulers in this region were not powerful; hence, they remained as feudatories of their stronger neighbours, or sometimes the area was directly governed from the imperial capital of these kings. With such a political state of affairs this area was often troubled by the marching armies. Probably with the fall of the Roman empire and prevailing anarēky in that region, the trade of Broach would have declined for some time till it was once more replaced by the strong kingdoms of the Muslims after the 8th century A.D. This decline also might have adversely affected the region.

This region was an outlying province for the rulers such as the Çālukyas and Rāṣṭrakutas, it did not receive much attention. Large settlements comparable to those at Achḍe, Valabhi, or Vadnagar did not develop here. The area
was recently occupied so it was devoid of the halo of antiquity. Except Bakulisa, the teacher of the Saivite sect, one does not come across the names of any great religious preacher who belonged to this region; so that from the religious point of view also the places here had no importance like Benares, Gaya, Mathura, Somnath or Dwarka and other similar sites. As a result of it the sites did not develop religious, establishments and temples are not found here. The combined politico-religious factors probably accounts for the absence of large towns or settlements with standing monuments.

Yet, the sites of this period are numerous in comparison to those of the preceding period. The changes in the ceramic tradition suggest development in material culture. The New pottery types appearing at this time are the mediaeval painted-ware, the black-burnished ware and the mediaeval red and black ware.

Out of these the mediaeval painted ware having burnished-red-slip and designs in black over white background is interesting. This style of decoration is distributed over an area from Rangmahal near Bikaner in Rajasthan to Kamrej on the Tapi. It is ascribed to the early historic levels at Rangmahal by Hynna Rydh. It is found from Vadnagar, Baroda, Timbarva and other sites, where on circumstantial evidence it is dated to a rather later age. This technique from such distant sites suggest an uniformity of cultural
tradition, but many problems connected with its chronology and distribution require much careful work. The other types mentioned above are also equally widely distributed in Gujarat, Malwa and Maharastra, pointing out thereby that certain cultural trends were common in the whole of Western India.

The coins of this period, those of the Traikuṭakas, Valabhis and Gadhaiyās are discovered from the surrounding regions of Saurastra, Rajasthan, Malwa and Maharastra. They also, therefore, point to the contacts of the Baroda, Broach and Surat districts with the neighbouring areas at different points of time during this period.

No standing monument of this period have been discovered. But numerous sculptures, door-jambs, pillars etc. suggest that temples were erected in this period. The sculptures of this period show many stylistic features with strong affinity to those from other regions. The Akota hoard of Jain images show a style current in contemporary Rajasthan and Gujarat. The two forms of Mahismardini figures noted in the section on iconography, show wide distribution in time and space in many parts of India. A close study of the coiffeur, costume, ornaments and anatomical proportions reveal many close parallels in Western India. These common traits suggest a common tradition, but, the source of its origin and the general development are still seen only in broad outline. Much exploration and work is necessary in
Western India before numerous questions connected with this post-Gupta and early mediaeval style of sculpture could be completely answered.

The copper plates from this area are valuable sources in the study of its relations with the neighbouring regions. Most of the ruling families here came mainly from the North or South, the donees of the grants also came here from different parts of India. The script of these copper plates show a mixture of Northern and Southern variety of the Brāhmī. During the period of the Traikutakas, Calukyas and Rastrakutas, the southern variety of Brāhmī was common for documentary writings, but the influence of the Nāgarī is clearly indicated by the signatures of the Gurjara kings. Even the use of different eras - the Cēḷī, Saka etc. - is a pointer in the same direction. These records clearly reveal the fact that the Baroda, Broach and Surat districts received constant influence of the people from different parts of India, suggesting thereby that it was in constant touch with the main currents of Indian life, specially of Western India.

In spite of the constant warfare the population increase is gleaned through the numerous mediaeval sites that have been traced so far. It is interesting to note that some of the groups of the villages mentioned in the grants of the Gurjaras, Calukyas and Rastrakutas show that their distribution has not changed throughout the succeeding centuries. The explorations of these groups did not show any
intermediary sites that were developed and afterwards deserted. This fact suggests that some parts of the central plain were developed to their full capacity. This factor is suggested by the place-name study of North-Gujarat by H.D. Sankalia. He indicates that "the villages spread over Gujarat exactly in the same position as they are now. Very few new villages seem to have sprung up between the old villages. Rather we find some deserted sites of old villages. This might have been due to migration to urban areas."  

Mediaeval period II.

After the 10th century we find many changes. The old ruling dynasties are replaced by the new dynasties of the Calukyas of Lāta and Caulukyas of Patan. The Parmaras of Malwa and Yadavas of Deogiri also come in the picture. Out of them Caulukyas of Patan were the most successful. They and their branch line the Vaghelas brought the whole Gujarat under their sway. Their rule proved to be landmark in the history of the region.

It is during this period, that the first standing monuments are seen. The fort of Dabhoi, the Kalīkā Mātā temple, the Vaidyanātha Mahādeva temple, at Dabhoi, Nakul-eshwar Mahadeva temple at Awākhāl and the Kapileśwarā

1 Sankalia, op. cit., p. 44-45.
Mahadeva temple at Sarona were built in this period. All these structures clearly reveal that uniform building style was current in many parts of India, as can be noted by any observer of the mediaeval temples of Badami, Aihole, Bhubaneswar, Khajuraho, Siddhapur, Modhera and other sites. These structure show dry order of building in which stones were superimposed on one another and held in their proper place by the mortise and tenon joints. The true arch is absent. But the corbelled arch was used at Dabhoi. Similar arches are seen at Zinguwada and later on at Acalgad, Sankheda and other sites in Western India point to a tradition current for a long time.

The standing temples are observed in this area show two different styles. Those at Dabhoi are in the full fledged Caulukyan style that is observed at Modhera, Delmal and other North Gujarat temples. But the other style is seen in the temples of Avakhal and Sarona. These are small temples with Garbha grha and Antarāla. The outer walls with heavy mouldings specially at Avakhal has their strong affinity with the Śiva temple at Pawagadh, the small group of Amthermātā temples, and Śitalā mātā temple at Vadnagar and those at Roda. The sculptures on these temples and their style suggest that they are earlier than the Caulukyan temples at Modhera, Abu, Asoda and other sites. The Avakhal temple eventhough, following the earlier tradition of the above mentioned temples at Vadnagar, Roda and Pawagadh, is rather later in
date as suggested by its sculpture. It is, therefore, very likely that the earlier style of architecture continued in this region alongside the Caulukyan style. As there are very few monuments in this region it is not possible to trace the stylistic studies much further and show its relation to other parts of India.

In this period, the local Caulukyan style developed after 10th Century A.D., from the widely known early mediaeval school of sculpture. The Mahismardini, and the Apasaras on the wall and pillars at Modhera, and a freize of sculpture outside Arjan Bari gate at Vadnagar are much near the forms of Cauri-bearer from Akota, the Mahisamardini from Bharthana, Karvan and Degam; but, stylistically, Modhera figures are an advance towards the Caulukya forms as is clear from the development of the typical mediaeval ornaments, and a slowly changing physical features. Besides these forms, we see the emergence of certain new features as for example elegant but over ornamented slim figures sometimes with longer legs and shorter torso or both of them of the same length. Occasionally they show mediocre workmanship, and stereotyped work suggesting mass production.

By the time of Siddharaj-Jayasimha (1094-1142) this new style has been firmly established and continues with certain changes upto this day. In the later period of history this style influenced other parts of India.
The ceramic traditions of the earlier period continued in this period, but after the 10th century glazed pottery with glass glaze on the upper surface of the bowls and dished is very widely distributed in Uttar Pradesh, Rajasthan, Madhya Pradesh, Malwa, Gujarat and Saurashtra. This ware comes into prominence in the Middle East after the rise of the powerful Islamic states. From this source the technique and sometimes the ware spread over many parts of the old-world. The brisk trade of India with these countries in the mediaeval period was responsible for the introduction, not only of this pottery, but also some glass objects. After the Muslim conquest in 8th, 11th and 12th Centuries its use became more common. Islamic glazed ware was possibly the de-luxe ware of the mediaeval period in India after 10th century A.D. During these centuries Cambay had become an important port and Broach was possibly ranking low, as can be surmised from the numerous references to the former in the records of the travellers. The Gurjara Pratihāra power of the North and then the Caulukya power at Patan might be responsible for the rise of Cambay, which was nearer to them than Broach. The latter might have suffered more due to the lack of patronage rather than any other disadvantage.

Eventhough the political conditions were unsettled in the later part of this period, traces of the existences
of many sites in this period are available. These antiquities suggest a further increase in the population. The vivid description of the pathetic conditions of the population in the 13th century by Somesvara in his Kirtikaumudi, is supported by the discovery of numerous memorial stones in this period. All these disturbances, and the earlier struggles in 10th century possibly led the people to seek safer places, consequently the eastern forests were possibly opened up, and strong fort like Dabhoi erected.

The eastward movement was further accentuated after the defeat of the Caulukyas of Patan in 1298 A.D. The numerous Rajput families began occupying this area and possibly pushed back the bhils and other tribes in the more inaccessible parts. These conquering rulers of the eastern belt possibly invited the farmers from the plains to cultivate the land. The study of the migrations of the Brahmins, Patels and Banias clearly suggest that they were invited by the rulers of this area. This phenomena continued down to the last century as could be understood by the efforts of the rulers of Chotau-daipur, Rajpipla and Idar. After the defeat of the Muslim Sultans of Gujarat, the Muslim nobles also took refuge in this area. The history of Pandu Mevasa, Rajpipla, Vansada and other states in the eastern belt bear eloquent testimony to this phenomena. But much further work, however, is necessary in the history of this
forested eastern belt to clarify the details of the process of actual occupation.

Thus one can easily decipher the main cultural currents of the Baroda, Broach and Surat districts. Upto at least the fifth century B.C. this area was in the pre-historic stage of hunting and food-gathering economy. After 5th century B.C. clear indications of the food producing agriculturists using iron are available. In view of the later introduction of Iron even in other parts of India this is not surprising. The material culture of this period is rather less advanced than that of the contemporary Malwa, Maharastra and North India. This fact could be well explained by the peculiar marginal position, and the border of semi-isolation. The development of the Indian culture and the extensive maritime activity of the Indians helped a lot to the growth of the ports like Broach, Gambay and Surat; and the establishment of small caravan stations on the main routes. The fertile land attracted the farmers, who came from different parts of India. Throughout the history of this area immigrants were pouring in as conquerors, traders, farmers and cultural missionaries. These immigrants brought fresh cultural impact from various regions. The relatively isolated position helped to develop the provincial traits in various aspects of material culture-like pottery, sculpture, etc. that have been dealt with in the preceding chapters.
The weak political power of the local rulers and the marginal position occupied by the region did not allow magnificent towns to develop here. The Fort of Dabhoi, seem to be the solitary construction under royal patronage. But most of the antiquities and monuments suggest that they might have been utilized or erected by the local population. The rich traders and merchants of Gujarat were responsible for many artistic pieces of sculpture as can be noted from the dedicatory inscriptions on the back of the numerous Jain images from Akota hoard, and of later period. This fact points out the important role of the trading community in patronising the art and artist in Gujarat and giving them a provincial tone by their likes and dislikes in art.

Thus the area of Baroda, Broach and Surat districts slowly developed due to a series of complex factors, and helped the Indian trade and commerce. It received many sided influences of common Indian culture and influenced the surrounding region by the commodities that it sent and the merchants and craftsmen who migrated in the interior of the country for earning their livelihood. In short, this marginal region of the subcontinent of India has developed on the main lines of Indian culture and has simultaneously shown certain well-marked provincial traits.