

COURSES TOWARDS AGRICULTURE IN ANCIENT INDIA

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INTRODUCTION

It is thus clear that nature provided Indians a suitable background for their commercial activities. But for real economic prosperity, the activity of man is necessary. Natural resources have to be exploited before they can yield results. Nature in a large measure determines the plan, but man is the agent whereby the civilization progresses. With the improvement in technological means man develops a geographical region along definite lines of a given plan in such exploitations, as Taylor Griffith remarks 'Nature determines the route of development, while Man determines the rate and the stage.

The economic life of man in India evolved through several phases. Some of these phases preceded the commercial stage. In the first phase man's total economic activity was confined to food gathering. In India this stage occurred when man was in the last phase of the second glaciation or in the beginning of the second (great) inter-glacial period. (Piggot) In this period 'the basis of subsistence was hunting and food gathering in one form or the other this phase can be, therefore, described as the 'age of direct appropriation

OBJECTIVES

1. TO FIND OUT THE SITES OF GRADUAL DEVELOPMENT IN DECCAN
2. TO FIND OUT THE SOCIETY FROM PREHISTORY TO PROTOHISTORY
3. TO FIND OUT THE SOCIETY FROM PRTO TO EARLY HISTORY
4. TO FIND OUT THE DEVELOPMENT OF THE SOCIETY FROM AGRICULTURE TO SURPLUS

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We do not find any transition in the development of food economy. People of the Mesolithic age continued as hunters and food gatherers and they did not produce food (pre-historic background) But on the basis of typological analogy of the western Neolithic cultures it can be said that some sort of a 'rudimentary trade (Gordon childe man makes himself) must have begun during this period, particularly for acquiring suitable stones to make tools. It is, however, very difficult to ascertain the role and nature of the so called 'rudimentary trade. One can understand a sort of exchange of such stones particularly among settled communities of Mesolithic India. In the year 1949 a factory site of Microliths was found in the Singrauli basin, which distributed (perhaps through exchange) the Microliths in the areas now comprising of Bauda, Bundelkhand and Baghelkhand regions, (Ancient India)

With the Neolithic (ibid) development in the material cultures there certainly occurred a change in the economy of the primitive man. Besides a food gatherer, he became a food producer(Ancient India,no,6) In this age man had not only learnt how to smooth his stone tools by various methods but, had also acquired the knowledge of agriculture and pottery making besides, domestication of animals such as cow, ox, sheep, goat, dog etc. That these people were pastoral-cum-agricultural employing polished stone tools for cutting as well as dressing the wood (Carpentry) can be inferred from the shape of their tools. The man in the Neolithic age was no longer a hunter moving from place to place in small groups but was a member of an organized community having a social life (H.D.Sankalia, 1962) The Mesolithic man lived mainly on the cliffs by the river-side or on isolated groups of dunes with ponds (Personality of India) With little chance for inter-communication, the tracks and routes were in the Mesolithic age mostly undefined. But in this Neolithic age, the people were settled and their needs of acquiring new type of stones became so acute that they had to go out to search for them. Therefore, the tracks became defined and perhaps a system of water-transport also became popular particularly among those who lived in river valleys or along sea coasts (Personality of India p.51-64). In this age, tool-making industry was sufficiently specialized and therefore, some sort of exchange also would have been introduced between manufacturers of the tools and their users. This situation would have given birth to the barter system, and thus a regular trade between the factory sites and those of the consumers would have begun (Pre-historic antiquities vol. 1.p.99).

Some scholars (Man makes himself, p.59) hold the opinion that cultivation preceded the stock-breeding, while others notably of the German historical school, believe that while some human groups were beginning to cultivate plants, other groups were domesticating animals. Stuart Piggot gives priority to agriculture (Pre-historic India, p.44). In his opinion agriculture and domestication of animals in mixed farming may have two different origins, grain growing from the food gatherers and domestication from the hunters, who had already tamed the dog (ibid p.44) The earliest trace of agriculture can be found in the existence of quern-stones along with microsites at Langhnaj (Pre-historic India) This is the first positive proof, as V. D. Krishna swami remarks, as how the original food-gatherers were being metamorphosed into the Neolithic food-producers (ibid) Stuart Piggot does not believe that agriculture in India has an independent origin (pre-historic India) He looks towards the west for the introduction of the art of agriculture in India (ibid) Similarly D. H. Gordon opines that 'until peasant farmers from the west started their settlements in Sind, bringing with them a knowledge of agriculture and the potter's wheel, the inhabitants of India were in a Mesolithic hunting food gathering stage of development (Pre-historic back ground).

As our information about the primitive economy is too meagre and very little stratigraphical data for the Mesolithic sites are at hand, it seems rather early to arrive at any conclusion regarding the source of introduction of farming in India. It may, however, be suggested that as the oldest crop hitherto known is wheat and barley and as Afghanistan (Man makes himself p.60) is also one of the original homes of ancient wheat and barley, we may not look towards the west in searching the region from where the art of cultivation was introduced in India. It may also be pointed out that according to the Vedic tradition it was Asvins, who introduced the cultivation of barley in India (Rigveda viii.22.6.)

According to B. Subba Rao, Kili Ghul Mohammad was the site where cultivation was introduced earlier than Langhnaj and the establishment of large scale agricultural economy in the main river basins of the country spread over a span of 3,000 years (3,500 B. C. for Kili Ghul Mohammad to about 500 B. C. for the megalithic cultures of the south (Fair servis, Quetta Excavations). But at Kili Ghul Mohammad no evidence of agriculture was found, though people there were domesticating animals since 3,200 B. C Therefore, it may be said that while the first phase at Kili

Ghul Mohammad represents the beginning of pastoral phase of Indian economy Langhnaj represents the beginning of the agricultural phase (Supra, p.12) These two phases later on jointly provided a condition of surplus to support trade and commerce. But this scope of trade became wide when the farmers of Baluchistan learnt the technique of pot-making (Pre-historic background). This became the main industry producing a commodity of exchange in the proto historic period. As it was a specialized art the bulk of people had to exchange their animal and agricultural produce for, pottery. As a matter of fact, these traders and pot makers revolutionized the whole economic phase of Baluchistan and Sind (ibid) this was the stage when the traders got recognition in society. Later on, when metal (copper) came into use, this profession received more impetus. Now the farmers began to depend on traders, who could bring copper and the allied metals for their tools. With the spread of the wheel made pottery and the use of copper the type of Microliths also changed (ibid) those, who were unable to purchase or barter the copper implements with the traders, however, continued to use the stone implements having parallel sided ribbon-flake blades. Such microliths continued to flourish on some sites of the Indus civilization (A.Stein, inner most Asia) and on several sites of a later date in the middle regions of India (pre-historic back ground).

This was the stage of mixed economy in which stone as well as copper provided jointly the basis for the technical development. This mixed culture of stone and copper (or bronze) (Pre-historic India p, 67) prevailed during 2,600 B. C.-1,600 B. C (Piggot, Pre-historic India) and is identical with the chalcolithic cultures of the western countries. The chief characteristics of this phase were 'social surplus (ibid) sufficient to support the trade and commerce of Harappa and Mohenjodaro, this 'surplus (ibid, p.70) created by the Indus Valley agriculture and industries provided sound footing for the establishment of trade and commerce.

In South India, this chalcolithic phase of development was lacking. Here copper age was either brief (B.B.Lal, J.R.A.S. vol.15) or altogether absent (revealing Indias past) Stone age-culture continued till early historic days (Ancient India, no.4p.200) and people passed directly from the phase of stone to that of iron. The reason why people in South India used implements of stone and iron and not of copper is explained by D. D. Kosambi. He says that besides that the South India is poor in copper, it may also be said that the 'granite and trap-rock of the Indian triangle

that just into the sea provide ample material for primitive tools, which can be picked up in profusion. In addition, there are good sources of iron in Dharwar type outcrops, where thick encrustations are to be found with little or no digging even today (Kosambi, Introduction to the study of Indian history, p.19). Therefore the trade movement in South India in comparison to that of the Indus valley where chalcolithic culture found full scope

THE MATERIAL CULTURES DEVELOPMENT IN EARLY ANDHRA:

Protohistoric sites the region is studded with a large number of early historical sites. Intensive explorations revealed early historical mounds almost at every alternate village. Evidently the region, comprising the districts of Karimnagar Warangal, Nizamabad and Medak, was thickly inhabited during the Satavahana period and it may be possible in near future to trace out its political nucleus. This view is strengthened by the account rendered by Yuan Chwang, who had travelled southward from Kosala for about 240 km. (900 Li) to An-to- (K.A.N. Sastri 1939, p.98) or Andhra, the modern Karimnagar region with its capital 'Ping-Kilo', transcribed: by M. Julian as Vinghila. Alexander Cunningham identifies, it with Elegandal (Cunningham 1975) about 8 km. from Karimnagar (of course, this was the position of the region in the year 639-40 a.d.). Elegandal has now a late medieval fort at the top of a precipitous hill. Nowhere in the vicinity the traces of an early historical town could be seen.

We have already seen in the earlier chapters that the Dravidians, who attained a high degree of civilization, might have drifted to South India and settled down there permanently. The name of South India as Dakshinapatha occurs for the first time in the Rigveda in which it is referred to as the home for the exiled. It was beyond the frontiers of the Aryan world. Dakshinapatha was mentioned by Boudhayana coupled with Sourashtra. In the Nalopakhya of the Mahabharata, Dakshinapatha is placed beyond Avanti (Ujjain) and the Vindhya and to the south of Vidarbha and Kosala.

The Janapadas, situated to the south of Vidarbha (Vatsagulma) and South Kosala were known, as Assaka and Mulaka. We find from Assaka Jataka (Jataka Stories, 1957) that a king by name Assaka was ruling in Potali under the kingdom of Kan. According to Suttanipatha, (Rayachaudary 1972) Assaka was situated on the banks of river Godavari. In Chulla Kalinga

Jataka (Suttanipada p.977 Rayachaudhary, 1972) it is stated that, when Kalinga was reigning over the city of Dantapura in Kaliaga country, Assaka was the king of Potali in Assaka country. Evidently both the regions were once contiguous. The Assaka Janapada existed in the time of the monarchs Renu and Dhatarratha (Dharita Rashira). It was ruled by Brahmadata, king of Assaka as a contemporary of Satabhu, king of Kalinga, Vessabhu, king of Avanti, Bharata, king of Souvira, Renu, king of Videha, Dhataratta, king of Anga and Dhataratta king of Kasi (Jataka,1897).

In Vayupurana (Rayachaudhary 1972) Asmaka and Mulaka were mentioned as the sons of the Ikshvaku family. The Mahabharata speaks of the royal sage Asmaka (Asmaka named rajarshi) as having founded the city of Pedana, Panini (Asthadhyayi 1962) makes a mention of Asmaka which was in the interior of the Deccan and watered by the Godavari. The commentator Bhatta swamin identifies Asmaka with Maharashtra.

We learn from the Nasik record of Queen Goutami Balasri that her son destroyed the Sakas, Yavanas, Pahlavas and his dominion extended not only over Asika, Asaka (Asmaka) on the Godavari and Mulaka but also over Surata, Kukura Aparanta, Anupa, Vidarbha and Akara Avanti. It is believed that the Mulaka country extended to the south-eastern region of Andhradesa parts of Cuddapah and Guntur districts and the Medak district are referred to in the inscriptions and Telugu literature, until the 15th century A.D., (Venkata ramanayya 1950) as Mulakanadu or the country of Mulakas, (Venkataramanayya, 1950) Rayachaudhuri (Rayachaudhary ,opcit) identified Potana or Potali with Bodhan (in Nizanmbad district); but this identification may not be correct. Phonetically the word Pecana or Potali is akin to Paithan. Moreover it was mentioned specifically that it stood on the banks of Godavari and Paithan actually stands on the river. In Karimnagar region there is one village by name Mulugu; and its namesake is a taluk headquarters in Warangal district. Andhra Brahmins of a sect, who drifted to the coastal region from Telangana in the past, are still known as Mulakanadu Brahmins, a sub-sect of Telanganyas. It is evident that Paithan was exactly Potali or Podana, the capital of Asmaka country and in all probability the present Karimnagar region was the Mulakanadu.

In the fourth century B.C. the Magadhan Empire was greatly expanded under the powerful but unpopular dynasty of the Nandas, who according to Puranic account, conquered all rival monarchs and became the emperors of the whole of India. The inclusion of Kalinga in the Nanda Empire appears to be confirmed by the famous Hathigumpha inscription of Kharavela, who ruled over Kalinga in the 2nd century B.C., in connection with the construction of an aqueduct. Nanded, on the upper reaches of the Godavari, was sometimes identified with Nounanda Dhera, indicating the extent of Nanda power into the Deccan.

There is no evidence of the Mauryan emperors, who succeeded the Nandas, having undertaken wars of conquest in the south, but they had succeeded to the southern possessions, as a matter of fact, by overthrowing the imperial dynasty of the Nandas. Jain traditions affirm that when Bhadrabahu, the last of the saints, prognosticated a famine of 12 years duration, the Mauryan emperor Chandragupta abdicated the Magadhan throne and migrated to the south with the saint and his pupils. According to Plutarch, Chandragupta overran and subdued the whole of India with an array of six lakh men. Kalinga was conquered by Asoka after a terrible war in which one hundred and fifty thousand were died, many times that number wounded. No other conquest is attributed to this great sovereign. Some parts of the Deccan may have been taken by force of arms during the reign of his father Bindusara, who, according to Taranath, destroyed the kings of 16 towns and made himself the master of all the territories between the Eastern and the Western seas. (Jayaswal 1916) Asokan inscriptions were found at Maski, Koppal, Brahmagiri, Siddapura, Jatingarnesvara, Udegolam and Nittur in Karnataka and at Erragudi in Kurnool district of A.P. (Sircar D.C. 1965) A considerable portion of the Deccan was indeed ruled by the vice-regal princes of Suvarnagiri and Tosali (Dhouli), the Mahamatras of Isila and Samapa and the officers incharge of Atavi or the forest country. The southern frontier of Asoka's Empire did not extend much beyond the locality where the southernmost group of his inscriptions was discovered viz. at Siddapur, Jatingarneswar, and Brahmagiri. Roughly it touched the line, drawn along 14° Lat. Many writers believe that with the dismemberment of Mauryan Empire after the death of Asoka, Satavahanas established a monarchy over the entire Deccan, and seized the imperial throne of Magadha, which was held by them for some time.

Large numbers of Satavahana coins have so far been recovered from many parts of the Deccan. But none of these coins represented Simuka, the founder of the Satavahana dynasty. Recently about 6 coins, attributed to Simuka, were presented by one Sri Narahari to Parabrahma Sastry (P.V. Parabrahma Sastry 1978) who identified them as belonging to Simuka Satavahana. The coins have on the obverse an elephant to the left with trunk hanging with traces of Ujjain symbol and the legend, 'Siri Chimuka Sata and on the reverse a Ujjain symbol with double circles and a crescent on one orb. Parabrahma Sastry identified Chimuka of these coins with Simuka of the Nanaghat label inscription and the founder of the Puranic list of the Satavahana dynasty. Palaeographically these coins are assignable to the last part of the 1st century B.C. In the same paper Sastry identified a few more coins with legends, Go Bhadasa as that of Bhagabhadra, the 5th Sunga king. The third variety belonged to Samagopa, which were identified with Samabhagha or Bhagavata, the 9th member of the Sunga dynasty. Therefore it may be reasonable to believe that the Sunga kings of Vidisa branch wielded authority over the Andhra country, the early Satavahanas being their subordinates.

SITES AND THEIR DISTRIBUTION:

As noted in the introduction, the Karimnagar region is marked by a number of early historical sites almost in every alternate village. It is really puzzling to find why they are mainly concentrated in the Karimnagar region. It is likely that the political nucleus of the whole or a part of the Deccan might have been situated in the region; secondly the population during Satavahana period must have increased manifold; thirdly it might be a commercially important region, traversed by the ancient trade routes; and lastly, agriculture being the main occupation of the people, they found the area, marked by arable alluvial black soil plains, congenial.

Unlike the settlements of their predecessors, the people, during the Mauryan and later periods, did not particularly select sites in the vicinity of major rivers. They spread far and wide into the interiors in quest of arable land. But there is no evidence of irrigation. Probably dry crops, such as maize, jowar and ragi, besides rice, formed their staple diet and supplemented by plenty of fauna and domesticated cattle. They already perfected the making and usage of well-burnt brick and this one of the reasons why they were not particular in settling down in the vicinity of hills. The bricks used are as big as 50 to 55 cm. long and 25 to 28 cm. broad. It was so well-burnt that

some of them were actually fused by intense heat of the kiln and are as hard as a stone, just as we have noticed a perceptible change from the Neolithic to the Megalithic; we could find a similar phenomenon at the inception of the Early Historical period.

SETTLEMENT PATTERN:

Kondapur is situated in Medak district about 70 km. Northwest of Hyderabad. The village is conspicuous on account of several historical mounds close by, one of which was excavated in the last by the Department of Archaeology under the erstwhile Hyderabad state the excavated mound is adjacent to a small stream, feeding a small tank nearby. It is at an altitude of 545 m, above M.S.L. and 49 M above the surrounding ground level." Excavation at this spot 1940 revealed some religious and secular buildings of the Satavahana period, which are architecturally neither wry imposing nor even, beautiful but quite efficient and skilful, though somewhat plain.

PEDDABANKUR:

"Peddabankur (18° 30' N. Lat. 79°-30' N. Long) is presently a small village in the Peddapalli taluk of Karimnagar district. The historical site, with an extent of 30 hectares, is situated adjacent to the Karimnagar-Peddapalli road, which intersects the site in the north-south direction; the site is bounded by a nullah, as ancient as the cultures represented there, known as Hussaini Vagu, about half a kilometer towards the west and one kilometer towards south. It is generally dry in summer, yet the people draw water by scooping in the bed. The surrounding hills are formed of granite and quartz, occasionally traversed by dolerite dykes. The secondary minerals such as carnelian, jasper, chalcedony, crystal and quartz were freely available for the use of the ancient tool and ornament makers. Tile site and its surroundings are covered by alluvial black soil, overlying, disintegrated granite morrum The black soil cover, denuded at a few places exposing the granitic morrum, was capped by a micro lithic industry. The excavation, conducted by the Department of Archaeology and Museums, A.P. at this place for several seasons under the supervision of the author, revealed many brick structures, cisterns, wells and elliptical rubble structures, besides an array of antiquities such as pottery, iron, copper and terracotta objects, including a big collection of punch-marked silver, Roman denarii and Satavahana coins.

DHULIKATTA:

Dhulikatta, also situated on the right bank of Hussainivagu, is at about 10 km. towards west of Peddabankur. The name Dhulikatta may be a corrupt form of Dhuli Kota, which literally means a mud fort. The villagers know very well the existence of a mud fort, which is popularly called the Kota area. It was deserted either due to a conflagration or due to natural decay but the memories of the ancient glory still linger in these minds of the people. They have pointed out to the author some other areas in the proximity known as Rajula Kunta or Yenugula Cheruv (elephants' pond).

Peddabankur was a Satavahana village site but Dhulikatta promised to be a walled-town of the Andhras. As attested by Megasthenes, (M.C.Crindle, 1877) the Andhras have built numerous villages, 30 fortified towns and raised an array of one lakh infantry, two thousand cavalry and one thousand elephants. (IBID).

The historical site, with an extent of 18 hectares of land, is roughly 6 m. above the plains and enclosed by mud ramparts, raised with the earth dug out from the trenches outside the fort, which formed into a deep moat. As at Peddabankur the surrounding area of Dhulikatta is covered by fertile black soil.

About a kilometer exactly to the north of the historical mound a Buddhist Stupa was discovered by the author and later excavated. It is situated at the confluence of the above said Hussainivagu and another nullah coming down from the north. In the vicinity, a kilometer away, is a modern village by name Vadakapura, probably derived from two words, Vata-Kapura, the latter being a much familiar word during the Satavahana period. As there was no anthropomorphic representation of the Buddha at the above Stupa and in the light of the Yaksha and other figures depicted on the ayaka slabs, the stupa may belong to the Hinayana sect.

CHINNABANKUR:

The early historical mound is noticed towards the south-west of the present hamlet of Chinnabankur, which is 4 km. away towards north of Peddabankur. The low mound, not exceeding 2 m. above the ground level, is roughly 5 hectares in extent and littered with typical

early historical pottery, such as red polished, black and red and coarse red, etc. The soil cover is black alluvium.

VEMNURU:

The village Vemnuru is 2 km. away from the right bank of river Godavari and approximately 15 km. The village is approached by a muddy cart-track. The early historical mound about 3 m. high from the ground level is in the middle of arable plains and mango groves with an extent of 3 to 4 hectares. It is eroded at several places and a large number of early historical potsherds found strewn over. The presence of iron slag and iron ore may indicate the existence of an indigenous iron industry.

The village is at 2 km. from Karimnagar-Laxettipet road on eastern side. In the vicinity of the village, there is a hill locally known as Munulagutta, with a precipitous face. At the top of the hill, about 20 m. above the M.S.L. there is a plane surface, considerably spacious and marked by several early historical structures, raised of random rubble. The architectural plan of these structures is square with openings towards east. Close by these structures a few rock shelters are noticed over one of which is an early Brahmi label inscription. These rock shelters were, in all probability, inhabited by Jain monks. These included places overlook the sandy expanse of the flood plains of river Godavari.

KOTILINGALA:

Kotilingala, situated at the confluence of Peddavagu and the Godavari in the Peddapalii taluk, is about 65 km. from Karimnagar and 5 km. from Munulagutta. The early historical mound, with a height of nearly 6 m. above the plains, is roughly 50 hectares in extent. It is the biggest mound so far discovered. As at Dhulikatta the mound at Kotilingala is also encompassed by a mud fort with several gates, opening towards the cardinal points. The entire mound is scattered with early historical pottery, beads, bricks, querns, etc. Some of the rain gullies which cut across the mound showed the cultural strata as thick as 2 to 2.5 m. and marked by several habitation floors. Adjacent to the bank of river Godavari the fort wall runs to a distance of more than 300 m. The bricks used for the structures measured 50 to 55 cm. long, most of which were ransacked by the villagers' to be utilized for the construction of their houses. In fact the entire village of

Kotilingala is now built with the early historical bricks. Iron slag and ore are found in plenty. Towards the north of the fort and adjacent to the water course of the river the brick structures in a long row, which are either square or rectangular in plan, indicate the presence of a wharf. The high mud fortification, protected on the east and the west by the nullah and the river Godavari respectively, and the brick structures near the water course are reminiscent of a once commercially and politically important town. It is from this place the above mentioned coins of Chimuka, the founder of Satavahana dynasty, were collected.

On one of the stone slabs, arranged as a fencing wall to a field on the way to Munulagutta from Kotilingala, a few label inscriptions in the Brahmi character of second century B.C (P.V.Parabrahmasastry, 1978) were noticed. On another sandstone pillar, now lying in a paddy field about a kilometer away, there is a label inscription, which reads 'Nagagopinikaya' in bold double-lined ornamental characters of 1st century A.D. In view of the description of the river in 'Gatha Sapthasathi' and the surface finds, it can be inferred that the site was one of the strong holds of early Satavahanas.

KACHAPUR:

The site is situated by the side of Peddapalli-Choppadandi road, at the turn of which it takes towards Kachapur. At the northern extremity of the site there are low hillocks and outcrops of granite. The soil coves of black alluvium was eroded by rain gullies, which exposed the ancient potteries such as black and red, red polished and coarse red, besides profuse occurrence of brick bats. The mound is rather low compared to other sites and is about 6 to 7 hectares in extent. Iron slag was also seen.

BODAGUTTA:

It is about 9 km. from Peddapalli and situated on the foothills of Bodagutta on the Peddapalli-Ramagundam road, the area conies under the revenue jurisdiction of Kannala village. Besides the typical pottery, a fragment of an elongated neck of a sprinkler was also collected. The area extends to about 5 hectares. The soil cover is brownish in colour and fertile.

BOMPALLI:

The village Bompalli is situated within 5 km. from Peddapalli. The historical site is in between two hillocks, on the left side of Peddapalli-Dharmaram road and spreads over an area of about 7 hectares. The low mound is covered by blackish brown soil and marked by ashy patches.

RACHAPALLI:

The village is at about 15 km. from Peddapalli. The site is noticed on the foot hills near the way to Paidichintalapalli from Rachapatli and is about 7 to 8 hectares in extent.

PAIDICHINTALAPALLI:

The early historical site was noticed on the right bank of Bandala-vagu (near the project site) among the outcrops of granite. The soil is brown and very fertile. Exploration yielded a large number of brick--bats and typical potsherds. This is also a low mound, extending to about 8 hectares.

KHADEEMKANAGARTHI:

The village is at about 9 km from Peddapalli, in the interior from Peddapalli-Dharmaram road beyond Bompalli. The soil cover is Black with a spread of 8 to 10 hectares. Intensive cultivation over the site threw up a good quantity of early historical pottery. Slightly away from the site are found a dozen medium-sized Megalithic Cairn circles.

KARNAMAMIDI:

The village Karnamamidi is at about 16 km. from Laxettipet, on the axettipet Manchiriyal road near the north bank of river Godavari. Adilabad district. The site is on the left bank of a nullah to a height of 3 to 4m from the surrounding plain. This is another extensive early historical site which spreads over 20 hectares. The eastern part of the mound revealed continuous habitation until the medieval times Exploration at the site yielded profuse quantity of typical pottery, bricks, etc. As the site is included in the flood plains of river Godavari much erosion is noticed. The soil is black with ashy patches. River Godavari separates the Vemunuru, Kotilingala sites of Peddapalli taluk from this site.

BODHAN:

The present town of Bodhan, in the Nizamabad District, is another extensive early historical site covering an extent of about 1 km. within and without the town of Bodhan. It is no wonder that some writers believed that it was once the capital of Asmaka country, known as Potali or Potana. According to Suttanipatha the town was situated on the banks of river Godavari. But the river is now 10 km. away from Bodhan. Except in phonetic resemblance, Bodhan cannot lay claim on the capital of Asmaka country, better than any other historical settlements near the modern villages like those of Kotilingala, Karnamaridi, etc. on the bank of river Godavari,

Nonetheless, the settlement appears to be much bigger than any of those mentioned earlier. The entire town is now enclosed by ancient mud ramparts, rising to a height of 9 to 12 m. on the west of the village, and a double fortification interned by a deep moat. The inner fortification encloses a high mound, where the historical citadel must have existed. On the top of the mud fortification the author has collected early historical potsherds by which it could be surmised that the mud ramparts were raised during the post Satavahana period or the early ramparts were reinforced during the medieval times, digging out early historical habitation in the process.

Bodhan was also the earlier capital of the Chalukyas of Vemulavada during the reign of Arikesari II (930-955 A.D.). It may be recalled that In the recent past, an inscription of the time of Arikesari II, which records' the name of 'Pampa' the famous author of Kannada Bharata, was recovered in the vicinity of the mud ramparts.

Unfortunately the whole of the early historical site, outside the town limits, was cut off and leveled for wet cultivation. Even the present town of Bodhan stands partially on the early historical mound.

VADLURU:

It is a small village in Kamareddi taluk of Nizamabad district, surrounded by a mud fortification, rising to a height of 6 to 9 m. The mound, enclosed by the fortification, was gradually hollowed out by the villagers, abandoning only segments of the original fortification, adjacent to the

village on the north Exploration inside the fort revealed a large amount of early historical pottery, consisting of rim fragments of red polished ware, dark brown ware (tan) and dishes of black and red ware, sometimes white-painted concentric rings at the base inside, shreds of dull red ware lid cum-bowls, etc. Undoubtedly there was a flourishing early historical settlement at Vadium from the pre-Satavahana times and the occupation continued till the Kakatiya period. The construction of the lake, adjoining the fortification towards north, may be attributed to the Kakatiyas.

The thickness of the total habitation deposit is over 3 m. which contained many ashy pits and post-holes. Typical Satavahana brick pieces were also collected.

KOLAKONDA:

Kolakonda might be a short form of Kolamikonda, in view of its location in the vicinity of a huge lake, Ramasamudram, abutting a range of granite hills. The early historical site at Kolakonda is noticed in an area of about 50 hectares, over the gradient plains between the Chinnagutta and a nullah, which is a tributary to the river Maneru. Traces of early historical habitation were noticed up to half the height of the hill. The surface collection included wares of black and red, red polished, coarse red and all black. Besides, there is also a good collection of Neolithic stone-axes. The entire mound, to a depth of more than 4 to 5 meters, was filled with black alluvium, most of which is now dug out by the villagers for manuring their fields. Only small chunks are left over here and there.

Excavation by a few trial trenches was conducted by the Department of Archaeology under the supervision of the author at different places, which revealed a deposit of Megalithic habitation of considerable thickness and capped by the Satavahana. With the exception of a few post-holes no traces of permanent structures were noticed.

POLAKONDA:

The early historical site at Polakonda was noticed at the foothills of Peddagutta towards the south to an extent of nearly 10 hectares. The Department of Archaeology and Museums had undertaken trial excavations, which revealed 3 periods of occupation viz. the pre-Satavahana,

Satavahana and the medieval. The pre-Satavahana phase was marked by a majority of brown ware, besides black and red, black brown and Stark brown wares, with a mix up of red polished ware. The Satavahana Phase was characterized by a brick structure over rubble foundation. In one of the cuttings a brick wall of 2 courses (each brick measuring 54x26x7 cm.) was noticed. The lower courses have a 10 cm. broad offset the western and southern walls measured 5.10 m. long 0.55 ME.T. 9 broad; the other walls were ruined. The bricks were well-burnt and consisted of profuse mixture of sand, grass and small twigs. No husk was found. In the middle of the structure, a cistern 1.70 x 1.80 m. was noticed. Internally it measured 85 X75 cm. with the present depth of 60 cm. The floor was paved with brick, making it water-tight. Post-holes were noticed over the walls at regular intervals, possibly meant for the erection of wooden posts for supporting the roof.

From the pre-Satavahana level a solitary potin coin, inscribed in early Brahmi script and datable to around 2nd century B.C., was found. The legend is not very clear but reads as "Mahatalavarasa Vijasamikasa Seva Sabha". In the middle there is a beautiful figure of horse, standing to left; on the reverse nothing is visible. In this connection it may be recalled that a terracotta seal, recovered from pre-Satavahana level at Peddabankur, is inscribed with a Brahmi legend reading "Mahatalavarasa Vijasamikasa Seva Sabha". Some coins belonging to Maharathi Vilivayakura, and Sivalakura were found in the Kondapur region in the past. It is now evident that this region was governed by Maharathis and Mahatalavaras either under the early Satavahanas or the earlier. (Analysis based on V.V. Krishnasastry)

CULTURAL DEVELOPMENT OF ANDHRA FROM AGRICULTURE TO URBAN:

Around the Andhradesa the basic pattern of economic life did not seem to have undergone" much of a change from what it was in the Neolithic-chalcolithic-megalithic phase. Archaeological excavations carried out so far at the Asokan sites, at Maski and Brahmagiri, for instance, do not reveal any significant difference from what has been laid bare in other sites of the Andhra Region, for instance, at Amravati and Bhattiprolu where one "comes across epigraphic records written in Asokan Brahmi script and Prakrit language and where, according to tradition, Asoka is said to have raised more than one Buddhist establishment. It is, therefore, difficult to resist the hypothesis that Asoka's interest in the lower and eastern Deccan lay more in

the exploitation of the mineral resources, as hinted before, of those regions than in anything else; the propagation and penetration of Buddhism seem to have been a direct consequence of the Maurya Political and Economic dent in these Regions. This would explain why, in so far as the lower and eastern Deccan were concerned, Buddhism, before the advent of the Satavahanas, could not make much of a dent as it did in other regions in the north, east and west where Asoka has extended his Empire.

But with the incorporation of the Andhra region within the far flung empire of the Satavahanas and more particularly, with Vasishthlputra Pulumavi's setting down in the Krishna-Godavari delta with Dhanyakataka (Dharanikota) as his metropolis in about the beginning of the second century A.D., the Andhra region, at any rate the Krishna-Godavari valley and the delta, seems to have directly felt the pressure of a new socio-economic organization. The basis of this organization appears to have been an improved method of agriculture, relative to what it was in the pre Satavahana times when agricultural methods do not seem to have outgrown the megalithic stage, and more intensified activity in agriculture. This is quite evident from an analysis of the epigraphic records as much as of the relief sculptures.

The Satavahana and Saka-Kshatrapa inscriptions of the western Deccan (which was the original homeland of the Satavahana dynasty) contain clear glimpses of an intense agricultural activity in this region, which was based on a somewhat systematized organization of land, land measurement, land transactions, irrigation, methods of cultivation of more than one variety of rice and other operations connected with agriculture. An analysis of records of land transactions during the reign of the Early Satavahanas in this region shows very clearly that insofar as the western Deccan was concerned the main consideration was the reclamation of new lands, establishment of new agricultural settlements and bringing of waste land under the plough for which the dunes were granted a number of concessions.(Sirar .D.C.1965) There are records which includes the threat that if a piece of land already donated, has not been cultivated and proper agricultural use made of it, the village would not be allowed to be settled.(Luders list 1124) Indeed, epigraphic evidence relating to the Satavahanas in the western Deccan leave no room for doubt that the most important source of production was agriculture. It is significant that the very Pauranic name Salivahana of a Satavahana monarch, is associated with a method of

cultivation of a particular variety of paddy, called Salidhanyam. Besides, the evidence of inscriptions is fully substantiated by what one gathers about agriculture and agricultural operation in the western Deccan during the Early Satavahanas, from the well-known GathaSaptasati, a book of Prakrit lyrics by Hala.(R.D. Basak 1971) it speaks of various kinds of paddy, of sali, vrihi and syamaka; of various kinds of pulses, of priyangu, presumably a kind of Millet, Sugar cane, Haridra (Turmeric) and karpasa, of the various agricultural seasons, of Agricultural Labour (pamara) and of more than one method of irrigation, a fact which is upheld by the epigraphic records as well.(E.I..vol.XVI) References are also found, to the cultivation of mango, palmyra-palm and betel-leaf plantations, both in the inscriptions and in the Gathasaptasati. (Luders list 1133).

There is every reason to assume that when the Satavahanas came to settle down in the Andhra valley and the delta they seem to have introduced into the new region the heritage of traditional agricultural practices and produces which they had known and put into operation in the Western Deccan. Evidence of their having done so in the eastern Deccan with special reference to the Andhra valley and delta which were potentially much richer in agricultural fertility, is not as profuse as in the Western Deccan. Nevertheless whatever glimpses we have in this regard in the Satavahana and the Ikshvaku inscriptions as much as in the sculptured reliefs, is indicative enough of their active attention which was bestowed on agriculture and all activities connected with it during the regime of the kings of these two dynasties.

A countless number of epigraphic records recovered from Amravati, make reference to the gahapatis and their wives and relatives (Sivarama murthy 1956) who figure as donors of one or other item of the great monastic establishments of Dhanyakataka. If the original toponym of the Satavahana metropolis in the lower Eastern Deccan, namely, Dhanyakataka, is any indication, (referred to in the inscriptions variously as Dhanyakataka, Dhamrakata, Dhamnakataka, Dhanakata, Dharhnakada and Dhanyaghata) it can then be inferred that the city was so-called because of its importance as a centre of paddy cultivation and paddy trade. Be that as it may, whatever little one knows of Buddhist social organization at the grass-root rural agricultural level, one can easily conclude that the gahapatis were relatively richer agricultural householders owning considerable landed property which was agriculturally productive and employing a

considerable number of agricultural labour; in other words, they were big peasant proprietors who were the leaders of the rural Agricultural Communities. That quite a few of them were substantial enough, economically speaking, is more than proved by the fact that they could make gifts and endowments to the local Buddhist communities and for their establishments. That quite a good many of these landed Agricultural interests were also owners of large flocks of cattle is also proved by more than one Amravati and Nagarjunakonda inscriptions. (Burgess 1887) The latter, namely, the epigraphic records recovered from the ruins of Nagarjunakonda, refer to a number of significant words (akshayanivi (E.I. vol.xxxiv) hala measurement, (ibid) for instance) which are connected with land, land-system, land-measurement and agriculture. The records also speak of khetas (ibid) or plots of agricultural land, govratas (ibid) (pasture grounds), tadagas (ibid) (tanks), talavana (ibid) (palmyra plantation) etc. Ehuvala Santamula's description in the inscriptions as the giver of lakhs of cows and lakhs of hala measures (Sircar, D.C. 1942) of land is as significant as Gautamiputra's description in the Nanaghat inscription. (ibid) This seems to indicate that the social change which had been taking place in the Western Deccan during the first century A.D. was being reenacted in the lower Eastern Deccan under the aegis of the Satavahanas and the Ikshvakus. Despite evident exaggeration in such descriptions, the fact remains that cows and land, both symbols of agriculture, were considered the most important items in the contemporary regional social and economic situation. It is further significant that tank irrigation played an important role in this region as it had done earlier in the western Deccan which is so clear from the evidence of Nasik cave (Epigraphia Carnataka, vol.xiii) and Junagadh rock inscriptions.(Sircar,D.C.Opcit) In the eastern Deccan excavations at Nagarjunakonda, (Sircar D.C.opcit) has revealed traces of an ancient irrigation canal with an average width of 50 feet and depth of 16 feet in the south-east corner of the valley.(Sharma k. 1944-45) Archaeological explorations seem further to indicate that there were two old tanks at the site of ancient Tandikonda in the Guntur district.(D.R.Das 1969)

Neither the inscriptions nor the archaeological explorations and excavations have yet revealed to us, one must confess, any material evidence of large-scale heavy agricultural operations in the lower and eastern Deccan. But when one considers the countless number of references to the gahapatis, to such technical land-tenure and land-measurement terms as akshaya-nivi, to agricultural labour, to corn dealers, to large herds of agricultural cattle, to hala-measurement of

land and to irrigation tanks, one can perhaps visualize that here was a socio-economic base in the lower eastern Deccan at any rate, which was primarily fed and sustained by rural agriculture. (Amitharay)

From whatever little evidence we have of settled agricultural operations in the lower eastern Deccan, one can perhaps assume that the process of the settlement of Agricultural villages had already started from at least the time when the Satavahanas came to exercise their political and economic authority in these regions, if not from the time of the Mauryas. We have enough evidence in the Amaravati inscriptions themselves, of villages and gahapatis to enable us to visualize the landscape of the Krishna-Godavari valley dotted with villages with agriculture as the main source of their sustenance. Besides, there is at least one Nagarjunakonda inscription which speaks of five villages's clustered in permanent endowment in favour of a Buddhist sect (E.I.xx, p.19&23). There thus seems to be no reason to doubt that the process of formation of villages, even of their being clustered together for certain purpose, must have started at least from the beginning of the Satavahana regime and their political organization in this region. This process must also have been at work through the centuries that followed so that we hear of satasahasra jagati, a cluster of six thousand villages on the southern bank of the Krishna. Another circle in the same part of the eastern Deccan was Vengimandala which is described as an area of sixteen thousand villages in the Pithapuram inscription of A.D. 1186. (Ray chaudhary 1971)

The sketch just outlined, of agriculture and rural settlements in the lower eastern Deccan is further upheld by a large number of representations of cows, bullocks and bullock-carts in the sculptured reliefs of Amaravati, Nagarjunakonda, Goli, Ghantasala and Sannati. There is no doubt that cows and bullocks were extensively used for purposes of agriculture as well as an important means of local transport. One may incidentally point out that whereas in the reliefs of Sanchi, for instance, it is the buffalo that catches one's eyes; in those of the Godavari-Krishna valley the most important domesticated animal seems undoubtedly to have been the cow and the bullock.

The period dominated by the Later Satavahanas beginning from Gautamiputra Satakarni and the Ikshvakus may perhaps be taken as marking a significant change in the social economy of the

Andhra region. Archaeological records including the epigraphic one, make it perfectly clear that the age of the megaliths was already a thing of a distant past and that a village economy based on extensive rural agriculture, had replaced the older tribal economy based on limited cultivation with primitive tools and in a primitive manner, presumably of 'hoe' and 'shifting' cultivation. The countless number of villages mentioned in the inscriptions belonging to the regime of these two dynasties and covering the entire Godavari-Krishna valley and the delta seem to indicate that a new agricultural economy had come into being to transform the tribal way of life of the past into a flourishing rural agricultural economy.

One may guess that there was perhaps a technological basis for such transformation, a basis provided by a more wide-spread use of agricultural tools made of iron. Unfortunately we do not have much evidence in this regard except what was already been referred to. The anonymous author of the *Periplus of the Erythrean Sea* says that large quantities of paddy along with cotton, raw and manufactured, used to be exported from contemporary Ariake and Barygaza (Broach).(Schoff 1912). It is difficult to say how much of this paddy used to come from the Andhra region; from the context of the evidence of the *Periplus*, it seems that what was being referred to originated not from the Andhra region but from the western Deccan.

The manifestation of social change towards a higher level of agricultural economy is also clear from the evidence of the Satavahana and Ikshvaku epigraphy. These epigraphic records are replete with references to the gahapatis who were none but the rich agricultural peasants holding large areas of cultivated and cultivable lands, and hence wielding positions of local power and prestige. The frequent mention of the gahapatis who figure as donors to the religious establishments of the Andhra region is perhaps good evidence of the fact that the institution of gahapati had become firmly established already from about the first century A.D. This presupposes that large scale agriculture had already come to be recognized as a rich source of wealth. It also presupposes that some kind of efficient organization of land must have also been taking place. The large number of evidence of grants of cultivated lands to individual Brahmins and to temples and monastic establishments is perhaps a pointer in this direction.

There are at least two pieces of evidence in Amaravati inscriptions, of the sons of gahapatis giving up their paternal occupation and taking to trade and commerce,(Sivaramamurthy .C.opcit) which presumably they found more profitable. It is pertinent to mention that we do not have evidence of a trader or a merchant changing his occupation in favour of agriculture. There is a long series of Epigraphic records to show that sons and daughters of gahapatis used to enter the monasteries as monks and nuns taking with them their respective share of property which were made over to the establishments which they joined. (ibid) These pieces of evidences tend to show that there was some kind of mobility between the agricultural occupations and those of trade and commerce as between the laity and the religious brotherhood.

One is now perhaps in a position to state, in howsoever summarily a manner, the socio-economic situation of the Andhra region roughly from about the time of Asoka to about the beginning of the fourth century A.D. in the following way:

MATERIAL CULTURES AND SOCIO - ECONOMIC TRANSFORMATION:

A study of the archaeological sites strewn all over the region will help us contextualize iron in the overall material setting and to determine its role in the socio-economic transformation of the region in terms of time and space. The other associated finds may help us in determining the extent of inter and intraregional contacts in terms of trade and ideology.

Pochampad (V.V.Krishnasastry, 1983) is a megalithic site in Nizamabad district on the right bank of the river Godavari. During the excavation, it has produced megalithic black-and-red ware. The iron objects recovered from the site include lances, javelins, daggers, sickles, cross-strapped hatchets and a chisel. In all, five megalithic burials were exposed from the site while a skeleton of a horse was also found.

Another site in Nizamabad district is Vadluru (ibid) located in the Kamareddi taluk of the district. It was a flourishing early historical settlement which came under occupation in the pre-Satavahana times and continued till the Kakatiya period. However, details of the findings from the site are not available.

In Karimnagar district, Budigepally (IAR, 1976-77) is a multi-cultural site where excavation has revealed three periods of occupation Neolithic, megalithic and medieval. The Neolithic period is represented by hand-made burnished - grey and dull-red-wares, microliths and Neolithic Celts, whereas the megalithic period is represented by the black-and-red ware and associated wares. After the megalithic phase, there seems to have been a desertion of the site though it was re-occupied in medieval times which are represented by "glazed pottery and associated wares.

Dhulikatta, (IAR, 1974-75) literally a mud fort, is situated on the right bank of Hussaini Vagu River in Karimnagar district. It is an early historical settlement. A baked-brick wall of six courses running across the mud fortification and another wall of five courses was encountered here and on the basis of pottery, including black and red, dark red and red wares and two Satavahana coins, the structures can be dated to the Satavahana period. The site revealed two brick-built gateways, one outside and the other in the middle. The outer gate appears to be the earlier one and there were guardrooms on either side of the inner gate. The residential complex of the site was lime plastered on walls and the flooring was brick paved and lime concreted. It also revealed a Buddhist stupa of the last quarter of the 3rd cent. BC with subsequent veneering in the first quarter of the 2nd cent BC two panels of the stupa was found inscribed in Brahmi characters assignable to the 2nd cent. BC. Granaries and wells with sewerage are noteworthy structures of the site. The ceramic industry of the site comprised of black and red, dark red, red ware, brown ware, pale red ware and red slipped ware. Other noteworthy finds include coins of Gautamiputra and later kings, a terracotta figure of a Roman (?) trader, a kaolin figure of Yaksha, Roman coins in base silver, copper objects such as a figure of mother and child, antimony rods, rings, knives, terracotta objects like mother goddesses, moulds of punch marked coins, ivory button seal and comb, beads of terracotta, amethyst, crystal, jasper and faience, and iron objects such as agricultural implements, ladles, lamps, nails, rivets and hinges.

Another excavated site in the Karimnagar region is Kadambapur, (IAR, 1974-75) situated on the river Maneru, a tributary of the Godavari, and eight kilometers north of Peddabankur. It is a megalithic habitation cum burial site where five megaliths and a small area of habitation have been excavated. The ceramic tradition of the site included red ware, black ware, dull red ware, black and red ware and red slipped ware (from habitation sites only). Iron objects recovered from the site included two javelins, a curved dagger with copper hilt, a knife, a crescent tanged battle

axe, spearheads and arrowheads. Two conch shells, two gold wire ear rings and a terracotta disc are other associated finds from Kadambapur.

Kotalingala (IAR, 1980-1981) is an early historical site of Karimnagar district which is situated on the confluence of Peddavaggu and Godavari in the Peddapalli taluk. It is the biggest mound so far discovered in the region and, like Dhulikatta, the mound here was encompassed by a mud fort with several gates. Excavation at the site brought to light beads of semi-precious stones, terracotta figurines, iron objects, iron slag and a few copper coins datable to the Satavahana period. The associated pottery is represented by red polished ware.

From the point of view of repertoire, Peddabankur, (IAR, 1967-68) in Peddapalli taluk of Karimnagar, situated on the south-west of the Hussaini Vagu River, is a very important early historical settlement. Excavation at the site revealed two cultural periods, labeled I and II, the earlier related to the megalithic period (c. 3rd cent. BC) the latter to the Satavahana period (c. 2nd cent. BC to 2nd cent. AD). Period II of the site is sub-divided into Period IIA and Period IIB, roughly corresponding to the early and late Satavahanas respectively. The ceramic industry consisted of distinctive black and red ware, red polished ware, black ware, dull red ware besides a few sherds of russet coated painted ware, alternatively known as the Andhra ware. It is interesting to note that the black and red ware was not associated here with burials.

Period I is represented by a massive baked-brick structure inside which are found three wells constructed with wedge shaped bricks while sub-Period IIA is represented by only a terracotta ring well as far as structures are concerned and sub-Period IIB is represented by a brick mandapa. Amongst noteworthy finds, sub-Period IIA is distinguished by a terracotta seal showing Gajalakshmi and sub-Period IIB by a Roman silver coin and a terracotta seal in early Brahmi characters. Other antiquities of the site included sickles, hoes, nails, spades, knives, chisels and a ring of iron; beads and bangles of copper; spools, beads and a bangle piece of silver; gamesmen; terracotta figurines; beads of jasper, agate, carnelian and amethyst; a hoard of silver punch-marked coins and several Satavahana coins in copper; a few ground stone axes. Besides wells of both pre-Satavahana and Satavahana period, two small brick paved cisterns,

hearths, iron slag and iron objects were encountered from a structure which indicate that it might have been used as an iron smelting and forging factory.

Polakonda (IAR,1975-76) is the only excavated site in Warangal district that is of interest. It is an early historical site and digging has revealed four phases here, viz. pre-Satavahana, early Satavahana, late Satavahana and Kakatiya periods. Phase I is assigned to the pre-Satavahana period and characterized by the predominance of brown, black-and-red, black and brown, dark brown wares with sporadic occurrences of red ware. Copper coin bearing a legend in early Brahmi script, datable to around 2nd cent BC, around a figure of a horse, was found here. A terracotta seal with the same legend was found at Peddabankur also. Phase II, belonging to the early Satavahana period, is characterized essentially by the presence of red-ware and black and red wares while Phase III, belonging to the late Satavahana times, is distinguished by red, grey and black and red wares.

Another digging at the site has revealed three periods, viz. Neolithic, megalithic and medieval. The Neolithic is sub-divided into two phases, lower and upper. Lower Neolithic is characterized by handmade burnished grey, black and dull red ware and upper Neolithic distinguished by the occurrence of a few micro lithic flakes of chert and crystal and a small copper wire ring indicating the influence of chalcolithic-Neolithic culture. Megalithic period is characterized by black and red ware, red slipped and dull red ware and iron objects included a broken sickle, a ring, a ladle without handle and a spearhead.

Excavations at Kondapur (V.V.KrishnaSastry op cit) in Medak district have revealed some religious and secular buildings of the Satavahana period which are architecturally neither very imposing nor even beautiful. However, Kondapur, during the early centuries of the Christian era, was a substantial settlement with structures housing a definite population involved in crafts production of various kinds as well as Buddhist religious establishments. It has provided thousands of punch-marked coins and moulds to which they fitted probably belonging to pre-Satavahana and Satavahana times.

Hashampet (ALOK, IHC,-1987) is a megalithic site in Hyderabad district and the period of Megalithism here should range somewhere between 2nd cent. BC to 1st cent.AD. Besides the usual black-and-red-ware with polished surface, Hashampet yielded black-ware, a bright-red-ware and a dull-red-ware also. The iron implements recovered from here included a knife or dagger, a sickle, a stirrup, a ring of an axe and a prong of hayfork (flail) or a ploughing implement. Three bronze ferrules of walking-stick-like objects were also found.

An early historical site from Hyderabad district, Keesargutta Hill (IAR,1975-76) has yielded fortification walls made of rubble foundation with brick super-structure. The excavation revealed the ceramic industry of red-polished, brown polished and dull-red ware. Other finds included coins of Vishnukundins, human and animal stucco figurines, shell bangles, beads of semi-precious stones like jasper, crystal, etc. Adjacent to the Keesargutta Hill is the Keesargutta site,(IAR,1976-77) which yielded the pottery tradition of black, grey, red, red-clipped and black-slipped-ware. Other antiquities included Vishnukundin coins, terracotta spools and beads, besides beads of semi-precious stones. It has also yielded a polished linga.

Yeleswaram, (Abdul Waheed Khan1963) situated on the left bank of the river Krishna in Devarakonda taluk of Nalgonda district, is a multicultural site. The excavation brought to light, from bottom upwards, approximately six periods of occupation with a clear cut break in between them.(ibid) Period I at Yeleswaram belongs to megalithic settlers of the site. They introduced iron here probably in the middle of the 2nd cent BC or 1st cent. BC (ibid). All-black ware, all red ware and the characteristic black and red ware were the three categories of pottery tradition which were prevalent in Period I.(ibid) A broken piece of ploughshare and a sickle with its tang bent were the most important agricultural implements found from megalithic burials, besides war implements.(ibid)

Period II at Yeleswaram belongs to the early historical period when structural activity is represented by a bathing ghat and a huge mandapa supported by limestone columns and the emergence of red polished ware suggests Roman contact of the site.(ibid) Period II is remarkable for very interesting evidence of advanced drainage because some of the drains were found connected with soak-pits in low-lying land and the entire site appeared to be like a citadel

enclosed by fortification walls. This period should be dated to pre-Ikshvaku times roughly between the 1st cent, and 2nd cent. AD.(ibid) The megalithic phase of the site has produced only two terracotta beads while the early historical phase has yielded fifty three beads, forty five of which are terracotta beads, three glass beads, three ivory beads and one crystal and paste bead each(ibid)The emergence of the historical period of Yeleswaram marked the maximum usage of iron in the early historical level however, very few agricultural implements were found.(ibid)

Another site in Mahboobnagar district is Budidapadu. (IAR, 1979-1980) which has provided three fold cultural sequences during small scale excavation period I of the site is characterized by the occurrence of black and red ware while periods II and III belong to early medieval and late medieval times respectively. The megalithic burials noted in the vicinity also belong to Period I. Chagatur (IAR, 1977=78) is another site in Mahboobnagar district between the rivers Krishna and Tungabhadra. It has yielded three-fold cultural sequences during the excavation. Period I is represented by structures built of shale-stone blocks and the ceramic industry consists of red-polished, black, red and black and red ware. Other noteworthy antiquities include terracotta male and female figurines, beads of terracotta, shell and stone, discs or spindle whorls of stone, ornaments in gold and silver, stylus or antimony rods in ivory. Period II is also marked by structures built of shale stone blocks and these are built over those of earlier ones. The ceramic of the period is represented by dull red and red ware. Other finds recovered from the site include beads and bangles of shell and terracotta and iron objects like sickle, nail, etc.

An interesting feature of the excavation was the existence, immediately below the occupation of Period I, of an implement ferrous deposit yielding a few tools of lower Paleolithic age. About half a kilometer west of the excavated site, a megalithic burial site was found which contained a few sherds of red ware and black polished ware. Excavation at the site also revealed a fifty meter long wall belonging to Period I which was provided with circular sockets at regular intervals extending up to the natural bed rock.

Karapakala, (IAR,1979-80) in Mahboobnagar district, revealed two periods of occupation, the earlier one yielding handmade coarse grey and red ware and the later crude black and red and

coarse red ware and greyware of the preceding period. A number of megalithic burials were also noticed. One megalithic burial yielded a copper bell with a bone tongue.

Another site in Mahboobnagar district, with three fold cultural sequence, is Pagidigutta. (IAR, 1978-79) Period I of the site belong to Chalcolithic culture and have yielded burnished grey and black or red ware besides an antimony rod of copper. Period II overlaps between Chalcolithic and the succeeding Iron Age, i.e., Megalithic culture. Besides the continuation of the pottery, stone tools, micro and disc beads of steatite, iron implements and black and red ware also occur in this period. Floorings belonging to semicircular huts were also exposed in this period. Period III is represented by black and red and other associated ware and marked by a massive circular wall which is 150 meters in diameter. The enclosure had an entrance on the north and housed many semicircular huts. A solitary sherd of rouletted ware was found in the upper level of the period.

Peddamarur, (IAR, 1977-78) in the Kolhapur taluk of Mahboobnagar district, is an important early historical site situated on the left bank of the river Krishna. Excavation of the habitation site has revealed two periods of occupation. Period I probably belongs to the megalithic culture or early historical times and is marked by post holes showing housing patterns. The ceramic industry of this period is characterized by red polished, tan, black and red and black polished ware. Buff ware was also represented. Antiquities of this period included beads of terracotta, jasper, carnelian and rock crystals, bangles of shell, carved with round pallets and copper bangles, decorated with beaded design; iron objects included arrowhead, spearhead, sickle and dish.

Period II is assignable to the Satavahana age and is marked by profuse use of shale stone for construction. The ceramic industry of Period II is dominated by red polished and coarse red ware. Other finds included heads of terracotta, jasper, carnelian and rock crystal, bangles of shell and copper, and iron objects in the form of socketed hoes and knives.

ANALYSIS OF DATA OF SITES OF CENTRAL DECCAN:

In the Andhra region of Central Deccan, we find the largest concentration of sites in the Karimnagar and Mahboobnagar districts. Except in the Mahboobnagar region, there is a near

total absence of Neolithic-chalcolithic sites while megalithic sites register a substantial presence. Karimnagar also appears to be a favourite haunt of Neolithic man and occasionally Neolithic axes were collected around the late-stone-age sites and sometimes in the vicinity of megalithic burials, but permanent settlements are very few. (Krishna Sastry opcit) However, early historical mounds are revealed at almost every alternate village of the region comprising the districts of Karimnagar, Warangal, Nizamabad and Medak and the region was thickly inhabited during the Satavahana period.(ibid)

IRON - THE TECHNOLOGICAL BASIS OF MEGALITHIC ECONOMY:

Iron was introduced in the region during the megalithic phase around the 3rd or 2nd century BC (Abdul Waheed Khan, Opcit) with distinct black and red ware and associated pottery of black ware, red ware and sometimes red slipped ware. The technological basis of megalithic economy, it seems, was iron.

The iron-repertoire from the megalithic phase of the region is related to war, agriculture and household activities. Iron implements related to war consist of daggers, knives, wedge shaped blades, lances or javelins, spearheads often with barbs on one or both sides, and arrowheads both socketed and tanged, swords of single or double edge and battle axes. Amongst agricultural implements, flat axes, sickles, hoe blades, spades and knives have been found, while household utilities consist of ring fasteners, hatchets, and chisels, lamp hooks, hanging saucer lamps, rods, horse bits, ferrules, nails, stirrups and ladles. War Implements, needless to say, outnumber agricultural and household implements in terms of quantity, variety and frequency. Since iron ore in this region is found in Adilabad and Karimnagar district (Nayanjot lahari 1992), this could be the reason for substantial emergence of megalithic sites giving rise to early historical sites in this region.

The early historical settlers in our region had attained a very high degree of civilization characterized by fortified towns, palatial buildings, subterranean sewerage, well laid out roads and metallurgy.(krishnasastry opcit) How could this be achieved? It is suggested that the basis of the economy of the region was the supply of iron objects and other related commodities and not agricultural surplus. Because of the non-availability of fertile tracts, other than along the rivers,

large scale agricultural operations were not possible.(Alok opcit) this region has not produced any archaeo-botanical evidence demonstrating the practice of agriculture.

However, agricultural implements like sickles from Pochampad, (IAR,1963-64) Peddabankur,(IAR,1968-69) Polakonda,(IAR,1975-76) Hashampet, (IAR,1970-71) Yeleswaram, (waheed khan opcit) Chagatur (IAR,1977-78) and Peddamarur (ibid) ploughshare or similar implements from Hashampet and Yeleswaram and the evidence of granary at Dhulikatta (G.Chandrareddy 1987) from megalithic and early historical phases are indicative of the practice of agriculture on substantial scale and surplus production.

The beginning of a rudimentary craft specialization and an exchange vortex in the southern Deccan and in Andhra had been established as early as the first millennium BC by the Neolithic-chalcolithic communities.(Sudarsan Seneveratne,I.H.R.vol,vii) This is evident from the occurrence of a considerable range in the ceramic industry, beads (of stone, steatite, carnelian and shell), copper/bronze and gold ornaments.(ibid) The black and red ware and its associated pottery types and the iron implements speak for a full-time specialization of crafts production.

With the introduction of iron, there came a qualitative and quantitative change in the production of arts and crafts. The megalithic phase of Yeleswaram has produced only two terracotta beads while the early historical phase yielded fifty three beads out of which forty-five are in terracotta, three in glass, three in ivory, one crystal and one paste bead. Similarly at Kondapur, a known bead manufacturing centre, it was not simply bead making that exclusively occupied the craftsmen, the making of terracotta figurines of particularly Buddhist affiliation was another flourishing art practiced on a considerable scale.(Waheed khan opcit)

Glass technology, which appears in the early iron age, may have been an offshoot of either faience or glazed production or of iron smelting or forging.(Shereen Ratnagar 1995) The influence of iron on productive activities was considerable and it had morretized the economy, at least partially, because the punch marked coin hoards from Raichur (adjacent to central Deccan), Karimriagar and Gulbarga districts, as pointed out by P. L. Gupta, are of pre-Mauryan origin.(I.K..Sharma 1974) Manufacture and punching on the punch marked coins is also

normally done with the help of iron implements. Most of the bead industries normally required iron tools for making and cutting beads. Therefore it will not be an exaggeration to say that iron probably played a vital role in the economic transformation of Central Deccan.

It is argued that, in Central Deccan, there is a notable absence of contact with the Mauryan influence and the Mauryan presence cannot be archaeologically located. (Alok, opcit) It is further argued that Central Deccan, due to the geo-cultural and techno-economic as well as institutional constraints and possibilities, developed an individual character different in content and style from other sub-regions of the Deccan, and also from other parts of India. (ibid) All this may suggest a 'closed' or 'isolated' pattern of development for the region. However, the region during megalithic and early historical times seems to have been a part of the larger network of relationships in the Deccan and beyond.

It is true that the region has not yielded NBP ware, the characteristic deluxe pottery of Gangetic north India during the age of the Mauryas, and Asokan inscriptions. It may be noted that Asokan edicts are present in Kumool district of the State while NBP ware has been recovered from Vaddamanu, Amaravati and Chebrolu in Andhra Pradesh besides Yavatmal and Bhandara district of Maharashtra (Nayanjot opcit) which are very close to our region of study. For argument's sake, it can be said that since there are no Asokan edicts between Vaisali and Sarnath in north India, it does not mean that the region between these two places was not a part of the Mauryan state. Here too all the areas surrounding Central Deccan have yielded NBP ware and Asokan edicts and there must not be any doubt in accepting that Central Deccan too was under Mauryan influence. The degree of influence is, of course, another matter of debate. However, the relative absence of NBP ware in the region is significant and reasons for it need to be explored. The region abounded in iron and various other products of lead, gold and semi-precious stones which were locally available (ibid) but the presence of semi-precious stone like lapis-lazuli (Krishnasastry opcit) in the region certainly points towards trade links with the outside world. For this trade from the region, one arterial route passed through Jaggayapeta, Gajulabanda, Phanigiri and Kondapur to Tagara or Ter and even beyond while another caravan route touched Dhulikatta, Pashigam, Bodhan to Vidisha or Ujjain (H.Sarkar 1986). Dhulikatta was probably also on the trade route, leading from Paithan to the south connecting Buddhist establishments

and market towns like Dhulikatta, Kotalingala, Peddabankur, Kondapur, Phanigiri, Nelakondapally, Dhanyakataka. (Chandrareddyopcit)

Linkages with the outside world can also be established through the presence of Buddhist stupas (Alokopcit) which date back to as early as the third century BC. A number of seals and label inscriptions found from the region are inscribed with early Brahmi characters. (IAR, 1968-69) This, naturally, shows the contact of the region with north India. Both these features had their origin outside the central Deccan and their presence in the region at such an early stage definitely indicates the contacts it had with north India during megalithic and early historical times.

Every region has its own characteristic features and specifications in terms of ecology and accordingly develops its own basic qualities. The Central Deccan too, like any other region, has these qualities but at the same time it was not cut off from the rest of the area and witnessed an active phase of inter and intra-regional interactions which ultimately helped in attaining its stage of civilization.

Conclusion;

It is permissible to assume that since the time when Asoka had extended the orbit of his political control and made felt the impact of Maurya economic pressure all over the Deccan including presumably the Andhra region, the megalithic socio-economic situation of these regions should be in the process of a great social change, at any rate in those areas where the Maurya impact was strong and persistent, and for a time at least. But if one has to go by the evidence of archaeology at our disposal, megalithic culture seems to have generally survived the Maurya onslaught, and persisted till the Saka-Kshatrapas on the one hand, and the Satavahanas on the other, who made their appearance on the Deccanese scene and became instrumental in the introduction of a new social economy based on improved tools and techniques of agriculture. Maurya administration seems to have already developed the existing routes of communication and may have laid out a few new ones, evidently for serving their political and economic aims. But these routes of communication must have helped the spread of the new social economy.

The basically rural-agricultural social economy was strongly buttressed by a rich internal and international trade and commerce. This trade and commerce enriched the region

considerably, materially speaking, but it also seems to have transformed the behavioral and cultural pattern of life of the region, at any rate in the coastal port towns, inland market-towns and metropolitan cities. It is significant that almost all the important religious establishments in the Andhra region happen to have been located in such towns and cities alone. To what extent the life and behaviour pattern of these centres were integrated into the basically rural-agricultural life of the Andhra people, is however difficult to say.

This transformation makes itself manifest also in the institution of kingship, in the introduction of such royal sacrifices as those of the rajasuya and the asvamedha, both symbolizing sovereign over lordship, of an administrative machinery with names and functions of officials, which had long been current in northern India. The theory and practice of ownership of land, of the Issuance of land-grants and the immunities connected with such grants, of land measurements and transactions all these seem to have been lifted, almost bodily as it were, from north Indian practices and introduced in the region. The form and style of the language of the inscriptions, the technical vocabulary and phraseology, all these point to the same direction. It thus seems to be clear that from at least the beginning of the second century B.C. if not from the time of the Mauryas, the most potent civilizing factors in the Andhra region was the culture and social economy of the north, particularly of the Ganga-Yamuna valley, and to an extent, of the already Aryanised western India. We shall presently see that the situation was the same in regard to the socio-religious transformation of the region.

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