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EDITOR'S NOTE

The fifteenth issue is a thoroughly refereed one and it has taken time. But, it is worth it for reasons of quality and scholarship.

We thank our referees Dr. V. Balambal, Dr. A. Chandrasekharan, Dr. S. Vasanthi and Dr. Chitra Madhavan for taking time off from their schedule for the sake of our Journal.

This issue has brilliant and well researched papers by Dr. P.C. Venkatasubbiah, Dr. P. Sumabala, Dr. J. Daniel White and Dr. Deepak Bhattacharya.

Dr. P.N. Premalatha and Dr. K. K. Gulam Dasthagir have provided extremely painstaking work for our readers.

Dr. C. Venkatesan's paper entitled 'Memorial for a Missionary' not only assesses the contribution of Rev. Schwartz but also sets standards in English.

Orissa scholars have kept the Journal going by their regular contributions. We thank them along with other contributors.

We are grateful to Dr. S. Gopalakrishnan and Dr. Chitra Madhavan for reviewing books for us.

I thank Dr. Nanditha Krishna & Mrs. Lalitha Ramadurai for taking up the editing in the earlier stages of work for this issue while I was away on lieu at the Dravidian University and Mrs. Malathy for all the continuity that she provides for the Journal by her assistance.

Dr. G. J. Sudhakar

PRE – HISTORY AND ANCIENT HISTORY

PRE-HISTORIC SETTLEMENTS IN THE KRISHNA VALLEY - ANDHRA PRADESH

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The present paper deals with the distribution of Paleolithic and Mesolithic cultural sites along the course of river Krishna and its tributaries, based on the documented sources.

The river Krishna takes its origin in the Western Ghats at an altitude of 1337m above mean sea level near Mahabaleshwar in the Satara district of Maharashtra. It enters Andhra Pradesh near the village of Tangadigi in Maktal taluk of Mahabubnagar district and its main tributary Tungabhadra forms the northern boundary of Kurnool district and joins the latter beyond Alampur and flows north-east direction till Nagarjunakonda. Its course, in the Srisailam gorge, it is narrow and deep as it cuts through the Cuddapah sedimentary formations and thereafter goes through a trough like valley of Nagarjunakonda. It finally discharges into the Bay of Bengal south of Machilipatnam at Harnsaladivi. Its course in Andhra Pradesh is about 720 kms. The river Krishna, which flows east-west cuts across the Nallamalais. The altitude of this plateau ranges from 200m to 1000m. The Krishna, literally "of black hue", probably derives its name from the black soil, Krishnabhumi, Karenadu which it moistens with its water. It also has a traditional image of a cow's mouth in the ancient temple of Mahadeva of Mahabaleshwar.

The main tributaries of the river which flow through Andhra Pradesh are the Dindi, the Musi, the Paleru, the Munneru in the north and the Tungabhadra in the south. Of these, the

Tungabhadra is the main tributary of the Krishna. The rivers Tunga and Bhadra originate in Karnataka join as a single river Tungabhadra and flows into Krishna. The river divides the western part of Andhra Pradesh into Telangana and Rayalaseema. It also has a tributary namely Handri. Musi (Muchikonda) also a tributary of Krishna, flows in the districts of Hyderabad and Nalgonda. In Andhra Pradesh, the river Krishna and its tributaries flow through the districts of Mahabubnagar, Kurnool, Nalgonda, Krishna and Guntur.

Brown red sandy loams are the characteristic soil types in the districts of Mahabubnagar, Nalgonda, Kurnool and Guntur. The heavy clay loams are found in two longitudinal strips stretching from the borders of Kurnool and Mahabubnagar to Krishna and Guntur districts. The alluvial soils are found in Krishna district. Rice, Jowar and Bajra are the important food crops grown in the districts of Mahabubnagar, Kurnool, Nalgonda, Krishna and Guntur.

The Krishna basin has a monsoonal climate. On the basis of differences in the amount of annual rainfall, temperature, relief and vegetation, the area can be divided into wet, intermediate and semi-arid zones. The tropical evergreen, semi evergreen and moist deciduous forests characterise the wet zone where the average annual rainfall is more than 1250mm. In the intermediate zone occur the dry deciduous forests where the average annual rainfall is between 750 to 1250mm. The thorn and scrub jungle vegetation can be seen in the semi-arid zone and the rainfall is less than 700mm. The greater part of the basin falls in the semi-arid zone.

The alluvial tracts of Krishna have tidal forests. They consist of several littoral species. Some important species are Avicennia, Sonneatia, Rhizophora mucronate, Aegiceras cormiculatum,

Lummifzera racemosa and Excoecoria agallocha. In the Krishna valley, tectona grandis (teak) is an important species. It grows in its natural form in the river basin of Krishna, found extensively in the districts of Mahabubnagar and Kurnool. Dendrocalamus strictus and Bambusa arundinacea occur in Kurnool district.

Archaeological investigations were carried out by Bhaskara Murty (Maddur, Guntur-1977; Lower Krishna valley-I987), Chandra Mouli (Kurnool-1988), Foote (Kurnool - 1984), Ghosh (Kurnool-1980), Paddayya (Mahabubnagar-1971), Pappu (Krishna basin-1974, Kurnool-1983), S.N.Rao (Nalgonda-1966), Sankalia (Krishna basin) Sarkar (Nalgonda-1960), Sarma (Kurnool, Mahabubnagar-1967), Sastry (Mahabubnagar-1968), Soundararajan (Kurnool-1952, Nagarjunakonda-1958), Subrahmanyam (Nagarjunakonda and Guntur), Vara Prasada Rao (Krishna and Mahabubnagar-1990), Venkata Siva Sarma (Mahabubnagar-1980) and Venkata Rao (Guntur-1980).

The main river Krishna, its tributaries and affluents are enriched with stone- age sites. Investigations in stone-age sites lead to the discovery of numerous Palaeolithic sites which can be divided into three cultural phases such as Lower, Middle and Upper and Mesolithic.

Lower Palaeolithic culture

In Mahabubnagar district, the Department of Archaeology and Museums carried out excavations at Chagatur situated in between the rivers Krishna and Tungabhadra, as a result of which three cultural periods were brought to light. An interesting feature of the excavation was the existence, immediately below the occupation of period, of an implementiferous deposit yielding a few tools of lower Palaeolithic period. The exploration carried out in the submersible area circle of the Srisailam project

resulted in the discovery of pebble tools and flakes at Kytur in Alampur taluk. In Mahabubnagar district, the surface explorations led to the discovery of early stone tools and ceramic wares. The evidence of human settlements in this area appears from Palaeolithic period.

In Mahabubnagar district the Lower Palaeolithic sites are found at Ayyawarapalli, Chagatur, Chandu, Challapahad, Dindi, Irladinne, Kalwakole, Kandur, Kyaturu, Pasupala, Pusalapadu Pampad, Rangapur, Tenetipadu, Tirumalapalli, Vemkal, Chandraguptapattanam, Burjgundal and Medinankal. The Lower Palaeolithic tools like hardaxes, cleavers and scrapers have been found in Chandraguptapattanam (Yurrapu Cheruvu) Burjgundal and Medimankal.

In Nalgonda district a large number of Lower Palaeolithic sites found along the Dindi, Peddavagu, Musi, Paler and Munner rivers. Several Lower Palaeolithic sites were discovered within stratified fluvial deposits of the rivers lying either on the river banks or the river bed while a few sites are classified as open-air factory sites. In Nalgonda district the other lower Palaeolithic sites are found at Minampalli, Dindi, Burhampur, Halia, Yedidelavagu, Vangapallivagu, Aler, Krishnapur, Rayavaram, Wazirabad and Yeleswaram.

In Kurnool district, only 12 Lower Palaeolithic sites are associated with Gundlakamma and Kunderu rivers which are found at Akavidu, Atmakur, Kolimiguntla, Mitnala, Nandavaram, Nandyala, Satanikota, Srinagaram and Srisailam. The Lower Palaeolithic tools were found at Srisailam by KT.Reddy and D.R.Raju near the guest house of Telugu University, artefacts like handaxes , cleavers, picks, grinding stones were found. Moreover, near Manikyeswaramma Ashram, the Lower Palaeolithic tools like handaxes and cleavers were found. In the

Telugu University campus itself, artefacts such as handaxes, cleavers, picks and scrapers have been discovered. These are all made of quartzite.

In the Krishna district, two Lower Palaeolithic sites were found in Nandigama Mandai at Vishvatapadu Vibharetapadu and Jaggayyapeta. The tools included cores and flakes from the foot hills at Jaggayyapeta, the famous Buddhist site.

About a century back, Robert Bruce Foote (1916) collected seven Palaeoliths from Ippatam in Guntur district. For a long time afterwards, no discoveries were made in the sites except that of Commiade and Burkitt (1930). In 1977, Issac noticed a few Palaeoliths in the periphery of Nambur, a village about 9 kms. northeast of Guntur. The area around the hills at Mangalagiri also yielded Palaeolithic tools. In Maddur, a village about 5 kms. South-east of Amaravathi, D. Bhaskara Murthy collected Middle Palaeolithic tools. (Bhaskara Murthy and K Srinivasulu: 1980) and also at Nagarjunanagar and Tummalapalem. The other Palaeolithic sites in Guntur district are Yanamadala, Karampudi, Rajupalem, Muttayapalem, Hasanabad, Dharanikota, Rentala, Chejerla and Nagarjunakonda. Nagarjunakonda has provided a cross section of the cultural succession starting from the Lower Palaeolithic times to the early historic period.

Handaxes, cleavers and choppers are the major tool types reported in associated with polyhedrons. A variety of scrapers, flakes, anvils and hammer techniques were used in the manufacture of artefacts. Quartzite is the main raw material used for tools although other materials like sandstone are reported in major proportion. A majority of the sites are associated with red soils and red loam and a few with black soils.

On the basis of the occurrence of tools, they are divided into shaped tools, simple artefacts and combination of both. Many of the sites may be classified as base camps and base-cum work-camps and only a few as work stations. Data reported on this aspect is rather poor and inadequate. In the Krishna valley, only 29% sites are reported along the main course of the river and the remaining along its tributaries. Distribution of Lower Palaeolithic sites in the catchment areas of River Krishna and its tributaries.

	Site	**River**
(1)	Amaravati	Krishna
(2)	Bellamkonda	"
(3)	Chejerla	"
(4)	Dharanikota	"
(5)	Hasanabad	"
(6)	Muthayapalem	"
(7)	Naguleru	"
(8)	Rajupalem	"
(9)	Rentala	"
(10)	Srisailam	"
(11)	Vishvatapadu	"
(12)	Vibharetapadu	"
(13)	Wazirabad	"
(14)	Yeleswaram	"
(15)	Karampudi	Naguleru
(16)	Pandugula	Dandivagu
(17)	Mitnala	Kunderu
(18)	Nandavaram	"
(19)	Srinagaram	"

(20)	Akavidu	Gundlakamma
(21)	Nandyala	Galeru
(22)	Aler	Aler
(23)	Burhampur	Dindi
(24)	Halia	Halia
(25)	Minampalli	Peddavagu
(26)	Rayavaram	“
(27)	Yedidalavagu	Yedidalavagu
(28)	Vangapallivagu	Vangapallivagu
(29)	Musi	Musi
(30)	Ramathirthampaya	Ramathirthampaya
(31)	Perugupalli	Domaleru
(32)	Agraharam	Paleru
(33)	Bellavaram	“
(34)	Jillallapadu	“
(35)	Kanigiri	“
(36)	Kottapalem	“
(37)	Peddavalavalapadu	“
(38)	Tammanenipalli	“
(39)	Tsakirala	“
(40)	Veligandla	“
(41)	Botlaguduru	Manneru
(42)	Inemerla	“
(43)	Isakapalli	“
(44)	Kandukur	“
(45)	Lingasamudram	“
(46)	Ramapatnam	“
(47)	Singarayakonda	“
(48)	Katretipuram	Narellavagu

The above table shows that nearly 48 Palaeolithic sites are located along the river Krishna and its tributaries. In the Krishna valley out of these sites, only 14 sites are along the major river course and the remaining sites are located along the various tributaries.

Middle Palaeolithic Culture

The Acheulian Culture slowly developed into the Middle Palaeolithic Culture. Middle Palaeolithic people used some new forms and new techniques. The Middle Palaeolithic populations occupied some regions and habitats as the preceding Acheulian populations. (Sankalia 1964). The Middle Palaeolithic industry is dominated by a variety of scrapers, flakes, borers, points, denticulates and notches. It is essentially a flake tool culture. During the period, men used quartz and quartzite for manufacture of the tools. The techniques used for tool manufacture are stone-hammer, cylinder hammer and levallois. No biological remains associated with artefacts have been reported. In 1956, HD. Sankalia organised river valley surveys along the Krishna and its tributaries. There is a single radiocarbon date, on molluscan shells, from a post Middle Palaeolithic culture at Nandipalli in the Sagileru valley (PRL 293), which gives a reading of 23,670+640 years ago. This suggests that the Middle Palaeolithic in this region is older than C 23,000 B.P. (M.L.K. Mruthy).

In Mahabubnagar district, the Middle Palaeolithic sites were discovered at Gurjihal and Hindupur in the Makhtal taluk, Kyaturu in Alampur taluk, Iraladinne and Kudaveli in Wanaparti taluk and Somasila in Kolhapur taluk. In Iraladinne clactonian and levallois flake-tools were discovered. Sites at Gurjihal and Hindupur are open air workshops located on high level gravels and showing a sequence (from bottom upwards) of weathered bed-rock, tool bearing conglomerate (1/2 to 1 m thick) yellow brown silt (2 ½ in thick) and black and brown silt. (½ to 1 ½ m thick)

In Nalgonda district, the Middle Palaeolithic site, Ramatirthampaya is situated about 5 miles north of Yeleswaram located close to hill-ranges. There is a mound near the site called Sundarammabodu. Two localities were observed, one yielding Middle Palaeolithic tools and the other Microliths. Locality, is a factory site of Middle Palaeolithic artefacts. Flake tools of medium size were found in plenty with cores, finished and unfinished tools along with waste products. All of them are unrolled and uniformely weathered to deep brown on their surface. The raw material is fine- grained quartzite, quartz and chert. No other tool types were found belonging to succeeding culture. Locality 2 is situated on the right bank of the streamlet, Ramatirthampaya, a few hundred metres north-west of locality, It is a factory site of late stone-age culture.

Excavation conducted by department of Archaeology and Museums at Siddaraja Lingapuram in Kurnool district revealed walls built of shale, slab pieces, a kiln and hearth, besides black and red, fine and coarse red wares. However, a few Middle Palaeolithic tools were also collected from the fields around Kudavelli and Veerapuram in Nandikotkur taluk. Quaternary formations in this region are of fluvial origin and are represented by high level gravels and alluvial fills made up of gravel silts. These gravels are found on the banks of the river Krishna. The gravel beds are also observed at Aralapadu, Jotpole, Kudavelli, Muravakonda and Patkondapur. Gravels are loosely consolidated and are made up of boulders, cobbles, pebbles and sands of chert, chalcedony, quartz, agate, quartzite and limestone. The field relationship of high level with the Late Pleistocene alluvial fill and presence of a few Acheulian artefacts in the lower portion of the alluvial fill, are older than 40,000 years B.P. Another site, Rangapuram is located south of Bethamcherla. Middle Palaeolithic tools scrapers, points, blade - forms and a few microlithic cores were also found.

In Krishna district, the middle Palaeolithic site at Thirumalagiri yielded choppers, scrapers and cores.

The Department of Archaeology and Museums conducted explorations at Gokinakonda in Guntur district. The Middle Palaeolithic tools is represented by cores, choppers, scrapers and flakes. The site Maddur is situated 5 kms. Southeast of Amaravati. On the western part of the village is a small range of granite hills. The yellowish red soil shows sloppy topography. The craftsmen must have derived the raw material from the beds deposited by the Krishna, which flows over the vicinity. Two localities were noticed. At the first locality the stratigraphy, from top to bottom, consists of a thin mantle of pole yellowish red earth of an average thickness of 15 cms. below which could be seen the implementiferous deposit characterised by dark reddish-brown sandy earth with quartz fragments, with an average thickness of cm. At the second locality, which is situated slightly due north of the first, a similar bed could been seen. Another site, Kothapalem is situated at a distance of 18 kms from Vinukonda on the road to Markaapuram. It is on the left bank of Gundlakamma River, at the foot of a low-flat topped hillock. Thin scatters of quartzite pebbles are present on the site. It is mostly red soils that covers the area expect on river sides where there are strips of alluvial deposits. The Upper Palaeolithic tool assemblages are also found at this site. At Tummalapalem close to the Kondavidu ranges about 125 Middle Palaeolithic tools were discovered. Typologically, the industry consists of scrapers, bores, points, cleavers, knives, retouched flakes and waste products. At Nagarjunakonda, the Middle Palaeolithic tools were discovered from loose gravels as well as surface scatters. The typology included pebble tools, biracial cores, handaxes on flakes, cordates, ovates, cleavers, cores and core scrapers, flake-blades, retouched flakes, scrapers, points etc. The typology is in tune with the middle Palaeolithic industries with a perceptible Acheulian strain. Middle Palaeolithic tools were also discovered at Nagarjunanagar. This area was originally occupied by Lower

Palaeolithic hunters. Later, Middle Palaeolithic people occupied the thick deposits of red earth. The choppers and handaxes of the industry may present the late survivals of Acheulian tool kit into the Middle Palaeolithic times. (D.Bhaskara Murthy and Srinivasulu; 1980)

Distribution of Middle Palaeolithic sites in the catchment areas of river Krishna and its tributaries.

	Site	**River**
(1)	Maddur	Krishna
(2)	Muravakonda	"
(3)	Nagarjunakonda	"
(4)	Nagarjunanagar	"
(5)	Srisailam	"
(6)	Tummalapalem	"
(7)	Yeleswaram	"
(8)	Akavidu	Gundlakamma
(9)	Kottapalem	"
(10)	Yeruvaripalli	Kanchivagu
(11)	Minampalli	Paddavagu
(12)	Rayavaram	"
(13)	Karampudi	Naguleru basin
(14)	Katritipuram	Narellavagu
(15)	Nandanamarella	Makeru
(16)	Rayagirivagu	Rayagirivagu
(17)	Giddalur	Sagileru
(18)	Tallapalli	"
(19)	Agraharam	Pa1eru
(20)	Gollapalem	"
(21)	Oguru	"
(22)	Singarayakonda	"

This shows that there are 22 Middle Palaeolithic sites located along the river Krishna and its tributaries. Only 7 sites are situated along the major river Krishna and remaining sites are along the tributaries. There sites are distinguished as either surface occupational scatters or river gravel sites.

Upper Palaeolithic Culture

The upper Palaeolithic culture has been frequently addressed by names as "blade and burin" or flake-blade culture. During the Upper Palaeolithic period people used different raw materials such as quartzite, quartz and cryptocrystalline (chert, chalcedony, jasper and agate) were used. The artefacts in Upper Palaeolithic culture are scrapers, (side, convex, notch, end, steep, round convergent etc) flake-blades, blades, cores, backed blades, points, burins and choppers. The bone tool element is available only from the Kurnool caves and it represents a crude facies (Murthy 1974) like Bos SP, (ox) Bubalus SP, (buffalo) Eques SP (horse) Hippopotamus SP, (hippopotamus) Rhinoceros SP (rhinoceros) and Elephas SP (elephant). The dates for this period from Kurnool caves and Nandipalli are ca. 17000 Y.B.P. to ca 24000 Y.B.P. Kurnool caves revealed faunal remains, bone tools and even the evidence of a fire place. The lithic artefacts associated with this industry are blades, burins, various kinds of scrapers with a predominance of end scrapers, a variety of backed blades, choppers, cores, flakes, hammer stones, anvils and perforated (bored) stones.

The Upper Palaeolithic sites Chandraguptapatnam (Chakli Sela), Burjugundal, Kadalivanam and Medimankal are situated in Achampeta taluk of Mahabubnagar district. The tool assemblages are handaxes, cleavers, scrapers, flakes, flake-tools, blades, points and knives. All these artefacts are made of quartzite.

The evidences of pre-historic man were first noticed by Captain New Bold at Billasurgam Caves in Kurnool district. Further, Robert Bruce Foote and his son Hemy Foote excavated Billasurgam in 1884. They discovered bone implements. Another excavation of a cave site known as Muchchatla Chintamanugavi, near Betemcherla yielded a blade tool industry along with a bone tool industry and Late Pleistocene Fauna. The other sites Bheemunikolanu and Srisailam in Atmakur taluk of Kurnool district. The Upper Palaeolithic tool assemblages are handaxes, flakes, blades, cleavers, scrapers, points, flake blades and cores. At Srisailam the Upper Palaeolithic tools were situated in three places i.e. High School, Telugu University Campus and Sarangadharamatam. These tools were made of quartzite, quartz and chert.

Excavations conducted at Nagarjunakonda revealed the phases of the stratigraphical representation of blades and blade tools lying underneath the surface soil. The industry is on fine grained quartzite composed of points, scrapers, knives, bores, blades, flake blades and flakes in both primary and secondary context as they are found in channel fill or stratified river gravel in which the tool bearing Upper Palaeolithic horizon succeed the Middle Palaeolithic and preceded the Mesolithic. This cultural phase reveals two distinctive features: (a) the blade tool industry (b) the backed-blade and burin industry. The districts Krishna and Nalgonda have no Upper Palaeolithic sites.

	Site	**River**
(1)	Nagarjunakonda	Krishna
(2)	Srisailam	“
(3)	Kottapalem	Gundlakamma
(4)	Chinnakothaliki	Tungabhadra
(5)	Gannvaram	Paleru
(6)	Kanigiri	“

(7)	Veligandla	"
(8)	Chilakapadu	Manneru Valley
(9)	Karampudi	Naguleru basin

In the Krishna Valley out of 9 sites, 2 sites are along the main river and the remaining 7 are located along various tributaries.

Mesolithic Culture

The Mesolithic Culture is characterised by "blade and bladlet" tool technology. By succeeding the upper Palaeolithic culture Mesolithic culture is essentially an intermediary phase between the Palaeolithic and the Neolithic with its hunting--gathering and fishing economy before the real beginning of food production. Except for a solitary T2 date obtained from the potsherds found at Muchatla Chintamanugavi (NCGII) of c.1800 B. C., the artefacts of the Mesolithic culture are parallel sided blades, bladlets, backed blades, blunted blades, pen knives, lunates, triangles, trapezes unifacial, bifacial and tanged points, scrapers, burins and choppers. The raw material used for making microliths and other tools include quartz, crystal, fine grained quartzite and cryptocrystalline silica.

Excavations were carried out in Krishna valley by Bhaskara Murthy and KS. Kesava, (1987) Chandra Mouli (1988) and Madhusudhana Rao (1978, 1984).

In Mahabubnagar District the Mesolithic sites were Basawaipalli, Donglagattutanda, Hasnapur, Kudaveli, Kyaturu, Manchalakatta, Pentlavalli, Polakampalli, Pydiagutta, Rangapur, Seripalli, Singavaram, Tatikonda, Tirmalipalli, Velatur and Yaperladevipadu. A small-scale excavation at the mound pydiautta, where a hemispherical stones structure looking like a dump of shale slabs, standing to a height of 4.57 m in an area of about

0.6 hectares revealed 3 periods. Period I - black and grey wares, rubber stones, sling balls and a few steatite beads. Period II - brownish grey pointed black-on-red wares, steatite disc beads and a piece of copper. Period III - black and red, red and red polished wares, terracotta beads glass bangles and iron pieces. The tool types are blades and cores made on quartz and jasper.

In Nalgonda district, the Mesolithic sites are found at Bhongir and Peddavagu. The former site yielded tools of late stone-age industry on the surface. No artefacts of other industries were found (S.N.Rao) at Peddavagu, the Microlithic artefacts were found on the surface.

The Mesolithic sites in Kurnool district are Bethamcherla, Billasurgum, Burgampad, Chinnakothaliki, Ekasiri, Gaddamankapalli, Kothavaram, Kolimiguntla, Lingampalli, Madhavaram, Mantralayam, Mettupalli, Muchchatla Chitamanugavi (II), Muchukota, Nallagundlu, Owk, Peddakothaliki, Ramapuram, Rallakothuru, Satanikota, Siddarajalingapuram and Vemulapadu. Dr. Krishna Murthy explored the area around Kethavaram and noticed rock shelters belonging to the pre-historic period with paintings. The paintings depict both animals and birds like deer, antelope, peacock, etc. in red pigment and occasionally in black, with those of the later period are represented by geometric designs including symbols. The site showed three terraces indifferent levels. All provided with random rubble revetment and vestiges of structural activity.

R.B. Foote conducted explorations near Billasurgam and Bethamcherla sites. The caves lie 5.50 m above the dry stream-bed formed in limestone, the cave is 6.3 m wide at the entrance and extends 20 m in depth. Animal bones were found. Chinnakothaliki, Johrapuram, Madhavaram, Mantasale (Mantralayam) and Peddakothaliki were located on the right bank of the Tungabhadra river.

In Guntur district, the Mesolithic sites were Karampudi and Nagarjunakonda. (D. Bhaskara Murthy) A non-geometrical Microlithic industry was found at Nagarjunakonda. The tools made on chert, agate and Jasper. The pottery was mostlyhand made. The decorations were simple and consisted of incised oblique lines or leaf designs, besides the usual band or rib around the body.

The district Krishna has no Mesolithic sites. Distribution of Mesolithic sites in the catchment area of river Krishna and its tributaries.

	Site	**River**
(1)	Nagarjunakonda	Krishna
(2)	Bhongir	"
(3)	Peddavagu	"
(4)	Karampudi	Naguleru
(5)	Chinnkothaliki	Tungabhadra
(6)	Madhavaram	"
(7)	Mettupalli	"
(8)	Tohrapuram	"
(9)	Nallagundlu	"
(10)	Satanikota	"
(11)	Peddakothaliki	Peddakothaliki

In the Krishna valley out of 11 sites only 3 sites are situated along the main river and the remaining along its tributaries Tungabhadra, Naguleru and Peddakothaliki.

A large number of stone-age sites in the Krishna basin are reported from surface context where the artefacts have been recovered from the surface of weathered bedrock or on the

surface of colluvial gravels, which provided suitable raw material for the manufacture of tools. Almost all the sites designated as factory sites occur in these contexts, especially in the foothill areas. An important point which emerges from the review is that the stone-age sites seem to be determined by the availability of perennial water sources. No skeletal remains have been reported from any period including the Mesolithic. However, the Upper Palaeolithic sites of Kurnool cave areas are associated with faunal remains and bone tools.

The data comprises a total of 90 prehistoric sites, out of which 48 are lower Palaeolithic, 22 are Middle Palaeolithic, 9 are Upper Palaeolithic and 11 are Mesolithic sites, showing a gradual decrease of cultural horizons in the area representing the spread of pre-historic populations spread in different areas along the Krishna River. It is difficult to ascertain at the movement the factors responsible for the gradual decrease of the frequency of sites as the human populations transformed into other cultural forms. It is also true that the whole area concerned here at present faces lot of change due to agricultural activities. Hence, it is a presentation of different pre-historic groups inhabiting the area based on hunting, gathering and forging economy during the period between 2,50,000 to 3000 B. C. This data can be useful for the future investigations. It gives a clear idea where the pre-historic sites are located in Krishna basin or in the districts of Mahabubnagar, Nalgonda, Krishna and Guntur.

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EARLY HISTORIC PHASE IN THE CENTRAL PENNAR BASIN, KADAPA DISTRICT, ANDHRA PRADESH: A PRELIMINARY STUDY

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Introduction

The present Kadapa district of Andhra Pradesh, forming the Central Pennar Basin, has been one of the rich areas of archaeological enquiry ever since the discovery of Palaeolithic implements by C.A.E.Oldham in the central part of Rayachoti taluk. Subsequently, several individual scholars, i.e, Sewell in 1882, Moir in 1909 and Brackenbury in 1914, brought to light megalithic burials in Pulivendla, Badvel and Kamalapuram taluks (Sivasankaranarayana 1967:55). However, the most important and significant contribution in finding Prehistoric, Protohistoric, Early historic and other cultural sites, in view of spatio-temporal integration of archaeological interpretation, not only in South India but also in the present area of research was carried out by Robert Bruce Foote (1916:105-107). As such, his work became one of the prime sources to study the Prehistoric cultural strata in the present area and one of such noteworthy finding being the site at Vellaturu (14° 272 N; 78° 402 E) where flakes, slick-stones along with a large quantity of pottery belonging to Protohistoric period and the shape represented in the ceramic industry, especially 'lotah', attained significance as it was largely filled with chunnam resembling what is frequently seen in the old rejected chatties of toddy drawers. His interpretation

regarding the typo-technological and socio-cultural aspects of Stone Age communities had been one of the inspiring scientific enquiries which made several Indian scholars not only investigate archaeological material culture but also helped them make meaningful inferences. Mention may be made of such studies in the Prehistoric cultures in the present area being carried out by Thimma Reddy (1968), followed by the scientific work of Raju (1981,1988) towards an ethno-archaeological interpretation among the Yanadi community in view of Prehistoric settlement patterns in the Gunjana Valley located in the South-eastern part of the area concerned. Later on several individual scholars and the Department of Archaeology and Museums, Government of Andhra Pradesh have reported the occurrence of several Prehistoric and Proto-historic sites (Sarma 1967-68,1968; Srinivasulu and Others 1985, Srinivasulu1993) However, the present author's (1988, 1992, 2007) work between 1986-1992 traced the origin, development, settlement pattern and system study of painted pottery tradition of Neolithic culture, through an ethno-archaeological approach among Kuruba community, has been one of the important studies to fill the gap between Prehistory and Early history.

The present paper aims to analyze the data and interpret the Early historic cultural phase, recovered through village-to-village survey during field investigations carried out recently. It is a primarily study to represent the evidence of Early historic cultural phase which had been one of the cultural processes that witnessed several changes in the socio- economic,political and religious aspects during the early urbanization (the post-Neolithic settled way of life). As such, this study attains importance, significance and may be viewed as the foundation of the historical episodes of later periods in the region.

The Area

The area under study covers the entire Kadapa district, forming as the central part of Pennar basin in the present Rayalaseema region of Andhra Pradesh lying between 13° 432 and 15º 142 North Lat. and between 77° 552 and 79º 292 East Long. with an extent of 15,000 sq.km. bounded by the Districts of Kurnool, Chittoor, Anantapur and Nellore on the north, south, west and east respectively. It can be divided into three natural divisions such as the western plains of black cotton soils covering Jammalamadugu, Kamalapuram, Proddatur, Pulivendla and part of Cuddapah taluks; a well defined valley in the eastern part covering the taluks of Badvel, Rajampet, Siddavatam and part of Cuddapah taluks and the southern plateau covering the entire Rayachoti taluk. Geologically it is occupied by rock formations belonging to the Archaeans and the Kurnool and Kadapa system of rocks comprising mainly shales, quartzites, dolomites, sandstones and limestones which possessed an important mineral wealth such as barites, clays, iron ore, lead-ore, ochres, steatite and other silicious as well as semi-precious materials like as chert, chalcedony, agate, quartz, feldspar, calcareous flags, dykes, etc. It is drained by the Pennar river, flowing the central part, alongwith many numerous tributaries such as Cheyyeru, Chitravati, Papaghni, Kunderu and Sagileru and many other affluents of them being distinguished by their seasonal nature but sustain the water source even during summer due to thick sandy-beds. The vegetation is of dry deciduous and tropical thorn types with semi-arid climate based on an annual precipitation of about 680 mm.

Antecedent to Early Historic Phase

The present region witnessed the inception of Neolithic farming communities around C. 2000 B.C., probably from the adjoining Kurnool region lying north and got influenced by the

full-fledged Chalcolithic cultural complex chronologically began from the beginning of the later part of second millennium BC and perhaps survived till the beginning of first millennium BC (Chakrabarti 1998: 156; Ramapuram, a Chalcolithic-cum-Megalithic habitation with a carbon date of 1960 B.C. from lower levels:IAR 1982-83:140) and also possibly from the Anantapur region (a Neolithic habitation-cum-ashmound site for the regional analysis of Southern Neolithic culture located at Palavoy dated to 1965 BCE.:IAR 1967-68:69:Rami Reddy 1976), lying west of the present region following the river courses in search of arable land for their livestock and suitable raw material (Venkatasubbaiah 1988,1992, 2004 and Ravi Korisettar 2002:169-172) for their tool-kit. The locational analysis of Neolithic sites in the region shows that they preferred river/stream banks, lived on pastoralism and cultivated dry crops like horsegram, ragi, millets, etc., supplemented by hunting, gathering and fishing. They produced a unique type of pottery known as black-on-red ware, which has been interpreted by earlier scholars as the influence of Deccan Chalcolithic cultures, especially Jorwe and Malwa (Sarma 1967, 1968). However, the present scholar's hypothetical analysis proved it as culturally determined factor being evolved due to local innovation (see. Venkatasubbaiah 1992:469) in the form of painted traditions which continuously existed from the early Neolithic horizons of Southern Neolithic Culture, e.g. Brahmagiri (Wheeler1948), Hallur (Nagaraja Rao 1984)Tekkalakota (Nagaraja Rao and Malhotra 1965), Piklihal (Allchin 1960), Sanganakallu (Sankalia 1969) and other important sites in Karnataka belonged to a post-firing technique prevalent at Palavoy (Rami Reddy 1976). Another important aspect of Neolithic culture of the present region is that all are single cultural habitations without ash mounds which are categorized into small hamlets, hamlets, small villages, big villages and regional centers based on thickness and extent. It has been visualized that there existed a kind of cultural exchange in the

form of burial practice, especially the custom of cist burials and usage of black-and-red ware pottery, essentially small bowls for the use as burial goods without iron tools (Walimbe and others 1991-92:679-684).

The first village farming Neolithic communities were interlinked themselves into several type of settlements and their cultural episode came to end (Venkatasubbaiah 1992:458)around 1100 BCE., without the superimposition of the proceeding culture i.e. the Megalithic culture, at all sites and hence made the author to interpret and visualize the fact that the region witnessed the diffusion of Megalithic culture slightly later from the adjoining Kurnool region (Veerapuram:a Neolithic/Chalcolithic/ Megalithic/ Early Historic site dated between 1290- 200 BCE. of Layers between 15 to 9 (IAR 1982-83:140; Sastri et. al. 1984) which is designated as the first urbanization in the region.

The Neolithic cultural phase (1540-1110 BCE: Venkatasubbaiah 1992:458) in the present region is distinguished itself as a peasant society and has been designated as a folk sphere of indigenous 'primary civilization' (Malik 1968:79-80, Fig.4),an organization with socio-cultural and economic relationship between the settlements in a network comprising different sizes mentioned elsewhere as hamlets, small villages, large villages and regional centres (Venkatasubbaiah 1992, Ravi Korisettar 2002:171) depended basically on cattle and sheep/goat pastoralism (Venkatasubbiah 1992), agriculture (Venkatasubbaiah 1991; season based) supplemented by hunting, gathering and fishing in which their pecked and ground stone and stone-blade technology might have helped in so many ways engaging themselves in operations like clearing the forest cover around their settlements by felling trees, tilling, sowing, weeding, harvesting and threshing. Millet and Cereal cultivation and the secondary products such as meat, milk and other derivatives,

vegetable, tubers and other collection of food resources might have been served and stored in their ceramic vessels comprising various types of bowls, pots, storage jars, basins, cups etc. This Neolithic folk-society may be defined as a small, isolated, non-literate, homogeneous society with a strong sense of solidarity in which their way of life is conventionalized into a coherent system. The present village life in the region can be well traced back to the Neolithic times which are self-sufficient and not for profits. Their life-way was a simple livelihood due to their effective control on a piece of land with select animal species to which they might have been attached through tradition and sentiment which can be hypothetically deducted as events even in performing festivals connected to agriculture and their domestic animals. By cultivating land year after year they might have brought new areas under cultivation suggesting a slow economic process. In course of time the Neolithic populations, due to their inherent character of restricted wandering with their animal folk, might have camped at certain places, especially the forest zones that can be described as year cycle of pastoral activity.

Around 1100 BCE., the area witnessed the proliferation of Megalithic population (by the disappearance of Neolithic people which are represented as single cultural sites without the superimposition of proceeding Megalithic strata) who were basically nomadic, constructed burials in the nearby areas during their camps rather than having permanent settlements according to Leshnik (1974:246) as a general theory put forward while describing the Pandukal complex of Megalithic burials of South India which stands good in the present context as there are many burial complexes rather than habitations. The burials certainly vary in their chronology when we see the material culture and the tradition of burying the dead in the form of Sarcophagi which might have survived during the 1st century BCE to 1st CE.

The Early Historic Phase

The Early historic culture in Andhra Pradesh can be broadly divided into two phases (Rajendra Prasad 1994:8-12), the first phase is marked by Megalithic burials and iron usage and the second phase beginning from 300 BCE. coincides with the emergence of script, coinage, brick structures(an indication for the growth of Urban centres), dominant ideology, maritime trade and phenomenal increase in the activities of trade and commerce and religious institutions. Further, Sarma (Ghosh 1989:148), while revealing the early historical phase of Andhra Pradesh, exemplifies that the period prior to Satavahana rule is divided into the Pre-Mauryan and Mauryan from 6th to 3rd century BCE. and Early Satavahana, as the succeeding phase, from 3rd BCE. to 1st century CE. and succeeded into the late Satavahana period upto 4 CE. However, several other scholars ascribed different dates for the existence of Megalithic culture in Andhra Pradesh ranging from 800 BCE. to 100 BCE.(Gordon 1958; Haimendorf 1954; Subba Rao 1958; Banerjee 1962; Sircar 1955, etc.), but Leshnik (1974:246), based on the typology of burials and material culture found in them attempted to establish the internal chronology and placed the Megaliths between third and second century CE. and even later. On the other hand MaIntosh (1982,1985:469),by combining the radiocarbon dates and typological analysis of the artifacts, worked out the internal chronology of the South Indian Megaliths from 1100 to 100 BCE.

Phase I:The Megalithic period

This period can be seen by the occurrence of burial sites(with a variety of burials found at each place in the form of cairn circles, pit circles, dolmens, cist-circles, dolmenoid cists and stone circles) at Annarajugaripalle, Bodupalle, Brahmanapalle, Chinnakudala, Dappalle, Diguvapalle, Gangaperuru, Gangayapalle,

Gopagudipalle, Gundlapalle, Isakalapalle, Idigapalle, Joukulapalle, Kanyathirtham, Koduru, Mekalabalayapalle, Mylavaram, Nekanapuram, Palagiri, Rasamwarlapalle, Reddivaripalle, Sankhavaram, Saraswatipalle, Vontimitta, Yerraguntla and Yerraballa and habitation-cum -burial sites at Balijapalle, Balireddigaripalle, Paidikalava, Peddadudyala, Pendlimarri and Vellaturu (Venkatasubbaiah 1992:99-112).

The material remains from the burials and habitations consists of pottery, animal remains, iron tools, stone objects, etc.The ceramic industry can be classified into three major fabrics, i.e., Black-and-Red ware, Black ware and Red ware and it has been further divided into sub-categories on the basis of surface treatment such as well burnished, imperfectly burnished, coarse and slipped variety which exemplify the functional analysis and hence been significant as a major difference from the preceding Neolithic period in the region. The clay was well levigated but occasional granules can occur. The fabric vary in thickness between 0.3 to 0.7 cm. in the case of Black and Red ware, Black ware and 0.6 to 1.8 in Red ware. The usual Graffiti marks found on the potsherds of B&RW recovered at Peddadudyala and Paidikalava indicate a ritualistic tradition among the megalithic folk. The pottery is made on slow-wheel and fast wheel(especially the Black and Red ware) and handmade in the case of bigger vases, especially red ware. The fabric is basically plain and utilitarian in character. Secondary devices such as incisions are seen only on outer surface which is simple and primitive. The major forms are bowls, dishes, basins, vases with bulbous and globular body with wide-mouths and pyriform shape. Use of Sarcophagus in the form of different shapes invariably formed part of an important burial practice which can be explained as an outcome of cultural processes of later period (for discussion see Venkatasubbaiah 2008:722-728). Cattle bones out number the sheep/goat and wild fauna can be of deer species representing domestication of

animals and hunting activity of the megalithic folk as one of the main economies along with agriculture even though there is no evidence of plant remains in the material collection. Hence, at this juncture, it is difficult to asses anything about their major economy other than animal husbandry but the corroborative evidence from an excavated site, Ramapuram from the adjoining Kurnool district lying north, would throw substantial information (for details see Venkatasubbaiah et al 2008: 20-27).

As mentioned above the ceramic industry of Megalithic culture in the region consists of mainly black-and red ware, black polished ware, red ware and coarse red ware. Burial pottery may be classified into two groups, 1.unpolished coarse urns and sarcophagi and 2. well-fired and finely polished smaller bowls. The sarcophagi found in the excavation conducted in the region at Mylavaram (APA&M Annual report 1984-85:22), Kanyathirtham (Walimbe and Others 1991: 00-101) and Sankhavaram (Sivasankaranarayana 1967:57) suggest that these burials were mostly fractional or secondary burials and probably ash was used as preservative and sarcophagi in zoomorphic forms were used while incurring the dead (Ram shaped sarcophagus at Sankhavaram; ovoid shape or tub shape at Kanyathirtham, etc). The common shapes in pottery consists of small pots of various shapes, bowls, lid-cum-bowls, lids, flasks, platters, dishes, storage jars, urns, etc.

The distribution pattern of Iron Age settlements in the area confirmed either culturally determined or environmentally determined. As such, it refers to the relationship between geography and exploitative population which also refers to functional interrelationship among the contemporaneous group of sites within a single culture. Based on such application of study, the present scholar visualized certain factors responsible for the wide distribution of megalithic sites in three natural

divisions of the area in contrast to the distribution of preceding Neolithic settlements which had been confined only to the north-western zone due to the availability of black cotton coils, water sources, etc. This is considered as an integral part of the culturally determined phenomena (for details see Venkatasubbaiah 1992; Ravikorisettar et al. 2002).

Even though the present evidence of megalithic culture in the form of burials and habitations being limited but there is every possibility of the existence of more sites in the region. The distribution pattern of these settlements show that there are 12 sites in the north-west zone; 7 sites in the south-east zone and the rest,13 sites are located in the southern plateau zone. The location analysis of burial sites and habitation-cum-burial sites indicate the attachment to water source being a basic factor along with areas stretched with arable and plain lands, both for grazing their livestock and cultivation but close to hillocks or hill tracts for the purpose of community burial grounds where there is plenty of raw-material. It shows that the megalithic populations followed an explicit pattern of settlements occupying the water source in a method of nearest-neighborhood which played an important part in the spatial patterning of settlements. It offers a high degree of objectivity for understanding the distribution of settlements in relation to physiography. In view of the present context, this analysis may be considered as an explanation in a wide range of resource potential such as distance to water, type of soils, vegetation or forest cover, suitable building material both for house construction and burials, ores of copper and iron, procurement of other raw material for the manufacture of material culture perhaps responsible for the aggregation of sites.

Broadly speaking iron technology played a dominant role in the distribution pattern of these settlements. As such, the

resource utilization was based on their socio-economic activities and hence seen the settlements distributed into three zones on the basis of the availability of soils, vegetation, iron ore, other raw materials such as building material, precious stones and the gradient topography (helped for the construction of shallow but sufficient water storage tanks across small streams for cultivation of crops like paddy and other cereals, pulses, etc). It is true that the region is equipped with important resources like chalcedony, agate, carnelian, jasper, opal(in the cuddapah and kurnool formation) for the purpose of manufacturing tools useful for cutting, scraping, slicing,etc.; steatite for the manufacture of beads; copper for the purpose of manufacturing domestic and other household objects; shale, limestone, quartz reef,granite, schist, quartzite rubble and sandstone used for the construction of burials; iron ore and hematite(for the process of manufacturing agricultural tools, domestic objects, weapons, etc.; clay deposits for manufacturing of pottery along with the application of secondary devices like slip, burnish and other processes involved in the ceramic industry; iron tools and other material culture (similar to that of Ramapuram and Veerapuram such as daggers, knives, wedge shaped blades, lances, spear heads often with barbs, arrowheads, swords, etc; the household utility and agricultural implements contain flataxes, ring fasterners, hatchets,chisels, lamps, hooks, knives, sickles, hill hooks, spades,how blades, horse bits,nails,etc. ;copper/bronze objects such as bells, celts,chisels, tongs, razor, wire,needle, etc.; ear ornaments and beads made of steatite, terracotta, jasper, shell, lapis lazuli, agate,ivory, carnelian, chalcedony from the former and chisels, knives, spearheads, dagger, lance, javeline-like objects,strap-like objects, arrowheads, tripod, razor-like objects, etc. of domestic, agricultural and other implements from latter (IAR 1980-81:3-7; 1981-82:3-8; 1982-83:3-5; 1983-84:3-5: Rao 2002:150), the two multicultural sites located in the adjoining Kurnool district lying north to the present area. Animal remains

from habitations suggest that both pastoralism and agriculture were the main economy during Megalithic period which is supported by the corroborative evidence of faunal and plant remains from Veerapuram (Sastri 1984) and Ramapuram.

The evidence of Iron Age in Andhra Pradesh, as in other parts of Deccan, either overlaps or merges with the Early historic phase (Parabrahma Sastry 1996:139). However, the same may not stand, in view of the evidence of few Megalithic/ Early historic sites in the present region, as majority of the burial complex are devoid of habitations and habitations of Early historic culture exists independently. On the basis of the statement proposed, that the Megalithic and Early historic phases in Andhra Pradesh do not necessarily represent two distinct chronological entities that could not have overlapped (Chattopadhyaya 1987:727-29) and hence there is a probability for a strong transformation of cultures which might have occurred deriving from the interaction of people due to expansion of trade and commercial activities.

Phase II : The Early Historic Period

It is clear from the list of 58 Early historic sites in the present region that these settlements were formed by the occupation of new areas which have proximity to water, mineral resources, transport facility, nodal points, fertile soils, etc and hence were the permanent habitations invariably grown at the localities where the preceding cultural occupations are absent, except at Peddamudiyam, Balireddigaripalle and Balijapalle. They are located in different geographical zones: 41 sites in the north-western part; 11 sites in the eastern valley and 6 in the southern plateau. Two-third of the total sites are located either on the bank of main rivers and tributaries and the rest on small nullahs or at places away from the water source. These settlements

vary in dimension from 0.5 to more than 5 hectares and can be categorized into hamlets, small villages, big villages, tertiary regional centres, secondary regional centres and primary regional centres like Animela, Balireddigaripalle, Dommaranandyala, Peddacheppalli and Peddamudiyam.

Though the economy was mainly agrarian, as there is evidence of plant remains such as red gram, lady's finger, etc.(Venkatasubbaiah 1991: 85-97) and from the early historic strata at Veerapuram such as rice, barely, wheat, kodo millet, lentil, common pea, horsegram, hyacinth bean, blackgram and cucurbitaceous types(Kajale 1984), and iron implements found at several sites clearly reveal their use for agricultural purposes. However, there was an advancement in other fields such as carpentry, smithy, manufacture of industrial raw-materials such as bricks, iron objects, wooden objects and implements, etc.(rign-wells of both bricks and pottery, shell bangles, beads, terracotta beads, antimony rods, etc), trade and commerce both internal (gold, silver, copper and lead coins of Satavahana period) and international (Roman silver coin found at Attirala) suggesting a semi-urban economy that had ushered with a surplus goods resulted in the processes of institutional forces directed to control over local exchange networks and thus emerged the chiefs or Nigamas(Maharathi coins from Veerapuram and Satakumara coins Satanikota) a characterized political set up in this region.

Except, coarse red ware, all other ceramic fabrics belonged either to slipped or unslipped and burnished or unburnished variety. The vessel forms consisted of globular vases and pots, sprinklers, dishes, basins, troughs, storage jars, bowls, deep bowls, carinated vessels, jars, lotas,etc. The decorations on brown ware signify the symbols common in vogue during Satavahana period. Sites like Pushpagiri and Adapur indicate the proliferation of Buddhism into the area but quite late when compared to

Veerapuram (Sastri 1984) and Satanikota (Ghosh 1986), both multicultural (Neolithic/Early historic) sites in the Krishna-Tungabhadra valley and also reveal a poor and slow development wither cultural or religious even during Pre-Mauryan period. However, the concentration of settlements in the fertile black cotton belts across Pennar basin was due to the availability of iron and other material such as copper, semi precious stones and hence emerged as a nucleated zone in later period. The first formation period i.e., Megalithic, confirmed the inventory of agricultural tool-kit revealing craft specialization in carpentry and other relevant occupations. The resource mobilization by the Megalithic people in Central Pennar Basin was drawn from the orb of Raichur doab or Tungabhadra valley (Rajendra Prasad 1994:8). Roman coins reported from Attirala explicit the trade activity and major towns would have been the Peddacheppali, Lomada, Pottapi and Dommaranandyala, the last being confirmed with the evidence of embankments built with bricks in the Pennar river bed and Papaghni during Satavahana period. No monument of any importance or fortified centre is reported except for a Buddhist establishment in the form of stupas at Adapur and Pushpagiri but have been poorly represented when compared to other areas of Andhra Pradesh. The two great languages Prakrit and classical Sanskrit enter the area with place names such as Pushpa-giri, called Pupha-giri in Prakrit records (Parabrahma Sastry 1996: 20). The region also witnessed the establishment of Jain and Buddhist centres at Gangaperuru, Danavulapadu, Mylavaram, Penikalapadu, Pushpagiri, Peddacheppalli, Erragudi, Peddamudiyam, Siddhavatam (Jawaharlal 2004:221-240 ; Mohan 2004:248-266).

Discussion

The first proof of early political history of the region is confirmed by Asoka's epigraphs discovered at Yerragudi

(Anantapur District) and Rajulamandagiri (in Pattikonda taluk of the Kurnool district), roughly 60 to 80 km. from the north-western border of this region. It indicates that Kadapa must have formed part of the Mauryan empire. After the decline of Mauryan empire, this region might have come under the sway of Satavahanas as there is occurrence of coins. This area is also referred as Mulikinadu that included at least some portions of Kadapa district in the Nasik inscription of the queen Gotami Balasri, the mother of Gautamiputra Satakarni, one of the later rulers of the line. Further, the occurrence of Roman coins belonging to the Trojan indicate that the region involved in the maritime trade and commerce. With the occurrence of lead coins of Satavahana period found at Peddamudiyam, located on the left bank of Kunderu river, which is referred as Mudivemu in the later Eastern Chalukya inscriptions probably flourished as a nodal centre connected through inland water ways.

The entire range of pottery types include the ritualistic ware consists of vases stamped with Triratna (the symbol denoting three jewels of Buddhist philosophy) or Nandipada (footprints of the sacred bull, Nandi), the symbols like tree-in-railing, Ujjain, horse and six-arched hill on the coins from Adapur, Dommaranandyala confirms that the region came under the rule of Satavahanas around 1st BCE. and remained under their sway till Late Satavahana period. It subsequently went under the rule of Ikshvaku kings and later formed part of the Early Pallavas. In the process of urbanization, the southern Andhra region including the present central Pennar basin might have played a significant role, especially Peddamudiyam, Peddacheppali, Dommaranandyala and Adapur, the south-eastern trade route from the far south to the north-western Deccan, functioning as factories and store houses, receiving trade goods from the hinter land situated in the south.(Shanmugam1998:5) and perhaps most of the trade with Western Deccan,the northern Andhra Pradesh and beyond was perhaps carried through this region only.

As mentioned earlier that the present paper is only an attempt to present the available preliminary data on the Early historic phase of the region and a thorough account of the socio-economic, religious, political and other cultural aspects would be made and discussed in the subsequent paper based on the available additional data. The chronological interpretation of Megalithic and Early historic cultures of the present region stands good in view of the evidence of material culture such as habitation and burials comprising black-and-red ware, all black ware and red ware in the first phase(800-300 BCE). and pottery of black-and-red ware, black ware, red ware, brown ware, rouletted ware, russet coasted painted ware, script, bricks, coins, etc. of the later phase (300 BCE- 400 CE.).

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Appendix

The List of Early Historic Sites(Fig. 1)and Material Culture: (B&RW= Black and Red ware; BW=Black ware; RCPW=Russet Coated Ware; ROW=Rouletted Ware; BrW=Brown Ware; RW= Red Ware; RPW= Painted or Polished Red Ware; CRW= Coarse Red Ware; H = Hectares in size of the habitation; PCVS= P.C.Venkatasubbaiah ; APA&M= Andhra Pradesh Archaeology and Museums and APA-AR= Andhra Pradesh Archaeology –A Review; Meg./EH.= Megalithic and Early historic site; extent in Length x Breadth x thickness in m.)

As pottery being one of the main criteria in assigning a site to a particular cultural period and the occurrence of pottery at all these sites being uniformly found on the surface of mounds and in the layers exposed due to quarrying. However, specific material has been mentioned while dealing with the other features as noted at each site along with the extent.

1. **Achchavelli**(EH:78° 172 E ; 14° 212 N): situated 9 km. north-east of Pulivendla and one km. north to the right bank of Pulivendla vanka. The Early historic mound is located 100 m. north-west of the present village with a 2.5 m. thickness cultural strata divided into several layers with an extent of 225 X 140 m.(several broken querns, mullers, shell bangle pieces, brick-bats, etc and the local people while quarrying, found charred grains and a few lead coins, probably belonging to Satavahana period);

2. **Adapur** (EH:79º 092E ; 14° 162 N): This village is situated 3 km. east of Nandalur on the left bank of Cheyyeru river. The Early historic habitation is located at the foot of the hill locally known as Lanjakanumagutta. The structures of Stupas and Chaityas, built of bricks are found, in a row,

on the terrace of the hillock mentioned above, large ones are earlier than the smaller or votive stupas. The material culture found consists of B&RW,BW,RPW, lead coins of single type(Horse, six-arched hill, tree in railing type assignable to Vasisthiputra Satakarni(130-150 CE) were found in a hoard and hence it is a Buddhist site(Sarma 1980:42-43; IAR 1979-80:1).The habitation has an extent of 120 X 140 m.with a thickness of 2 m. and according to the evidence of coins the settlement might have flourished between 2nd to 3rd CE.

3. **Alavalapadu** (EH:78º 242E ;14º 252 N): situated 10 km. north-west of Vempalle on the right bank of a local stream. The Early historic habitation lies a kilometer south-east of the village with an extent of 100 X 50 m. with a thickness of 1.5 m.(PCVS 1992);

4. **Akkireddipalle**(Meg./EH : 78° 472 ; 14º 252): situated 12 km. south-west of Kadapa on the way to Rayachoti has an Early historic habitation located 200 m. east in a cultivated field with an extent of 100 X 90 m. and a thickness of 1.5 m.

5. **Animala** (EH:78° 312 E ;14° 282 N): situated on the left bank of Papaghni river amidst a branch of hillocks of Erramala branch of hills and the Early historic mound lies west to the present village while approaching on the way from the main road (1km. Proddatur-Pulivendla). It has an extent of 250 X 200 m. The mound is 6 m. in height from the surrounding fields. Antimony rod, brick-bats, animal bones along with a stone wall of 3 m. length and one meter depth was noticed. The other findings include rubber stones, mullers, a copper needle.

6. **Annaluru**(EH:78º 462E;14°422 N):situated 6 km. south-east of Mydukuru has the Early historic habitation located on the west of the place measuring 120 X140 m. with a thickness of 2.5 m. Small and big brick pieces, iron slag, etc. were found in the quarry of the mound.

7. **Atterala** (EH:78° 102E ;14° 142 N):situated 4 km. north of Rajampeta has the Early historic mound located close to the present village towards east with an extent of 120 X 150 m. and a thickness of 2 m. Roman silver coins belong to Trojan(117 CE.) were reported from this place(District Gazetteers 1967:58);

8. **Balatimmayyagaripalle**(EH: 78° 342 E;14° 132 N):situated 35 km. south-east of Pulivendla on the way to Rayachoti has the Early historic site with an extent of 150 X150 X 1.5 m.

9. **Balijapalle**(Meg/EH:78° 202 E;14° 292 N): situated 3 km. south-west of Tsundupalle on the left bank of Bahuda river contains the Megalithic/Early historic mound on the western periphery of the village with a height of 3 m. in an extent of 100 X 150 X 2 m. Part of the mound has been occupied by the present village settlement.

10. **Balireddigaripalle**(Meg/EH:78° 472 E;14°122 N):situated 17 km. north-east of Rayachoti on the bank of Ganganeru stream has the Megalithic/Early historic mound with an extent of 170 X 125 X 3 m. located 1 km. towards east of the present village.

11. **Budidaguntapalle**(EH:78° 402 E;14° 102 N):situated 15 km. north-west of Rayachoti and the Early historic habitation lies on the left bank of local nala with an extent of 100X100X 2 m.

12. **Budidapadu**(EH:78°412 E;14° 422 N): situated 22 km. south-east of Proddatur on the right bank of Kunderu river has the Early historic habitation located towards north of the present village in an extent of 120 X100 X3 m.(Terracotta figurines and some coins of Satavahana period were reported earlier);

13. **Chagaleru**(EH:78° 222E;14° 242 N):situated 3 km. north of Kottapalle on the Pulivendla-Vempalle road has the Early historic habitation below which Neolithic habitation was found in the field on the eastern periphery of the mound which lies 0.5 km. south-east of the present village with an extent of 150 X120 X 2 m. Along with usual pottery, potsherds of RCPW,ROW of 3rd BCE to 1st CE were found.

14. **Chamaluru**(EH:79° 052 E;14° 342 N): situated 20 km. south-east of Badvel on the left bank of Sagileru has the Early historic habitation located on the south-east of the present village with an extent of 100 X120 X1.5 m. (Terracotta figurines, shell bangles, etc);

15. **Chennuru**(EH:78° 472 E;14°342N):situated 10 km. north-west of Kadapa has the Early historic mound on the left bank of river Pennar which is ½ km. north-west of the present village with an extent of 200 X 150 X2.5 m. has been completely brought under wet cultivation.

16. **Chilamakuru**(EH:78° 292 E;14°392 N):situated 10 km. south-east of Muddanuru on the road to Yerraguntla has the Early historic mound located on the right bank of Peddavanka towards south-east of the present village with an extent of 200 X 100 X1.5 m.

17. **Chintakunta**(EH:78° 212E;14°412N):situated 5 km. west of Muddanuru has the Early historic mound located at the foot-hill region towards east of the present village. It has an extent of 100 X 100 X 2 m. Rock paintings are found on the boulders of quartzitic-sandstone of this period (PCVS 1992: 80-81,Fig.7);

18. **Dappalle**(EH:78° 322E;14°132 N):situated 8 km. southwest of Jammalamadugu on the right bank of river Pennar has an Early historic mound (200 X100X 2 m.)located south of the village which is now submerged in the waters of Mylavaram reservoir. Red ochre paintings were found in a rock-shelter on a hillock located south of the village representing group of stylized animals such as bull, goat, boar besides mystic symbols(Annul review of APA &M 1984-85:22 and IAR 1976-77:1);

19. **Danavulapadu**(EH:78° 262E ; 14° 472 N): situated 10 km.south–east of Jammalamadugu on the left bank of river Pennar has the habitation mound (300 X200 X5 m.) lying adjacent to the Jain temple complex being excavated by the Andhra Pradesh state Dept.of Archaeology and Museums.

20. **Devagudi**(EH:78° 272E;14°522 N): situated 12 km. south-east of Jammalamadugu has the Early historic mound with an extent of 200 X200 X 2 m. The present village is located on the central, south-west and south-east part of the habitation on the left bank of river Pennar with brick embankment hidden in the sand-dune of river activity. An early Siva temple with erect human phallus form of linga, like that of Gudimallam linga located in Chittoor district, but it does not contain the figure like Siva and apasmaraka murthy. V.V.Krishna Sastry observed this type of linga form and gave

the date of 2nd century CE(Annual Report of AP Archaeology and Museums 1984-85:19);

21. **Devaraguttapalli**(EH:78° 322 E;14° 132N): situated 35 km. north-west of Rayachoti on the right bank of a local nala has Early historic habitation located ½ km. south of the village with an extent of 120 X 100 X 2 m.

22. **Dommaranandyala**(EH:78° 222 E;14° 522 N): situated 3 km.west of Jammalamadugu on the left bank of river Pennar has the Early historic habitation and most of the present village lies on it. Bricks of 50 X25 X 7-8 cm. in size were noticed in the sand-dune of the river Pennar probably part of the embankment along the river perhaps built to arrest the erosion. During the excavation, conducted by the Dept. of Archaeology and Museums, Govt. of Andhra Pradesh, found lead coins of Satavahana period representing a horse, full moon and a Srivasta symbol on the obverse; a tree in railing and Ujjain symbol on the reverse. On the basis of the style it may be dated to 1st B.CE of Early Satavahana period (Annual Report of APA &M, 1984-85:21);

23. **Dongalasani**(EH: situated in the Siddhout taluk):The Dept. of APA& Museums undertook ten trenches at various places of the village. The trench laid near the left bank of river Pennar, towards south of the village, brought to light an embankment wall constructed with bricks (50 X 25 X7-8 cm.) probably to prevent the erosion. Shallow dishes and bowls were found kept one above the other in several rows of coarse dull red ware, probably of a kiln belonging to Satavahana period (IAR 1977-78:1). In the same excavations, a brick temple (41.5 X 6.5 cm.) containing a garbhagriha (2.15 X 1.45 m.), antarala, mukhamandapa and prakara with an entrance measuring 0.75 m. facing east was found

belonging to a Vankaya Chola Maharaja of 10th CE but the bottom layers of habitation belongs to Early historic period as the usual pottery of Early historic period was noticed.

24. **Gaddamedapalli**(EH: located in Kadapa taluk): Trial excavation conducted by the Dept. of A.P Archaeology and Museums exposed three layers. Out of which, layer 2 yielded brick-bats, potsherds while the 3rd layer being the natural bed rock. The red slipped ware consisted of bowls, pots, dishes, lids, etc. belonging to 3rd CE (Ramalakshman 1987-2001:39);

25. **Gandikovuru**(EH:78°292 E;14°162N): situated 1 km. northwest of Chakrayapeta on Vempalle-Rayachoti road has the Early historic mound located on the right bank of Papaghni river, south-west of the present village with an extent of 170 X 100 X 2m. Bangle pieces along with pottery and a ring-well of 1.5 m. diameter built of bricks(25X15X7 m.) was found in the north-eastern part of the mound in a dug-out area(PCVS 1992);

26. **Gangaperuru**(EH:78° 022 E;14° 262N): situated 5 km. north of Votimitta at about 1.5 km. south to the right bank of Pennar river has the Early historic habitation lying towards east of the village with an extent of 150 X 120 X 1.5 m. An inscription found at this area link with Ikshvaku and Early Pallava rule(Annual Report of APA&M for 1984-85 and K.S.B.Kesava personal communication);

27. **Gandluru**(EH:78° 122E;14° 472 N): situated 22 km. west of Muddanuru lying on the right bank of Chitravati river has the Early historic mound lies 1 km. west of the village with an extent of 100 X120 X1.5 m.

28. **Gollapalle**(EH:78° 172E;14° 582 N): situated 20 km. north-west of Jammalamadugu has the Early historic habitation located west to the village with an extent of 100 X 100 X 2.5m. known locally as'patidibba'exposing lot of cultural material due to quarrying.

29. **Goriganuru**(EH:78° 252E;14° 472N):situated 7 km. south-east of Jammalamadugu on the left bank of river Pennar is the Early historic mound which lies west to the present village with an extent of 200 X 200 X3.5 m. The department of A.P Archaeology & Museums undertook trial excavation exposing four trenches at four corners of the mound. The diggings brought to light some constructional activity of Early historic period. Pottery and a chain of disc beads was found in the exposed Trench-II and a brick embankment constructed along the bank of river Pennar, in order to arrest the erosion of the settlement, as the village proper is located on the central and western part of the habitation(Annual Report of APA&M 1984-85);

30. **Illuru**(EH:78° 312E;14°442 N): Early historic habitation at this village has an extent of 100X100X1.5 m. Pottery of ROW,RCPW along with other usual pottery was found on the surface of the habitation.

31. **Jonnavaram**(EH:78° 052E;14°322N):Early historic mound at this place has an extent of 100 X 150 X1.5 m. located south-east of the present village exposing usual material culture.

32. **Kalluru**(EH:78° 372;14° 412): Early historic habitation at this place is located on the right bank of river Pennar which is under cultivation exposing lots of pottery and other materials.

33. **Kondareddipalle**(EH:78° 222E;14° 282 N): situated 10 km. south-west of Pulivendla on the left bank of a local stream has the Early historic habitation with an extent of 200 X100X1.5 m.

34. **Koppulu**(EH:78°102 E;14° 522 N, an extent of 100 X 150 X 2m.);

35. **Kottagundavaripalle**(EH:78º 11'E;14º25'N, an extent of 200 X 100X1.5 m.);

36. **Kottapeta** (EH:78° 312E;14° 462N, an extent of 100 X 110 X2 m.);

37. **Kotilingala**(Early historic habitation yielded pottery of Satavahana period and coins of Simukha, the first king of the Satavahana dynasty, in the trial excavations conducted by the A.P Archaeology and Museums (IAR 1977-78:76);

38. **Lebaka**(EH:78° 212E;14° 502N): situated 15 km. north-east of Nandaluru on the left bank of Cheyyeru river has the Early historic habitation mound located towards east of the village with an extent of 200 X 200X 2 m. A ring-well was observed in the dug-out area in the south-eastern portion of the mound (PCVS 1987-88:84 and IAR 1980-81:89);

39. **Letapalle**(EH:78° 362E;14° 312N, an extent of 150 X 100 X1.5 m.);

40. **Lomada**(EH:78° 132E;14°362N): situated 17 km. north of Pulivendla has the Early historic mound located on the left bank of Mogamareru river towards north-east of the present village with an extent of 100 X 100X2 m. During trial excavations conducted by A.P Archaeology and Museums

yielded Satavahana coins, along with a brick (25 X15 X7 cm.) structure of 6 X 4 X1.5 m.(PCVS 1988:84 and Annual Report of APA&M of 1985-85:22);

41. **Machanuru**(EH:78° 322E; 14° 302N, an extent of 100 X 120 X 4 m.).

42. **Mahankalipatnam**(EH: an extent of 100 X200 X 4 m., is an diserted village located near Pasidikalava village on the left bank of river Pennar (APA&M 1984-85:22);

43. **Moyillakalava**(EH:78° 422E; 14°292N, an extent of 150 X 150 X4 m. on the left bank of Mogamareru river);

44. **Nemalladinne**(EH:78° 292E;14° 582N, an extent of 110 X 120 X1.5 m. on the right bank of Kunderu river);

45. **Nanganurupalle**(EH:78º 34'E14º 42'N) situated at a distance of 10 km. towards the east of Proddatur the Early historic habitation is an extensive mound located on the edge of the left bank of river Pennar located south of the present village with an extent of 250 X 200 X 3 m. The cultural material found here contains the usual pottery along with ROW,RCPW, animal bones, terracotta figurines, etc.

46. **Peddacheppalle**(EH:78° 372E ;14° 332N): situated 7 km. south-west of Kamalapuram has the Early historic habitation located 1 km. away from the left bank of Papaghni river with an extent of 190 X 170 X 7 m. Pottery along with shell bangle pieces, the author also found a brick(25 X 15 X7 cm.) structure probably a wall in the exposed sections and a ring-well of 2 m. in diameter in the south-eastern portion of the mound (PCVS 1988:84;PCVS 1992and IAR 1977-78:76);

47. **Peddakudala**(EH:78° 102E;14° 282N): situated 10 km. north-west of Pulivendla has the Early historic habitation located on the left bank of the local stream over which the Parnapalle-Pulivendla road, passes through which is 1 km. south-west of the village. It has been an extent of 110X 100 X 2m.

48. **Peddamudiyam**(Neo/EH:78°272E;15°012N):situated 21 km. north-east of Jammalamadugu has two Early historic mounds (Mound I:250 X200 X8 m. and Mound II:100 X200X7 m.) located on the left bank of Kunderu river. From the quarried portion of the southern periphery of Mound I, the author collected Neolithic pottery and stone objects. Both mounds are disturbed due to quarrying operation exposing 5-7 m. sections with lots of pottery, stone and brick (50X 25 X7 cm. to 25 X 15 X 7 cm.) structures. Lead coins of Satavahana period were unearthed from this mounds (IAR 1961-62:96) and Panchayatana plaques of 2nd CE.(IAR 1967-68:66; Cuddapah District Gazeteers 1967:58 and PCVS 1988:84, 1992) was also reported.

49. **Penukanchiprolu**(EH: situated in Rajampet taluk, is an ancient Buddhist place with Stupas and limestone sculptures of Buddha. According to the style these sculptures are dated to 2nd-3rd CE.(IAR 1975-76:75);

50. **Pernapadu**(EH:78° 212E;14°252N: an Early historic habitation with an extent of 100X 100 X 1.5 m. Querns, mullers, pottery and other stone objects were found);

51. **Pottapi**(EH:78° 142E;14° 212N): situated 25 km. north-east of Nandalur on the left bank of Cheyyeru river has an extensive Early historic habitation located close to the river bank towards located south of the present village has an extent of 120 X120 X2 m.

52. **Pottipadu**(EH:78° 072E;14° 452N: situated 8 km. west of Kondapuram has the Early historic habitation with an extent of 120X120X 3 m. located on the right bank of Chitravati river towards east of the village);

53. **Pushpagiri**(EH:78° 452E;14° 362N: the whole mound of Early historic period has been brought under wet cultivation located on the left bank of Pennar river. Buddhist stupas, similar to Sanchi and sculptures of Buddha dated to 3rd CE. lie on top of the hillock nearby.(APA&M 1984-85:22);

54. **Ramapuram**(EH:78° 552E; 15° 092N): situated 18 km. to the north-west of Porumamilla on the way to Giddalur (Prakasam Dist.) has the Early historic habitation in the form of low-lying mound located 0.5 km. north of the village with a height of 1.5 m. measuring 100 X 90 m. Apart from finding the usual early historic pottery, a dump of iron ore, has been noticed in the northern corner of the habitation along with charcoal, mullers, rubber stones, animal bones.

55. **Tallapaka**(EH:78° 092E;14° 142N):situated 5 km. north-west of Rajampet, located on the left bank of a local nala, has the Early historic habitation mound on which part of the present village lie. It has an extent of 200 X 200X4 m. Two trenches were laid at two localities, Trench I (4 X 4 m.) was laid towards the eastern periphery of the mound exposing three layers; of which Layer 1 has yielded Red slipped ware, black slipped ware, black-and-red ware, fragments of storage jars, brick structures in the trench. Trench II was laid 100 m. east of Trench I (4 X 4 m.) exposed two layers (IAR 1980-81:1). Of which the 2nd layer comprised of a rectangular platform of 1.40 m. 90 cm. thick provided with channels lined with single course of bricks

abutted with an enclosure (90 X 140 cm.) brick wall .This platform was, probably, housing some worship objects. Potsherds of ROW and two Satavahana lead coins were recorded from this structure. The other antiquities include terracotta figurines. Out of the two lead coins one is mutilated and on the basis of structure, coins, and pottery, the site can be dated to 1st century BCE(APA&M a Review 1987-2001:71);

56. **Tallaproddatur**(EH:78° 092E;14° 502N):situated 12 km. north-west of Kondapuram, lying 2 km. from the right bank of river Pennar, is the Early historic habitation located south-west of the present village on the right side of the road leading to Tadipatri from Kondapuram. The local high school building lie on the mound which measures 100 X100 X 3 m.

57. **Tippaluru**(EH:78°342E; 14 °372N):situated on the right side of Erraguntla-Kamalapuram road, about 5 km. south-east of Erraguntla, has the Early historic mound located on the western side of the village. It measures 100 X 175 X 2.5 m.

58. **Ulimella**(EH:78° 152E;14° 262N): situated on the right bank of Pulivendla vanka, about 5 km. north-east of Pulivendla, has the Early historic mound measuring 200 X 150 X 1.5 m. Apart from the usual Early historic pottery, the scholar also noticed thick potsherds containing designs of lotus medallions and several brick structures in the lower levels of the habitation deposit.

A JAINA YAKSHINI IN THE MUSEUM OF FINE ARTS, HOUSTON

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The above picture of a female figure belonging to the Gupta period has been acquired by the Museum of Fine Arts, Houston. The sculpture, made of buff sandstone, 83.8 cms in height, is in very good condition, although the top of the stele and the vina-like instrument are broken, and the raised left foot, fingers of both hands, nose, mouth and right eye are slightly chipped, while one arm of the figures on the upper left and lower right are missing. The reddish discolouration of all the faces may be due to pigment applied during puja, although it seems surprising that a figure that has been in so many private collections for several years has not been cleaned. It is a beautiful work of art and among the best examples of classical sculpture.

Pal (1977) has described the figure as Sarasvati belonging to the 6th – 7th century. His description is given in the annexure.

However, there are major flaws in this interpretation. As one who has seen the sculpture at the Houston Museum, I am certain it is not Sarasvati.

- Sarasvati, being a goddess, should have four arms. This figure has only two. (However, some Kushana deities are two-armed).
- Sarasvati is invariably accompanied by the swan or peacock. Both animals are missing. The horse and monkey, which accompany this figure, are never associated with Sarasvati.
- The horse-headed flute player and the monkey-headed percussionist are also playing their instruments. Normally, Sarasvatî, as the Goddess of the fine arts, plays the vîòâ and her animal and human attendants watch enthralled.
- Further, is the instrument a vina, which should have two pots at either ends? There is nothing to even suggest that there were any pots that were broken off. The instrument looks more like an early lute.
- Sarasvatî's other attributes of book and rosary are also missing.
- Finally, 6th – 7th century seems to be a late date for such an exquisite sculpture. I would place it in the 5th century, an example of either Gupta or Vakataka art, depending on the provenance where it was originally found. The figure is seated on a lotus throne with elaborate foliage below. Such foliage was common in Vakataka art. The thick rope-like necklace is also typically Vakataka.

I am grateful to Dr. Anna Dallapicola who suggested it might be a Jaina Yakshi, if it was not Sarasvati. Thereafter, I searched for the appropriate equivalent, which I found in Jainism.

The Yakshini of the Jaina Tirthankara Padmaprabha is known to the Svetambaras as Acyuta (imperishable, permanent) or yama (dark) and to the Digambaras as Manovega (swift mind). Acyuta is represented as riding a man and may hold the vina and bow in two hands, while the other two are in the varada and abhaya mudras. The Digambara Manovega holds a sword and arrow, while the horse is her vehicle (*turanga vahana devi manovega* from the *Pratishthasarasangraha*) (Bhattacharya, 1974).

The vina is also the instrument of a Vidyadevi or the Goddess of Learning. The Jainas have sixteen Vidyadevis and one Srutadevi (Goddess of the Sruti or revealed works) called Sarasvati. The Vidyadevis are similar to the Yakshinis, with a difference: by worshipping the Vidyadevis, the devotee attains knowledge, character, religion, effort and mental qualities. Vajramkusa, a Vidyadevi, holds a lute, but her vehicle is the elephant. Sarasvati, who is the only Srutadevi, holds the lotus, book, rosary or lute. Her vehicle is either the swan or peacock (Gupte, 1972).

Yakshas and Yakshinis are a class of semi-divine beings in Jainism, unlike Brahmanism and Buddhism where they tend to be spirits. The Jaina canons inform us that they were not only the female attendants of the Tîrthankara, but leaders of the women converts to Jainism. There are two types of Yakshinis. Some like Nirvani Devi and Ambika were probably historical figures fused with older Brahmanic deities, while others like Sarasvati are of obvious Brahmanic origin. The Yakshinis were Sasana Devis (governing goddesses) (Bhattacharya, 1974) who were the means to reach the Tîrthankaras, all of whom had renounced the world.

Although the Jaina canons suggest attributes and mudras for four hands, most Jaina Yakshas and Yakshinis are two-armed,

such as those at Ellora and Orissa, and the sculptures of the early and even medieval dynasties like the Chandela and Pratihara. In fact, the Tîrthankaras themselves are two-armed, as are the Yakshas and Yakshinis, for they are humans who have renounced the world and are examples to be followed.

Padmaprabha, the sixth Tîrthankara, is symbolized by a lotus. His attendant Yaksha is Kusuma, meaning flower, whose vehicle is either the antelope or the bull and his attendant Yakshini is Manovega, also known as Acyuta and Syama, who rides a horse vehicle. Both the horse and the antelope represent the speed of the mind.

The figure in the Houston Museum therefore has to be Manovega (Acyuta / Syama), all three being the names of the same Yakshini. Manovega's vehicle is the horse: the horse plays the flute in this tableau. Her Tîrthankara is Padmaprabha, whose defining symbol is the lotus: Yakshini Manovega sits on a lotus. The two female figures flanking her on either side are apparently her Jaina women followers. The monkey percussionist is obviously an artistic addition, maybe a substitute for the man ridden by Acyuta. The figure should also be dated to the 5th CE, belonging to either the Gupta or Vakataka periods.

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ANNEXURE

"*This sculpture depicts Sarasvati, the Hindu goddess of both wisdom and music, who is also worshipped by Buddhists. She is seated gracefully in lalitasana and is playing a fragmentary vina, with her left fingers resting on the fret and her right hand plucking at the strings. Two animal-headed musicians, or gandharvas, celestial beings that provide music for the gods, are seated in the lower register and accompany her son. The horse-headed player blows on a flute while the monkey headed musician plays a drum. Above them, two female figures have also joined in the merriment – one playing the cymbals and the other dancing.*

The skillful carving of the sculpture is further enhanced by the fine-grained quality of the stone, which allowed the highly skilled sculptors of the Gupta Dynasty to create such a masterpiece. Under the patronage of the Gupta Kings, the iconographic canons of art were refined and standardized, and they subsequently served as the ideals for many generations to follow. There is a great refinement of previous traditions, and the transcendental nature of the gods is successfully expressed by incorporating the forms of nature with those of humans.

In this image of Sarasvati, one can see how the artist has imbued the goddess with the essence of nature. Her arms and legs are like supple tree branches, while her broad hips, like those of earlier yakshis, suggest fertility. The lush, scrolling foliage beneath her lotus throne enhances the idea of her fecundity, yet this is counterbalanced by the strong emphasis on symmetry within the sculpture. For these reasons and many more, this representation is not only a superb example of Gupta sculpture, but also it is undoubtedly one of the most exquisite images of Sarasvati known."

Provenance
Nasli and Alice Heeramaneck Collections
Dr. J.R. Belmont, Basel
Christian Humann (Pan-Asian Collection)

Pratapaditya Pal,
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LORD JAGANNATH, THE REDEEMER OF THE FALLEN

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Lord Jagannath, as the name connotes, is the Lord of the Universe. He is the unifying force, who binds people of different faiths, castes, communities and customs with the thread of love. The spirit of tolerance and catholicity, which are the basic tenets of the cult of Jagannath also form the basis of our social and cultural milieu[1].

The cult of Jagannath is a remarkable synthesis of Buddhism, Saivism, Saktism and Vaishnavism[2]. Like different rivers falling into ocean, several streams of faith have merged in the worship of Lord Jagannath. He is also called Purusottama, the Supreme self of the Bhagvat Gita. He is also the Patitapavan, Redeemer of the fallen or dalits[3].

Since ancient times, Puri, has been known as Srikshetra, Neelachal – Dham and Sankha Kshetra. The layout plan of this sacred city is often described as resembling the shape of a conch shell. Skandapuran, in its Purusottama Mahatmya, even mentions different deities residing in various parts of conch-shell[4]. The majestic temple of Jagannath occupies the navel or centre portion of the Sankha Kshetra. It continues to be one of the "Chaturdhams" or four important religious centres of India, the other three being Badrinath, Dwaraka and Rameswaram.

Lord Jagannath is not only worshipped in India, but also abroad. That is why He is called as the Lord of Universe. The

great English historian W.W. Hunter writes[5] - "But the true source of Jagannath's undying hold upon the Hindu race consists in the fact that He is the God of the people. As long as His towers rise upon the Puri sands, so long there will be in India a perpetual and visible protest of equality of man before God."

Lord Jagannath opens his arms and blesses to all irrespective of caste, creed, sex and religion. The doors of His temple are open to all. There are no differences between Brahmins and Sudras. Both do not hesitate or eat cooked food or Mahaprasad of Lord Jagannath to eat together inside the temple. Exchange of Mahaprasad between two persons belonging to two different castes or classes binds them together[6]. This indeed is a unique feature of Jagannath Culture.

Many ancient religious leaders have visited the seat of Lord Jagannath in the past. The great Adi Shankaracharya came to Puri in the 19th Century. Ramanujacharya visited Puri and set up Emarmath. In the 16th Century, Shri Chaitanya visited Puri and preached Vaishnavism[7]. Guru Nanak visited this holy shrine in 1506. The Gurudwara Bauli Sahib at Puri bears testimony to the holy presence of Guru Nanak. Sant Kabir also paid a visit to Puri.

The three deities i.e., Lord Jagannath, and Lord Balabhadra and Devi Subhadra are worshipped here along with Siva and Durga. The three sects of Vaishnavism, Saivism and Saktism are assimilated here together. Jagannath cult is free from all types of regional narrowness. It believes in universality and not in sectarianism. Thus, he has been worshipped by the primitive tribals, Dravidians, Aryans, Hindus, Jainas, Buddhists, Sikhs, Saktas and Saivites[8].

The age old car festival of Lord Jagannath is celebrated in the month of June or *Ashada* every year. Although the car festival is celebrated all over Orissa and in different parts of the country and even abroad, the main attraction for the devotees is the Car Festival celebrated at Puri, the seat of Lord Jagannath. Lakhs and lakhs of pilgrims from all over the country and some from abroad gather at Puri to witness the World famous Car Festival which is the most celebrated festival of Lord Jagannath[9].

On this occasion, the three images of Lord Jagannath, Balabahdra and Subhadra are brought in a procession from *Shri Mandir*, seated on majestic wooden chariots and drawn to the *Gundicha Mandir* or the garden house by people of different sects. The three majestic decorative chariots are drawn along a three kilometers road called Grand Road or *Bada Danda*, with great pomp and grandeur[10].

The *Ratha Jatra* or Car Festival is the symbol of Universal brotherhood and during it people forget their individual identity and merge in an ocean of humanity. This great festival is meant for universal brotherhood, communal peace and harmony. It stands for national and international integration. It tolerates all races, religions, customs and cultures[11].

The Maharaja of Puri sweeps the three chariots during the Car Festival, which is the symbol of a casteless society and equality. Even the Mahaprasad, *Nirmalaya* or dried rice[12], the food offered to the deities can be taken together without any distinction of caste or creed. Devotees irrespective of caste, creed or religion could go upto Him and embrace the chariot during the car festival.

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LION-HEADED GODS IN MYTHOLOGY

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The lion (*Panthera leo*) is a member of the family Felidae and one of four big cats in the genus *Panthera*. With exceptionally large males exceeding 250 kg (550 lb) in weight, it is the second-largest living cat after the tiger. Wild lions currently exist in sub-Saharan Africa and in Asia, having disappeared from North Africa, the Middle East, and Western Asia in historic times. A critically endangered remnant population exists in northwest India. Until the late Pleistocene (about 10,000 years ago), the lion was the most widespread large land mammal beside humans. They were found in most of Africa, much of Eurasia from Western Europe to India and, in the Americas, from the Yukon to Peru.

Visually, the male is highly distinctive and is easily recognized by its mane. The head of the male lion is one of the most widely recognized animal symbols in human culture. It has been depicted extensively in literature, in sculptures and in paintings.

The lioness has been recognized, however, as the pinnacle of hunting prowess from the earliest of human graphics and writing representations. The lionesses are the hunters for their pride and capture their prey with precise and complex teamwork. Each lioness develops specific skills for her role in the hunting techniques used by her pride and, generally, assumes that role during most hunts. Members of human cultures living among lions in natural habitats have understood this characteristic and often have chosen the lioness to represent their most ferocious war deities and warriors, often naming their male rulers as her "son".

Since ancient times lion deities have been revered in mythology and legends. People feared their powerful nature and strength. Humans have always worshiped to emulate the lion and it made him proud. So, the symbolization of this creature for the greatness of humanity became a practice. Human beings desire to be like lions, with this idea they made mix hybrid heroes, monsters and Gods.

In ancient civilizations like Egypt and Mesopotamia, we often find Gods and Goddesses with extraordinary powers and have animal combinations in their forms. For example, Aker is an ancient Egyptian lion God who guarded the gate of the dawn through which the sun emerged everyday. Other attributes included being able to heal people afflicted by the bites of snakes, and if someone had swallowed a poisonous fly, he could neutralize the effects of that poison in the victim's stomach. When a pharaoh died, Aker was the God who opened up the earth's gate for the king to pass into the underworld. Later still, the Aker became Sef and Tuau, which means 'yesterday and today'.[1] The Ancient Egyptians always saw lions as guardians and protectors. As lion Gods guarded the gates of morning and evening, so statues of lions guarded tombs and palaces, protecting both the dead and living, keeping demons and human enemies at bay. The Akeru was represented either as two lions seated back to back, or else one lion with two foreparts.[2]

Apart from Gods, the mythical animals are also very famous in ancient civilizations. They create hybrid monsters with a combination of the special attributes of different animals. For example, Pazuzu is the ancient Mesopotamian demon, who has the wings of an eagle, the tail of a scorpion and the claws of a lion. Pazuzu was known as the "king of the evil wind demons," but he was also often seen on amulets, which were used as protection during childbirth.[3]

There are different categories in the mythical form of the lion in ancient mythology. Anthropomorphic, hybrid beasts and animal are the main forms. In anthropomorphic form both God and Goddess are shown with any one of the attributes of a lion mostly with the head or whole body. Here the important cause behind the form is to give more attraction, power or to create some fear. Anthropomorphism is the attribution of uniquely human characteristics to non-human creatures and beings, natural and supernatural phenomena, material states and objects or abstract concepts. But here lion serves as a character to raise the power of the supernatural beliefs of the ancient people.

In Egyptian mythology, there are many Gods and Goddesses found with lion combinations. Arensnuphis is an anthropomorphic Egyptian God, who either was depicted as a lion or as a man with a plumed crown. He is often referred to as a companion of Isis and there is a temple dedicated to him in Philae built during the reign of Ptolemy IV Philopator in about 2250 BCE.[4] Menhit is another ancient Egyptian deity, Menhit means "she who slaughters". Menhit is the wife of Chnum and together they had a son named Hike. The three of them were worshipped as a trinity in the city of Latopolis. Like other gods of war, Menhit was thought to ride ahead of the army, slaughtering enemies.

Sekhmet is a very powerful ancient Egyptian Goddess of war and vengeance, who was married to Ptah. She was worshipped in Memphis and Luxor. Her name means "powerful" and in battles she would breathe fire on the King's enemies. At one point, however, Sekhmet lost the plot and began a systematic slaughter of all humankind. Ra, the sun god, fearing the death of all of humanity, intoxicated her with a blood colored beer which she believed to be real blood. She awoke slightly hung over but satiated of her need for further destruction.[5] Sekhmet also had a male form, when she was known as Sekhmet Min.

There is a representation of her in this aspect in the Temple of Khonsu at Karnak, Luxor, which shows the king standing before her to invoke her mighty strength in Min form.[6] Apedemak, Bast, Ari-he-nefer were the other leonine deities, they also have the war-like nature and are worshiped by the people to over come their misfortunes and illnesses.

Bes was one of the most popular Gods among the common people of Egypt. Although he does have a war-like aspect, he is primarily a cheerful and benign God, associated with domestic matters, as well as laughter, dancing and general merry making. He is the lion dwarf, most likely of African origin, even though his name is properly Egyptian. Bes has an almost comical, grotesque appearance. He is small and squat, with a great shaggy head of hair, like a lion's mane. His nose is flat and beneath it his tongue protrudes as if it's too big for his mouth. He has long arms and short bowed legs, and his body is adorned with a lion or panther skin, whose tail trails down behind him. He is generally shown wearing a crown of tall feathers, like ostrich plumes, which resemble a tribal head-dress. In paintings, the figure of the Bes is often shown full-faced rather than in profile, which is unusual in Egyptian art. He was reputed to bring good luck to families and to protect them from the common threat of snakes and scorpions.[7] *

Beset, the Lioness-demon is a feminine form of Bes. Some figurines of Beset show her as having the normal proportions of a woman rather than being dwarf-like, although like Bes, she has a mask-like face that resembles a lion. One surviving representation of Beset is a wooden figurine, dating from the second millennium B.C. The figure wears a Beset mask and holds metal serpents. A recent excavation at Egypt unearthed a carving of Beset which has similar features of Bes.[8]

Caroline Seawright writes in her article on "Maahes, God of War and Protection, The Leonine Lord of Slaughter..." is that, "Maahes (Mahes, Mihos (in Greek), Miysis, Mysis) was the ancient Egyptian lion-God of war, a guardian and the Lord of the horizon. He was also associated with perfumes and oils. Maahes was a God, who seem to have first appeared in the New Kingdom, and is thought to have been a deity of foreign origin. Usually depicted as a lion-headed man carrying a knife or a sword, Maahes sometimes wore the *atef* crown or the solar disk and *uraeus* on his head. Occasionally he was portrayed as a lion devouring a captive. Maahes was thought to be the guardian of sacred places, and the one who attacks captive enemies. He protected the innocent dead and condemned the damned".[9]

Claudius Aelianus a Greek scholar says, "In Egypt, they worship lions, and there is a city called after them... the lions have temples and numerous spaces in which to roam; the flesh of oxen is supplied to them daily... and the lions eat to the accompaniment of song in the Egyptian language".

"Lions were bred in the God's temples. Maahes guards the door to the astral plane, and his eye and hand guard the gates of night. He was called 'Wielder of the Knife'... Another epithet, 'The Scarlet Lord' referred to his bloody sacrifices, while other titles included 'Helper of the Wise Ones', 'Lord of Slaughter', 'Manifester of Will', 'The Initiator', and 'Avenger of Wrongs'. Maahes repels evil, protects, initiates and stands guard during magical rites. He is the God of sight, the Sun God of the Nile Delta and the God of mid-summer, who was invoked to bring forth the souls of men, Gods and underworld spirits for divination or to discover the truth of a matter". — *Maahes*, Terri Sharp.

Nefertum is another lion God of the Egypt. The important feature of his depiction is that he is normally shown as a young boy or young man with a lotus crown on his head but occasionally

he is depicted as a lion-headed man with the lotus crown. Temple complex of Seti I at Abydos shows different forms of Nefertum in its walls as paintings as well as relief sculpture. On the northern wall of the chapel, a relief shows Seti burning incense and pouring a libation in honour of the god. Nefertum stands before the pharoah, holding an eye of Horus against his chest in his left hand. Upon his head, a falcon perches and is crowned with a lotus flower. On the southern wall, Nefertum is shown as a lion-headed mummy, again with a lotus-crowned falcon on his head. The chapel walls are carved with hymns to Nefertum, as well as other pictorial representations of the god. He is said to be the protector of the Two Lands (may be the upper and lower Egypt) and the common people and their children'.[10]

The Sphinx is a being which appears in both Egyptian and Greek mythology. Sphinxes have the body of a lion and the head of a human. The Greek Sphinx also has wings, which the Egyptian does not have. In Greek mythology, the Sphinx poses a riddle to all who seek to pass a rock near Thebes and strangles all people who cannot solve it. Oedipus accepts the challenge and the Sphinx asks him: "What walks on four feet, two feet and three feet, but cannot move well on three and four?" Oedipus gives the right answer: it is man. As a child he crawls on all fours, as a grown-up he walks on two legs and old people need a cane for walking. After hearing the right answer, the Sphinx destroys itself by throwing itself down the rock. The Egyptian Sphinx is a Goddess of wisdom and knowledge.[11]

The Griffin / Gryphon is a Greek mythical monster, the guardian of a hidden treasure. The creature is composed of the body, tail and hind legs of a lion, and the head, forelegs and wings of an eagle. The griffin represents speed and majesty.

The Chimera is a fearsome beast in Greek mythology, with the head of a lion, the body of a goat, and the tail of a snake

/ dragon. Modern interpretations have given it three heads and dragons wings. Homer and Hesiod are the Greek poets of 8th c. BCE, report about the Chimera as an awful, fire breathing monster that terrorizes the land of Lycia. The local tyrant, Iobates, asks the hero Bellerophon to get rid of it. Bellerophon carries out this task by flying over the monster on the winged horse Pegasus, firing arrows towards the creature. Others say that he thrusts a block of lead with a spear into the creature's throat. The hot breath melts the lead, and the beast dies suffocated.[12]

Imdugud is the thunderbird of the Sumerian god Enki (Lord of the Soil / God of Water). Imdugud is the South Wind and carries the rain on its back. It has the body of a bird and the head of a lion, whose roar is the thunder.[13]

Chnubis is a Roman God with Egyptian and Greek elements. He is depicted as a snake with the head of a lion.

Ningirsu is the god of rain, fertility and irrigation in Sumer and Babylon. He is depicted as an eagle with a lion's head. In the ancient Sumerian city of Girsu, a temple was devoted to Ningirsu.

The Manticore is a medieval heraldic beast. It has the body of a lion, the head of a man (sometimes of a lion) with many rows of teeth, a scorpion's tail and a flutelike voice.

According to the Egyptian and Greek mythology, the Gods and Goddesses with lion head and other characters of the lion are commonly depicted as the protectors of the people, destroyers of the evil, and creators of the Gods, Goddesses and Kings. Comparing with other deities, these Gods are more ferocious and powerful.

The Indian lion is another name for the Asiatic lion, *Panthera leo persica*, the sub-species that once ranged from Greece to North-Eastern India. This animal has played a major part in the symbols and folklore of Indian culture for over 2000 years.

In Ancient Indian literature, the Rig Veda, the oldest among the four Vedas, mentions the lion. *Simha* is the name for lion mentioned in the four Vedas. Apart from the reference of lion as an animal, we are not able to find any God or Goddess with lion attributes in the Vedas. Even mythical animals with the combination of lion are also not found.

One phrase of the Rig Veda appears to indicate an epithet that can be rightly attributed to the form of Vishnu as Narasimha clearly calls the qualities of Vishnu that are seen only in this avatara as "like some wild beast, dread, prowling, mountain-roaming" (RV.I 154.2a).

Upanishads and Puranas mention the man-lion form of Vishnu as Narasingha or Narasimha meaning both "man-lion" and "lion among men", the fourth incarnation or Avatar of Vishnu, in which the God appears as a lion, to tear to pieces the *rakshasa* (demon) king Hiranyakashipu who, for his piety to the gods, had been granted universal dominion later punished for his evil activities.

Following are the different forms of Narasimha worshiped in India.

1. Ugra Narasimha
2. Krodha Narasimha
3. Malola Narasimha
4. Jwala Narasimha
5. Varaha Narasimha

6. Bhargava Narasimha
7. Karanja Narasimha
8. Yoga Narasimha
9. Lakshmi Narasimha
10. Chhatravata Narasimha / Pavana Narasimha / Pamuleti Narasimha.

Each one of the above forms has different iconographical features but the common feature is that he always showed with a lion head and human body, some times half-lion and half-man. While he is tearing the demon, he is shown with lion claws. He is also showed with multiple arms carrying different kinds of weapons. The earliest sculptural representations of Narasimha are found in Northern India, starting from the Kushan period (1st – 2nd c. A.D.). A stone sculpture made of Mathura mottled red sandstone, now at the Philadelphia Museum of Art[14] and a coin of Kanishka, carry an emblem of a man wearing the head of a lion as a crown**.** Images of Visnu with a boar's head on one side and a lion's head to the other also begin to appear in the Gupta period, and temples from that period survive that were dedicated to the worship of Visnu-Narasimha. Standing cult images of Narasimha from the early Gupta period, for example, survive from Eran and Vidisha Madhya Pradesh. These sculptures are two-armed, with long mane, frontal, wearing only a lower garment, and with no demon (Hiranyakashipu) figure.(Ref**:** Benoy K. Behl, Mind over matter, Art, Frontline Volume 24 - Issue 22 , Nov. 03-16, 2007,)

In South India, the earliest sculptural representation of Narasimha found in Andhra Pradesh is a panel discovered at Kondamodu dated to the third-fourth centuries A.D., showing a full theriomorphic squatting lion with two human extra arms behind his shoulders holding *gada* and wheel (Vishnu's attributes)[16].

This lion, flanked by five heroes (*vrisini / viras*), has been identified as an early depiction of Narasimha. In Tamil Nadu, at Manimangalam village in Kanchipuram District a Pallava period (late 6th c. A.D.) a stone plaque was found in which the Naraimha form of Vishnu is shown along with his consort Lakshmi represented as Srivatsa (symbolic form). This is the earliest known representation of Lakshmi-Narasimha. Further south, in the Pandyan kingdom (early 8th c. A.D), at Anamalai and Kalukumalai, we can see Narasimha carved inside the Cave temples. Apart from these we find various forms of Narasimha as relief panels, pillar carvings and stone sculptures on the temple walls and pillars build during the subsequent periods.

Besides his ferocious forms he is also worshiped as God of peace and love. He showed respectively as Yoga Narasimha (ascetic) and Lakshmi Narasimha (his consort sitting on his lap).

Narasimhi, consort or female power of Narasimha, is a woman-lion, and one of the saptamatrikas (seven mothers). According to Jagdish Narain Tiwari and Dilip Chakravati, the Matrikas existed as early as the Vedic period and the Indus Valley civilization[17]. Coins with rows of seven feminine deities or priestesses are cited as evidence for this theory. The Rigveda (IX 102.4) speaks of a group of seven Mothers, who control the preparation of Soma, but the earliest clear description appears in the epic Mahabharata (215. 21-22).

The Yali is a mythical creature in Indian legend, with the body of a lion and the trunk and tusks of an elephant. We can find beautiful sculptures of Yali used to decorate the pillars, niches and ceilings of the temples.

In South East Asia, Barong is a character in the mythology of Bali. He is the king of the spirits, leader of the hosts of good,

and enemy of Rangda in the mythological traditions of Bali. Banas Pati Rajah is the fourth "brother" or spirit child that accompanies a child throughout life. Banas Pati Rajah is the spirit which animates Barong. A protector spirit, he is often represented as a lion, and traditional performances of his struggles against Rangda are popular parts of Balinese culture[18].

Singa, although a dragon, appears in the shape of a lion in the myths of the Batak people in the mountains of northern Sumatra in Indonesia.

While analyzing the different civilizations and their mythology about the lion gods and goddesses, we can see a close similarity between these ideas. In India, Narasimha has similar features like the Egyptian god Aker. He is always shown as a man with a lion head, ferocious, protector and the guardian deity of the West, where the Sun set and darkness emerges. He is also the protector of people and the children, like the Egyptian Gods Nefertum and Pazuzu who are the protectors of women during childbirth and children. In this connection, we can conclude that the idea of the man-lion emerged in different civilizations in different times and they were all interlinked at in a particular point.

In India, the lion plays an important role in mythology and religion. Images of mythical lions in sculpture and painting are famous. Some Hindu Gods and Goddesses were mounted on the Lion and temples have lion based pillars and decorated with the Yalis (mythical lion-elephant combination). The "Asian Sphinx", mythical animal with Lion body and human head, sculptures found in India starting from the 3rd c. BCE. clearly concludes that the idea is not because of the foreign influence. In South India, the "sphinx" is known as *purushamriga* (Sanskrit) or *purushamirukam* (Tamil), meaning "human-beast". It is said,

by tradition, to take away the sins of the devotees when they enter a temple and to ward off evil in general. It is therefore often found in a strategic position on the gopuram or temple gateway, or near the entrance of the sanctum sanctorum. We find examples of these *purushamriga* at Mamallapuram in Govardhanadhari Panel and in the Nataraja Temple, Chidambaram.

In India today, the distribution of the lion is restricted to the Western India, but it was found up to central India in ancient times. Hence the mythological stories and sculptures and paintings of the God Narasimha and the mythical lion are almost found in all parts of India. The Southern India the idea evolved further and new forms like Varaha Narasimha, Lakshmi Narasimha and Yoga Narasimha were created and worshiped.

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*Here I like to mention about the Laughing Buddha who looks similar to Bes, but without the lion face. The idea of Laughing Buddha originates from the later beliefs of the Buddhists that good life and contentment can be attained in this living world. There goes a belief in the Chinese mythology that an image of smiling Buddha can bring forth good luck, success, happiness, fulfillment, prosperity and wealth. This belief has motivated not only the Chinese but also people of all communities to keep laughing Buddha idols where they reside. In India, the God of Wealth, Kubera has similar features.

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MEDIEVAL HISTORY

BURRAKATHA AND THE HISTORY OF ANDHRA PRADESH

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Introduction

The evidence of existence of folk literature in Telugu with distinct cultural values, representing the spontaneous artistic expression of the Telugu people, can be traced back to 11th century. Nanne Choda (11th Century) and Palkuriki Somanatha (13th Century) in their poetical works referred to the different kinds of folk songs and folk art forms prevalent in those days[1]. Telugu folklore can be broadly divided into songs, prose, and drama. Folk songs may again be divided into simple songs and ballads or narrative poems. The ballad songs cover a variety of stories from mythology, religion, epics, *puranas*, history, legends, fables, and local events. Historical ballads have a major part in the Telugu folklore.

Burrakatha is a unique and original form of narrative entertainment of Andhra Pradesh. It is a form of ballad singing. The history of ballad singing is as old as Telugu literature as we get evidence of this in the works of Nanne Choda. Evolved from traditional Tandana Katha or Jangam Katha or Dasari Katha or Jamukula Katha, this ballad singing art preaches, entertains, and provides diversions to the rural folk. The Jangam tribe took to Virasaivism religion under the influence of Basava of Karnataka (12^{th} century). For their livelihood, they continued seeking alms and started *Burrakatha*, in which they narrated the stories of Lord Siva. During the reign of Kakatiyas, the Saivite missionary

zeal made the Jangams to go for the musical recitations before the masses. In the coastal Andhra region, *Burrakatha* is called J*angam katha*. In Telangana, it is also known as *tamburakatha* or *saradakatha*. In Rayalaseema, it is known as *Tandana katha* or *suddulu*. There are differences between the Telangana, Andhra, and Rayalaseema *Burrakathas*. Language is distinctly different from each other. There is also difference in the instruments used by the performers.

Usually, this art is practiced by a team of two or three people from the same family of certain castes / tribes like *picchuguntla* or *jangalu*. *Burrakatha* narrators are also known as *Saradagallu*. In this form of narration, the main storyteller tells the story, while playing a *tambura* (a stringed instrument) and dancing wearing *andelu* (anklets). One or two associates or sidekicks assist the narrator with small drums called *gummeta* or *budike*[2].

Burrakatha stories fall into three categories - mythological, historical, and socio-political. *Burrakatha* named after the percussion instrument *"Burra"* is a form of ballad singing. The term *'**Burra**'* refers to 'tambura', a stringed instrument worn across the right shoulder of the performer or to the percussion instrument (burralu, budikalu, or dhakkis) used by the associates. *'**Katha**'* means a story. The historical stories of Katamaraju Katha, Palnati Yuddham, Bobbili Katha, Alluri Sitaramaraju, etc. are the most popular of the *Burrakatha* renderings.

The drummer to the right of the performer is known as the '***rajakiyam***'. He comments on contemporary political and social issues even if the story concerns historical or mythological events. The drummer on his left, the '***hasyagadu***', cracks jokes and provides comic relief. Performance begins in the evening with devotional songs in praise of various celestial beings. Then the performer introduces the main story by establishing the place,

time, and historical context of the action. The *rajakiyam* and *hasyagadu* repeat the refrain of the narrative. When the introduction is concluded, the main plot begins in which all three performers take an active role, assuming various characters in the incidents, as well as providing narrative bridges between incidents. Dance, recitation, song, and enactment of scenes provide variation within a strong narrative line. Generally, a story continues for two to three hours. A longer work may be serialized into several consecutive evenings. The traditional artists are not particular to any definite style of dress or make up. Being polygamous, their wives play as assistants and instrumentalists. The ballads are composed in single type of *Dwipada* metre, *Manjari- Dwipada* metre or *Ragada* metre etc[3].

Burrakathas are especially effective in invoking *rowdra, bheebhatsa, veera*, and *karuna rasaas*. The singers can make the audience feel the tenseness of fiercely raging battlefield in one minute, and then make them cry about the fallen valiant hero the next minute. Of course, the comic and the main story teller would lighten up the proceedings when the other emotions become overwhelming. Needing very little in the way of props, this is truly a simple folk art.

One of the noteworthy aspects of *Burrakatha* is the use of ballad cycles to re-create an extensive canvas revolving around the central character. Ballads about the members in the family of a main hero in a chronological order constitute a ballad cycle. The ballad cycle of the heroes of Palnadu and the ballad cycle of Katamaraju are very popular.

Three specific events - the war of Palnadu that took place around 1182 A.D., the battle between the Telugu Chodas of Nellore and the Yadavas that took place circa 12th-13th century A.D., and the War of Bobbili in 1757 A.D. between Gopalakrishna

Ranga Rao of Bobbili and Vijayaramaraju of Vijayanagaram are taken up as examples for purposes of illustration.

Palnati Virula Charitra

Palnadu is the northern region of Guntur district in Andhra Pradesh. This region was ruled by Haiheyas in 12th century. The war of Palnadu that took place between 1178 and 1182 A.D. is the main theme of Palnati Vira Charitra. The ballad narrates the geographical regions and the characters of the story. The dates of the rulers and the battle are not mentioned in the ballad. Based on the inscriptions, the dates have been assigned. It was a battle between two factions of the Haihayas. They were the descendants of Kartaviryarjuna and were the feudatories of Western Chalukyas of Kalyani. Nalagama was the son of Alugu Bhupati of the Palnati Haiheyas. His stepbrother was Malideva. After the death of Anuguraju (Aluguraju), the Palnadu was divided and ruled by Nalagama with his capital at Gurazala and Malideva with his capital at Macherla. Nalagama ruled between 1147 and 1162. However, according to the ballads, he ruled even after 1182. Nagamma, a great statesperson of the times was his adviser and minister. Malideva was supported by his noble minister Brahmanayudu. The differences between Brahmanayudu and Nagamma led to civil war that was fought between 1178 and 1182.

Nalagama's maternal uncle / father-in-law was Kulottunga Rajendra Choda II (1161-1181) of Velanadu Choda dynasty. His stepbrother, Malideva married a daughter of Somesvara (1165-1177) of the Kalyana branch of Kalachuri dynasty. Somesvara's son was Kommaraju and grandson was Alaraju, about whom there is no evidence in history.

Brahmanayudu tried to usher in a new era in which caste distinctions would be abolished. Nagamma was against this. According to some ballads, it was a rivalry between Saivites (supported by Nagamma) and Vaishnavites. Mutual suspicion and rivalry reached climax between the two courts and Nagamma under the pretext of Malideva's defeat in a cock fight, exiled Malideva and his followers for seven years from Palnadu.

After seven years, Brahma Naidu sent Alaraja, the son of Kalachuri Kommaraja of Kalyani, (who was also the son in law of Nalagama) to claim Malideva's share. The demand was turned down and Alaraja was poisoned to death under the orders of Nagamma. The enraged Kalyani Kalchuris and Brahma Naidu declared war on Nalagama and his supporters of Velanadu. The fierce battle was fought in Karempudi on the banks of the river Naguleru. The Kaktiyas, Kota Vamsis, Parichedas, and Hoysalas supported Nalagama. Malideva was supported by the Kalyani Kalachuris. Nalagama was victorious[4].

Though started as a civil war between two factions of Haiheyas, this war shook the Velanadu Kingdom to its foundation. A whole generation of the greatest warriors of Andhra perished. The tragedy hastened the end of Chalukyan rule in Vengi. It exposed their weaknesses and allowed the Hoysalas, Kalachuris, Eastern Gangas and the Kakatiyas to eventually overturn them. The rule of Haiheyas came to an end and the Kakatiyas occupied this region.

The ballad of Palnadu has the oldest historical ballad cycle. A thorough study of the ballad cycles of Palnati Vira Charitra (about 25 in number)[5] and contemporary inscriptions is required to ascertain the names of the rulers (and their dates) who participated and supported the two parties in this historical battle. This ballad also provides a platform for the study of society, role of women in the political affairs, customs, practices, games,

entertainment, religious conflicts and conflict between different castes.

The authorship of Palnati Viracharitra is attributed to Srinatha (14th century), Mallayya (16th century), Kondayya, and Mudigonda Virabhadrakavi (19th century).

This ballad is sung by the Vira Vidyavantulu of Guntur and Nellore regions, who had an education centre at Karempudi, 35 Kms from Macherla, where the historical battle took place. A *veeraotsava* is being celebrated here every year in the temple of Palnati heroes. The historical Chennakesava Swamy temple built by King Brahma Nayudu is located here. Weapons used during the Palnadu war have been carefully preserved here. An annual festival to commemorate the memories of the heroes of that war attracts visitors from all over the region.

Katamaraju Katha

The battle between the Telugu Chodas of Nellore and the Yadava chiefs that took place in 13th century A.D. is the main theme of Katamaraju Katha. The Telugu Chodas claimed descent from the famous Karikala Chola. They ruled over their Kingdom consisting of the present Nellore, Kadapa, Chittoor and Chengalput districts with Vikramasimhapura (modern Nellore) as their capital. Chola Bijjana was the first important chief in the Nellore Choda clan. As a feudatory of the Western Chalukya Someswara I (1042 -1068) of Kalyani, he took part in the wars of the Chalukyas and Cholas. In recognition of the loyalty and services of his descendants to the Chalukyas of Kalyani, Vikramadiya II (1076 - 1126) appointed them as rulers of Pakanadu.

During the reign of Nallasiddhi, a dangerous feud broke out between Nallasiddhi and Katamaraju, the Yadav Chief of

Erragaddapadu in Kanigiri region. The feud was on the issue of the rights of the two princes to use certain wide meadows as grazing grounds for their flocks of cattle. It is said that as there was a severe famine in his region, Katamaraju took permission from Nallasiddhi to graze his cattle in the pastures of Nellore kingdom and entered into an agreement with him for paying grazing tax (*pullari)*. He agreed to give all the male calves born to his cows during his stay in Nellore region. However, he broke the terms of the agreement and grazed his cattle in the pastures as well as in the cornfields around the city of Nellore as he had a tiff with the queen (or courtesan) of Nallasiddhi, Kundamadevi. Enraged at this, she ordered her hunters to destroy the cattle. Katamaraju thought that this was done at the instigation of Nallasiddhi. It led to the fierce engagement of the two sides and the bloody battle was fought at Panchalingala on the banks of Paleru river. Nallasiddhi's forces led by Khadga Tikkana won the cattle, but the leader perished in the battle. Shortly after this disastrous battle, Nallasiddhi also died.

The ballad cycle of Katamaraju is a longest historical ballad cycle. It is longer than that of Palnadu. No research of comprehensive nature has been done on the ballad cycles of Katamaraju Katha. Hence, most of the ballads in this cycle are left unknown. According to T.V.Subbarao, who made an extensive research on this work, there are about 32 long ballads in this cycle.

King Nallasiddhi and Khadga Tikkana are the two historical persons in the ballad-cycle of Katamaraju. It is said that it also contains references to the Kings of Orugallu (Kakatiyas of Warangal). According to inscriptions and ballads, this took place during the last days of Kakatiya Queen Rudramadevi when Pratapa Rudra was heir apparent. That means it was fought between 1280-1297.

There is a difference of opinion among historians of the identity of Nallasiddhi. Some consider him as Manumasiddhi, while according to others, he was the son of Manumasiddhi, who ruled Nellore towards the end of 13th century, which coincides with the rule of Kakatiya prince Pratapa Rudra (1280-1296).

The authorship of this ballad cycle of Katamaraju was attributed to Srinatha, the famous poet of 15th century, though there is no evidence to support this attribution. In 1952, Veturi Prabhakara Sastry edited the ballad of the battle of Yerragaddapadu written by Gangula Pina Yellayya. It was published by the Madras Govt. Oriental Manuscripts Library in 1953 with an introduction by the late Mallampalli Somasekhara Sarma. This ballad has been written by several other authors. Most of the ballads connected with this story are with the folk minstrels in the form of palm-leaf manuscripts.

These ballads of Katamaraju are usually sung by Madigas called Kommulavaru and Suddula Gollalu. The Burrakatha players adopted this ballad from these minstrels. Goddess Ganga is the family deity of Yadavas. It is customary to sing the ballads of Katamaraju in the jubilant folk festivals called Ganga *Zatara*. Bhaktiranna, eldest son of Polaraju who survived the battle, ordained the off springs of the Yadavas to immortalize their memory to posterity[6].

Though it is considered as a mere ballad, it provides an excellent source material for the study of political, social, and economic history of 13th century. The customs, tax terms, sentiments, and traditions appear in this ballad form a base for a thorough research. An extensive study of inscriptions and other

historical records will further help to prove the historicity of this ballad.

Bobbili Katha

Bobbili is a town in Vizianagaram district in Andhra Pradesh. It was the headquarters of the *zamindari* estate of same name. The War of Bobbili in 1757 A.D. between Gopalakrishna Ranga Rao of Bobbili and Vijayaramaraju of Vijayanagaram, (or Vizianagaram of the district of same name) is the main theme of this ballad. The Velama chief, Gopalakrishna Ranga Rao of Bobbili was defeated by the troops of Vijayanagaram, supported by Mons. Bussy, the French commander. Later, Vijayaramaraju was killed by Tandra Paparayudu, the brother-in-law of Ranga Rao. Finally, Venkata Ranga Rao, who was saved by his uncle Vengalara Rao, becomes the chief of the Bobbili estate. In this ballad, the achievement is attributed to the daringness and valour of one hero, Tandra Papayya[7].

The author of this ballad is a certain Mallesam of the Peddada family. His name is mentioned at the end of the story in the last two lines. His father was Nagesam. It is certain that this work was composed sometime after 1757, (the date of the battle of Bobbili), most probably in the 19th century.

Bobbili katha, the ballad on the battle of Bobbili, is very popular in the Andhra country, particularly in the east and west Godavari and Visakhapatnam districts. It continues to be sung all over the country. The Bobbili singers are a particular class of minstrels whose profession is to sing this ballad. They give performances for a pittance and engage the rapturous attention of the masses. Generally, the performance is given during the night and lasts for nearly three hours.

Telugu ballads in song, were and are written generally in popular colloquial style so as to be easily understood by the illiterates and this is one of the factors, which accounts for their immense popularity among the masses. The Bobbili ballad is no exception to this rule. It is colloquial but in dignified style. Its popularity can be estimated by the several numbers of folk editions it has run into and by its several revisions. The Bobbili Katha mentions the villages on the road from Hyderabad to Bejavada (Vijayawada), from Bejavada to Eluru, from Eluru to Rajamahendravaram (Rajahmundry) and finally from Rajamahendravaram to Bobbili which are all halting places of rest are after a strenuous journey. It also mentions the various local chieftaincies or *Zamindaries* situated on the way.

Much interesting information about customs, manners, and items of dress of the Velamas and pieces of art, which were in vogue during that period, lies scattered through this work. This information will be useful for the reconstruction of social and economic history of the period.

Burrakatha in Modern Period (20th century) - Changes in format, form, and content

The difference between the old narratives and *Burrakatha* is obvious: the major difference lies in channelising the traditional medium to serve a dire contemporary need - to make the message contemporaneous by using several methods of performance - using tone, direct comment, forceful appeal, irony, ridicule and the entire satiric spectrum. This is the finest achievement of *Burrakatha* as a recreated model. A new appearance, a new thrust, a search for new goals, a new approach to performing excellence exploiting the in-built strength of an already existing medium-this is what *Burrakatha* has achieved - in a short span of fifty years. During the National movement for independence,

Burrakatha was brought into mainstream and was used for political purposes. *Burrakatha* was banned in Madras Province by the British Government and in the independent Hyderabad kingdom by Nizam Government, because the purpose of this form was to enlighten people of the current political situation. The form of *Burrakatha* has attained the additional dimensions of politics after independence The *Burrakatha* has been used during elections and by Christian missionaries, since it is a powerful means of mass communication. No other creative medium is used so extensively and is so popular in Andhra in the recent past as *Burrakatha* has been. It served as a political whip-up employed by all the political parties. It is being used by Government organisations to propagate developmental activities in the rural areas. Popular artists in the field include Nazar, Pendyala Venkatesvara Rao, Parachuri Ramakotayya, Sirivisetti Subba Rao, Kosuri Ponnayya, Govardhana, Kakumanu Subba Rao, Davuluru, Chintalal, Suryanarayana, etc. Women also formed groups, e.g. Moturi Udayam, Chintala Kotesvaramma, Mahankali Lakshmi and others. Before the advent of Television, All India Radio and Government media used it to bring the message of family planning to the rural masses. In the modern version, the troupes lay much emphasis on gaudy dresses and colourful make-up. Based on gender, assistants are picked up. While the duration of the entire show is time bound, the metrical composition differs at different stages depicting the moods and incidents. The ballads compositions now mark the variety of songs in form and content.

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MUSLIM ATTACKS ON THE TEMPLE OF LORD JAGANNATH AT PURI AND THE SHIFTING OF IDOLS TO KODALA-ATHGARH

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The temple of Lord Jagannath at Puri was one of the largest and the most famous Hindu Temple of India during the medieval period. Its importance was enhanced during the reign of Anangabhima Dev and his illustrious son Narasingha Dev–I, who achieved tremendous success against the Muslim rulers of Bengal. The Gang King Bhanu Dev-IV declared Lord Jagannath as the reigning king of Orissa and his empire as the Purushottam Samrajya. The Gang Kings considered themselves as the Deputy or Rauta of Lord Jagannath. The '*Purushottam Samrajya'* reached its zenith during the reign of Gajapati Kapilendra Dev (1435-66 AD), who gave a death blow to the Bahmani Empire of South India in the historic battle of Devara Konda and plundered its capital Kalabarga (present Gulbarga). He donated huge wealth worth crores of rupees to this temple, which he obtained from the vanquished in his successful expeditions[1]. By his donations and munificence, he made Jagannath the real Supreme Lord of the Hindu Community.

Added to this, the composition of the unique Sanskrit lyric Geeta Govinda at Puri by the celebrated poet Jayadev and the recitation of which was introduced in the daily seva of the deity, made Jagannath popular throughout India and abroad[2]. Moreover, the importance of Lord Jagannath was immensely enhanced by the stay of Sri Chaitanya at Puri for 18 long years (1510-1528

A.D). He identified Lord Sri Krishna with Jagannath. Consequently, Krishna consciousness and Jagannath consciousness were rolled into one. In the words of Sir Jadunath Sarkar, "The diverse religions of Orissa in all ages have tended to gravitate towards and finally merged into the Jagannath worship…"[3]

Reasons behind the attack of the temple of Lord Jagannath

However, the temple of Lord Jagannath at Puri, which was considered to be the principal sanctuary of Hindu religion and culture and a renowned place of pilgrimage throughout India, became the main objective of attacks by the Muslims during the medieval period[4]. The reasons behind the frequent Muslim raids of the Jagannath temple at Puri were many. Firstly, the temple of Lord Jagannath at Puri was the greatest Hindu temple of Eastern India and the most famous center of Hindu religious activities. So it was an eye-sore to the Mahammadans, who considered it as a great obstacle for the spread of Islam in India. Secondly, Lord Jagannath was the symbol of Oriya Nationalism and Oriya unity[5]. Thirdly the Gajapati Maharaja of Orissa commanded the respect of the people of Orissa and the feudatory Rajas of Orissa as "*Chalanti Pratima*" because he was the superintendent of the Temple of Jagannath. Fourthly, the fabulous wealth of this temple served as an inducement to the Muhammadan invaders to raid it from time to time[6]. It was believed that, the "*Ratna Bhandar*" or the treasure of Lord Jagannath Temple of Puri was full of gold, diamonds and costly jewels which was more than any other temple of the then India. The Muslims had the conception that the '*pinda'* (heart) of the idols of Jagannath, Balabhadra and Subhadra were made of rare and costly Jewels known as '*Indra Nilamani*'[7] Fifthly, some iconoclasts also in their religious fanaticism prompted the attack on the temple of Jagannath because they considered it as their duty to destroy the greatest Hindu Temple of eastern India[8].

Because of these frequent Muslim incursions, the Gajapati Maharajas of Khurda ordered the shifting of the idols of Lord Jagannath, Balabhadra and Devi Subhadra from the temple of Puri to the estate of Kodala Athagarh inorder to protect them from the Muslim desecration. Consequently, the deities were shifted to Marda Temple, where they were kept and worshipped for two and half years under the direct supervision of the Raja of Kodala Athagarh[9].

Feroz Shah Tughlaq, the Sultan of Delhi was the first Muslim ruler to attack the temple of Jagannath in 1385 A.D. He invaded Orissa on his way back to Delhi after his official visit of Bengal and Bihar. His objective was to capture the elephants of Orissa, destroy the Hindu temples and subjugate the King. Bhanudeva-III, the King of Orissa escaped to a nearby forest. He also captured the Fort of Sarangada and marched towards Puri. He plundered the wealth and images of Jagannath, Balabhadra and Devi Subhadra with the intention of using them as foot steps of the Jumma Masjid of Delhi[10]. There is however a controversy about the location of the Jagannatha temple destroyed by Feroze Shah's soldiers. There was a Jagannatha temple inside the fort of Barabati at Cuttack, which was actually occupied by the army of Feroze Saha Tuglaq. So it is not known whether Jagannatha temple situated at Cuttack or the famous temple at Puri was destroyed and desecrated by Feroze Shah[11].

The second attack on the temple took place during the reign of Gajapati Prataprudra Dev. The Madala Panji (the Jagannath temple chronicle) states that, 'Amura Surathanu' (Amir Sultan), the King of Gauda (Bengal) entered the Jaganatha Temple. In his "Mahabhava Prakasha", Kanhai Khuntia, who was a servant of the Jagannatha Temple at that time, stated that, 'Surathanu Gazi Isimili' invaded Orissa. Ismail Ghazi was a general of Sultan Husain Shah of Bengal. He advanced as far as Puri, taking

advantage of the absence of King Prataprudra in the capital. The priests of the temple secretly removed the images of Jagannath, Balabhadra and Subhadra from the temple and took it to the Chilka coast. On receipt of the news, Pratap Rudra hurriedly came back and chased the enemy up to the fort of Mandrarana in Bengal. It appears that the Muslim invasion took place after the rainy season in 1509 AD[12] .

Kala Pahara, the general of the Sulaiman Karrani (Afghan Sultan of Bengal) also desecrated the temple of Jagannatha. Of all the Muslim invaders of Orissa, Kala Paharahas earned the greatest amount of notoriety as the desecrater of the temple[13]. Regarding the activities of this iconoclast, Hunter writes, "The fierce Afghan Kalaphar swept like a wave across the province, throwing down temples, smashing the idols, drawing Jagannath himself to hide his head in the smile waves of Chilka and exterminating the last of the independent dynasty of Orissa" [14].

In his work "Makhzan-I-Afghana", Niamat-Ullah describes that, from the neighbourhood of Jaipur, where the last independent ruler of Orissa Mukunda Dev fell fighting (in the battlefield of Gohiratikri), Kala Pahara made a rapid dash to attack the Jagannath Temple[15]. But, before his arrival, Divyasingha Patnaik, the *Parichha* or Superintendent of the temple removed the idols to Parikud, an island in the Chilka lake and laid them underground at Chhapli Hathipada. Kala Pahara got the information of the place of hiding from one Dana Pahanta Singh, the headman of Kokkolo, a village near Khurda and proceeded to that island.[16] He brought back the images on the back of an elephant. He plundered the treasure of the Jagannatha Temple, damaged all the images, uprooted the Kalpavata tree and set fire to it[17].

It is stated in the Madala Panji that Kala Pahara carried the image of Jagannath as far as the banks of the River Ganga

where he set fire to them. According to tradition, the notorious iconoclast died on the spot, of heart attack as a consequence of sacrilege[18]. As his body began to crack, he threw the half burnt image containing the holy object (*Daru Brahma*) into the River Ganga. A Muslim Amir (noble) picked it up from the river and kept it in his house. Besara Mohanty, a Vaishnava mendicant from Orissa, followed the incoclast. He procured *Pinda Brahma* (the sacred part) of the charred image from the Amir, took out the holy object and secretly carried it to Kujanga of the Cuttack district[19]. Later on Raja Ramachandra Deva of Khurda brought it back from Kujanga and installed it in new images[20]. Regarding the burning of the images by Kalaphada, Abul Fazl states that, Kalaphada flung the images of Jagannath, Balabhadra and Subhadra into fire and burnt them and later cast them into the sea[21].

It is not possible to believe that, Kala Pahar carried the heavy image upto the Ganga from the shore of the Chilka Lake. Moreover, he did not immediately die inspite of the sacrilege. It is assumed that the images were taken to the seashore near Kujanga and burnt.

It was at this stage that Ramachandra Deva, Raja of Khurda came to lime-light. Madala Panji describes that, in his ninth Anka (7th regional year) Ramachandra Dev brought the *Daru Brahma* from Kujang and installed it in new images at Puri. The image of Jagannatha was installed in this temple. The temple chronicle gives Ramachandra Deva, the credit of installing Jagannatha in the Puri temple glorifying him as second Indradumnya[22].

Throughout the reign of the Mughal Emperor Jahangir, the temple of Jagannath became a target of attack by the Mughal Subedars of Orissa. Jahangir appointed Hashim Khan as the Subedar, when Orissa was made a separate Suba in 1607 A.D.

Hashim Khan made an attempt to loot the Jagannath Temple at Puri in 1610. Therefore, the idols were removed from the Jagannath Temple to Gopaljee Temple at Khurda in fear of being dishnoured at the hands of the Muslims.

During his rule, Kesodas Maru, a Rajput general of Hashim Khan seized the Jagannath Temple in 1610. The story of his raid is given in detail by a contemporary writer, Mirza Nathan in his book '*Baharistan-I-Gaibi*.'

Kesodas Maru and his followers entered the Jagannath Temple as pilgrims and forcibly occupied it. Since it was the car festival season, the idols were worshipped at Gundhicha Mandir. He looted the store house of the temple amounting to three crores of rupees. He also burnt the cars of Lord Jagannath, Balabhadra and Devi Subhadra. Raja Purushottama Dev of Khurda was defeated and forced to sign a humiliating peace treaty imposed by Kesodas Maru[23]. Raja Kalyana Mal (son of Raja Todar Mal) succeeded Hashim Khan as the Subedar of Orissa in July, 1611. Purushottama Dev hoped that Raja Todarmal's son would be friendly to a Hindu Chief. But he was sadly disillusioned.

Raja Kalyana Mal excelled Kesodas Maru. He plundered the territory of Khurda, forcing Purushottam to comply with the terms of the peace treaty that were imposed by Kesodas. In 1615, Raja Kalyana Mal invaded Puri. Hearing this news, the Raja transported the idols to a place known as Gurubai, apprehending the desecration of the Gods. But Purushottama had to offer his daughter to become the Queen of Emperor Jahangir, to pay a large *peshkush* and to send his best elephant for the service of the Emperor. It is unreasonable to accept the statement of Nathan without reservation. Jahangir writes in his memoir that, he received eighteen elephants which were brought by Raja Kalyana from Orissa after his recall in 1617, but makes mention of the Khurda Princess[24].

In 1618, Mukarram Khan, the Mughal Subedar of Orissa attacked Puri. With the approach of the Muslim soldiers, the *sevakas* of the temple of Lord Jagannath were so frightened that, they carried away the idols to Gobarpada in Banapur along the Chilka coast[25]. The Raja of Khurda was reduced to the status of a mere *zamindar*.

The reign of Shah Jahan was a period of peace and tranquility for the temple. When he rebelled against his father Jahangir, he entered Orissa from south in October,1623. He was cordially treated by Narasingh Dev, the Raja of Khurda who sided with the rebel prince. Probably that is the reason why Shah Jahan helped the restoration of the deity in his temple. During the reign of Shah Jahan, the Jagannath Temple was spared by the Muslims. According to Madala Panji, the temple was renovated and plastered during this period. The date of renovation is 1636-37 A.D[26].

The reign of Aurangzeb was the most disturbing and humiliating period in the history of the temple. In 1660, Aurangzeb appointed Khan-I-Durban as the *subedar* of Orissa. During his rule, the temple of Baladev at Kendrapara was destroyed and a mosque was built in its place. In 1676, Shaista Khan became the *subedar* of Orissa. It is stated in the Madalapanji, that Abu Nasir, son of Shaista Khan advanced towards Puri to attack the temple. But at Pipli, his camp was struck by lighting. Hence, he returned to Cuttack.[27].

In 1687, Ekram Khan became the *subedar*. It is stated that Emperor Aurangzeb ordered Ekram Khan to destroy the Jagannath temple at Puri and despatch the image of Jagannath to him. Apprehending the desecration of the idols, Raja Divyasingh Dev removed the idols to Minitri-a village near Ranpur before hand. Accordingly, in 1691, Ekram Khan assisted by his brother

Mahammad Khan Zaman Ullah and another named Iman Koli entered into the temple and practiced vandalism[28]. They broke certain portions of the Lion's gate of the temple and took away the wooden idol of Lord Jagannath. One of them climbed the throne (*Ratna simhasana*) of the Lord Jagannath. This was considered as an act of desecration. The disc of the Bhoga Mandapa was broken. This frightened Divyasingh Dev, the Raja of Khurda to such an extent that, instead of facing the problem, in utter fear, he preferred taking shelter in the house of Bidyadhar Mahapatra, a *sevaka* of the temple[29].

The next attack of the temple was directed by Mahdmmad Shuja-Uddin Khan, the Governor of Orissa in 1713. In 1713, he led a great invasion against Raja Harekrushna Deva of Khurda. In the course of his invasion, he entered into the temple, destroying the main gate. He plundered the stores of the temple and took away precious ornaments of the deity[30].

But, it was during the administration of Muhammad Taqi Khan (1717-1734), the Deputy *subedar* of Orissa, that the worship in the temple of Lord Jagannath was disturbed most[31]. He was one of the cruelest iconoclast *subedars* of Cuttack. During his tenure, Lord Jagannath of Puri and the King of Khurda Kingdom had to take shelter in the mountainous regions of Kodala-Athagarh several times. During his administration, the *sevakas* of the temple were forced to remove the idols from the temple four times in fear of being dishonoured at the hands of the Muslims[32].

There were several reasons behind the Taqi Khan's frequent invasions of Khurda and the raids of the temple of Jagannath at Puri. Firstly, Taqi Khan wanted to suppress Raja Ramchandra-II, the Raja of Khurda for his insubordinate behaviour and his desire to assert himself as the independent king of Orissa.[33]

Secondly, Taqi Khan was a staunch Muslim and followed a vigorous anti-Hindu Policy in Orissa. As a staunch Muslim, he thought it his duty to destroy the Hindu temples. Thirdly, he very well knew that Lord Jagannath was not only the Chief God of Orissa, but also the embodiment of the unity of Oriyas. Being the Superintendent of the Jagannath temple, the Raja of Khurda commanded the respect of all the Rajas, nobles and common people of Orissa. In order to bring the complete subjugation of Orissa and the Raja of Khurda, the destruction of Jagannath Temple was a political necessity[34]. Therefore, Taqi Khan wanted to destroy the Kingdom of Khuda as well as the temple of Lord Jagannath - the center of worship of the Hindus of Orissa. Fourthly, he wanted to take away the huge wealth and precious ornaments of the temple. Fifthly, he had the conception that, the '*Pinda'*(Heart) of the idols of the temple were made of rare jewels known as '*Indra Nilamani'*.

On 2nd December, 1731, Taqi Khan invaded Khurda. Expecting the Mughal attacks on the temple of Puri, Raja Ramachandra-II ordered the removal of the idols of Jagannath, Balabhadra and Devi Subhadra to a secret place. Accordingly, these were carried to Dobanda in a palanquin. From there they were taken to Banpur through the Chilika lake in a raft and installed in the temple of Hariswar of village Nairi[35].

Hearing this news, Taqi Khan again invaded Khurda. Ramachandra Dev-II fled away to Nayagarh, then to Khandapara and Bolagarh and took shelter under the respective kings of this estate. For better safety of the idols, he ordered to remove them to village Chikilli of Khallikote estate[36]. After dethroning Ramachandra-II, Taqi Khan installed Bhagirathi Kumar, the son of the King on the *Gadi* of Khurda and proceeded to Murshidabad through Cuttack for some months. Thereafter, the idols were usually returned to Puri for worship.

Taking full advantage of the situation, Ramachandra Dev drove out the Mughal forces and occupied Khurda. This was a matter of grave concern to Taqi Khan. Therefore, he again attacked Ramachandra Dev and occupied Khurda. Ramachandra Dev-II fled away to Kodala-Athagarh and hided himself in a nearby Fort namely Rumagarh [37].

Hearing this news, the *sevakas* of the temple were so frightened, that they carried away the idols to Niladri Garh of Banpur estate. Since, that place was not out of danger, Ramachandra-II ordered the *sevakas* to remove the idols of Lord Jagannath, Balabhadra and Devi Subhadra to a place called Marada of Kodala-Athagarh.

The Reasons behind the Shifting of Idols to Marda

The reasons behind the shifting of idols to Marada village were many. Firstly, the *zamindars* of Ganjam district, including the Raja of Kodala-Athagarh were under the Nizam of Hyderabad and not under the Mughal Governors of Orissa. It was not an easy task for Taqi Khan to cross the boundary of his jurisdiction and interfere in another Kingdom[38]. Secondly, the village Marda was situated inside dense forests and was inaccessible for the Mughal army. Thirdly, the Kodala-Athgarh Raja family had strong social ties with the Gajapati family of Orissa[39]. Fourthly, it was alleged that Ramachandra Deva-II married a Muslim Princess namely Razia Bibi and was made a outcaste by the Hindus. Although he was hated by all, the Raja of Kodala Athgarh gave him shelter because of their strong social and family ties [40].

The idols of Lord Jagannath, Balabhadra and Subhadra of the world famous Puri Temple were kept and worshipped in strict

secrecy in Marda form 29.12.1933 to 312.6.1936 for more than two and half years, till they were brought back to Puri

Description of the Temple of Marda

For the deities, a new temple known as Marda Temple was built by Jagannath Harichandan Jagadev-the Raja of Kodala-Athgarh. The temple of Marda is situated in the Kodala-Athgarh estate of Ganjam district. It is about four kilometers from the village Mathura on the way from Berhamnur town to Polosara and 160 kms. away from Puri. The empty *Ratna Simhasan* of this temple is a mute-witness of the relationship of Jagannatha cult with the Rajas of Kodala-Athgarh. The temple was constructed at the foot of the Hathibari mountains covered by dense forest. Perhaps this place was selected for its inaccessibility and its strategic importance to hide it from the knowledge of general masses. It is said that the architects and sculptors of nearby Mathura village constructed it secretly within two months working day and night. For the construction, reddish brown sandstones were smoothly finished and fitted together in such manner that the joints are hardly visible. They are laid horizontally one upon another and kept in a position by their weight and balance. Mortar was not used in the joints but a plaster of lime was applied.

Architectural Designs

The temple consists of two chambers - 1.Deul (Sanctuary) 2. Jagamohana (Porch or audience hall). It is constructed in a Pidha style. Erected on a common platform, the Sanctuary and Jagamohana are two components of a single unified architectural scheme. Inside the Garbagriha, there is a raised *simhasana* covering the entire south wall similar to that of Puri Jagannatha temple. The *simhasana* is plain in treatment and devoid of any decorations. On it, there are three circular pedestals where the images of Jagannatha, Balabhadra and Subhadra were placed.

Raja Jaganath Harichandan Jagdev of Kodala-Athgarh spent a huge amount worth Rs.500 every month for the worship and maintenance of the temple. He donated three villages for maintenance of this temple and its priests. Gajapati Ramachandra Dev-II, who had hidden himself in the fort of Rumagarh used to visit this temple every day for his lunch and worship [41].

Thus, during the Muslim period, the worship at the temple of Jagannath was very often disturbed. The frequent invasions of Khurda by Taqi Khan seriously affected the worship of Jagannath and created panic at Puri. This unexpected interference in the temple matters brought chaos and confusion as a result of which important festivals like *Rath Yatra*, *Chandan Yatra* and *Deva Snana Yatra* could not be performed.This led to the substantial decrease in the number of pilgrims visiting Lord Jagannath. Some of them who had reached there were disappointed to see that the idols were no longer there and had been removed to a place to which they would not be in a position to go [42].

Return of the Idols to the temple of Lord Jagannath

After the death of Taqi Khan, Murshid Quli Khan-II was appointed as Deputy Governor of Orissa. As soon as he took charge, he took steps to revive the worship of Lord Jagannath. He sent his Deputy Mir Habib to bring back the idols from Marda to Puri. Accordingly, the idols were brought from Marda and installed at Puri in 1736 just before the Car Festival of the year. This general attitude of Murshid Quli Khan-II was considered as a big relief to the Hindus of Orissa. This fact is supported by Madala Panji, the temple chronicle of Puri and Muslim account of Riyas-us-Salatin[43].

In this way, the temple of Marda had played an important role for safe keeping the Jaganatha images from the Muslims and establishing a long historical relation between Atharh and the Jagannath cult of Puri. Though nearly two and half centuries have passed since its construction, the Marda temple still stands in its perfect condition on a lonely barren field as a mute witness to the shelter given to Lord Jagannatha by the Raja of Kodala-Athgarh in its critical years. At present, the *simhasana* of the Garvagraha is empty, as the images were taken back to Puri, but people still worship the three circular pedestals where the deities were once placed.

In spite of all these raids on the temple of Jagannath, the popularity of the cult of Jagannath could not be decreased, rather it was increased to an enormous extent. Whatever may be the attacks and conspiracies, the fact is unchallengeable that, Lord Jagannath - the Lord of Universe is a resultant composite of many divine concepts and Gods. In the words of W.J. Wilkins, "Jagannath is unparalleled in this context. Starting from a local deity of a unknown tribe (Sabara) in dense forests, Jagannath manifested Himself as one of the greatest religious centers of the whole world". It has found unity in diversity. Inspite of heterogeneous ritualistic practices, Jagannath stands supreme. He was not meant for any one sect or tribe. In course of time, He became universal. Even Muslims like Salabega, Haridas and Chaitanya Das accepted Him as the source for their salvation.

Thus, in the critical juncture of destiny of the Gajapati Kings of Orissa as well as the temple of Lord Jagannath of Puri, the Kings of Kodala-Athgarh not only showed their undivided loyalty but also gave them shelter in their estate for a long time. In order to commemorate the memory of help rendered by the Kings of Kodala-Athagada, the Gajapati Maharaja of Puri ordered

to light a special lamp at the evening hours of every Ekadasi day by reciting the following sloka.

"*Sarana panjara je mana udharan*
*Harichandan Bhai Jagadev Ran*a".[44]

After the ceremonial circumbulation of Madan Mohan is over, a class of *sevayats* called Chunara climbs to the top of the spire of the Jagannath Temple and after offering Tulasi leaves and sandal paste to the iron disc on Nilachakra places a lamp known as Mahadipa, invokes the blessings of Lord to save the Raja of Puri and Athgarh from any possible danger. Therefore, Kodala-Athagada was popularly known as the second home of Lord Jagannath or "*Sarana Srikhetra*" (Second Puri) in the History and Culture of Orissa.

Thus, inspite of all these sacrileges and incursions, the temple of Lord Jagannath stands as a prominent center of Hindu religion and culture all through history. Frequent Muslim attacks on the Jagannath temple were more due to political reasons than due to religious intolerance. The attack by some fanatic Muslim generals may be regarded as an exception.

In course of time, the cult of Jagannath gradually spread to different parts of India and even outside India. A number of Jagannath temples have been built at Bangalore, Chennai, Surat, Delhi, Mumbai Ahmedabad, Kolkata, USA, Australia, Canada, Germany, Thailand, England, Indonesia, Nepal, etc. The main feature of this cult is its universal quality. This cult accepts people of all religions, castes and sects into its fold. In this process, all religious faiths of India converged into the great Institute of Jagannath.

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THE GARH - *KATAKA* CONCEPT: ORISSA

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Abstract

Orissa is a coastal state. It is also part of ancient Gondwana. The coastal plains are bounded by ancient hill ranges in the north, west, south and by the Bay of Bengal in the east. They act as natural barriers. The drainage systems are shore oriented, they cut across these barriers and traverse the plains. These drainage systems have eroded the barriers forming wide valleys, which have been used as pass by the invaders and expeditionary forces to march upon each other. They have also acted as germ pans and as harbours for urban centers. Drainage channels, invasion & maritime facility has acted as Factors of Urbanisation in Orissa. Locations having strategic vantage evolved into urban centers from forts and cantonments termed as *Garahs and Katakas* respectively i.e. a *Garah* and *Kataka* concept emerges, which indeed is unique. Ancient Orissa was a maritime state. Favourable maritime facility has acted as adjuvant factor. Invasions also dictated resettlement of urban centers. A west to east migration of urban centers in tune with the drainage pattern is discernable.

Introduction: Geographical Aspects and Historical Background

These presents transpire out of our oral presentation at a National Seminar (2005)[1]. Orissa marks the north-east terminus of ancient Gondwana[2]. This has resulted in a geomorphology

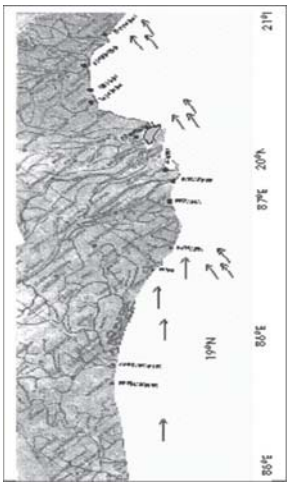


Fig.-1

of mixed topographical features. At its center and to its north, west and south, we note high lands and denuded hill chains ranging between 1000 – 3000 feet high[3]. Extensive denudation has widened the channels into valleys, which have traditionally been used for seasonal communication. As a result, the coastal belts of Orissa are composed of rich alluvial soil . The intervening valleys have settlements, while the highlands have historically been bereft of habitation. The orography between Kalingapatna in the south and Kasaphala in the north is that of uninterrupted alluvial flat coastal belt, extending variably into the hinterland along the river valleys. Orissa has an inclined shore line (see 1^0 grid map, Fig.-1). This has resulted in additional benefit in the past, as an inclined shore experiences less diurnal tide amplitude effect, shallow draught and a short inter-tidal zone, which were necessary for easy cross over and quick access to the placid sea by the merchandise laden sea-going vessels, which then had non-mechanised propulsion. Inclination of the shore line also reduces the tidal bore effect during cyclones. This helped settlements to close up towards the shore at select places, which allowed safe anchorage. The ring of highlands to the hind of the coastal hinterland, apart from acting as a natural barrier between coastal Orissa and rest of India also creates limited obstruction to the monsoon draft. The obstruction is the cause of heavy rainfall in Orissa and a long rainy season locally known as *chaturmasia* (four month period)[4]. This had resulted in lush evergreen flora all over the hill-ridge zones with a variety of fauna, which had accentuated the effectiveness of that natural barrier. The pouring rain also eroded the hill sides

and annually surcharged the top soil in the coastal flat lands, which has an elevation between 4-24 meters above the mean sea level. Such geographical, topographical and agro-meteorological conditions gave to Orissa's coastal belts a self-sustaining rain fed long staple, high yield rice producing condition, which sustained a easy way of life. Greece also has a similar topography[5]. Orissa has a rich maritime history and its sea going vessels and ports have been acclaimed as the best[6]. The sea provided the scope for global trade. Ancient Orissa, could therefore, remain a natural isolate. Conquering it was profitable, but it also required special wherewithal. The number of invasions through the entire historical period, hence has been few and far between and Orissa always was among the last destination. For similar reasons, only two Orissan dynasties (the Chedis and the Suryavansis) had indulged in repeat expeditions across these formidable barriers. Emperor Kharvela (c.2nd B.C.), who had for the first time crossed these natural barriers in his repeat invasions, states in his *Udaigiri Prasati*, that he had his '*Mah-vijaya Prasada'* in his capital[7].The *Prasati* also suggests the name of his domain as Kalinga[8]. This means, Kalinga had buildings in its capital in c.2nd B.C. It could therefore be an urban center. If present Bhubaneswar's neighbourhood be accepted as Kharvela's erstwhile capital (with due respect to other view points), it then was effectively bounded by all these natural barriers with easy access to the sea i.e. it was selected on the basis of geostrategic consideration. Such natural protection, lack of invasions and consequent isolation is also noted in the case of Brahmaputra and Bagmati valley areas. Invasions were always capital (urban center) and prime asset oriented. Expeditions were always controlled from urban centers. The need for security on one hand led to the migration of sub-populations and resettlement of urban centers and on the other, a pattern of cantonisation comprising *garhs* and *katakas* evolved to protect the prime assets (such as ports , docks , trade routes , edifices and

merchandise), which in this study is nomenclatured as the *Garah-Kataka* concept. In **Fig.2** and in **Table II** , they are numbered as 1 – 16. In *Oriya lingua*, the term Cuttack is pronounced and spelt as in *Kataka* (3 consonants), which is hereinafter adhered to. Kharavela's *Prasati* names only urban centers that he had taken during his expeditions[9]. Kapilendradeva's (c.1434 –1468 A.D.) campaigns were also settlement centric, the campaigns of Samudragupta to Krisna Deva Raya were all urban settlement centric[10]. Untill the sea cum shore launched expeditionary forces of the East India Company took Orissa in c. 1803 A.D., no invasion had ever happened from the Bay of Bengal route. All successful invasions of Orissa are always noted to have been associated with large campaigns (elaborate preparation events). This is because of the fact, that (i) crossing the natural barriers required time (ii) the principal urban centers and assets were all located on an average of 100 to 400 kms. from such barriers (iii) this needed special and elaborate logistics.Therefore, natural barriers were a limiting factor. In **Fig.2**, the invasion paths are suggested by arrows, along the borders of Orissa. Our **Table – I** gives a select short descriptive tabulation.

Fig.2

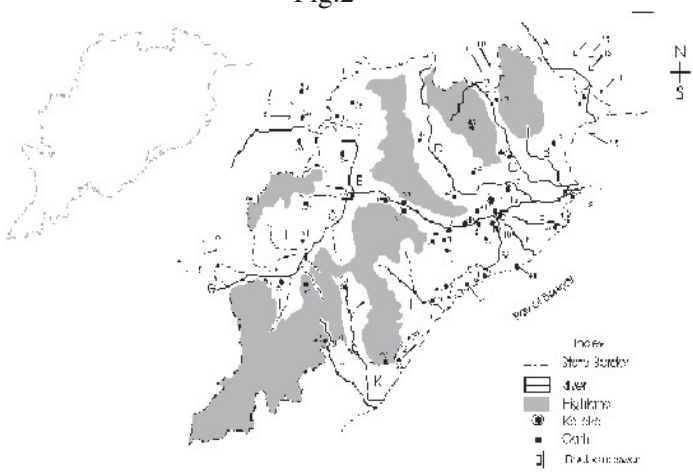


Table – I

Period	Invader (dynasty)	Track no.	Result	Defender
3rdB.C.	Asoka (Maurya)	9	Occupied	N K\SB
2ndB.C.	Naga	6,7 &16	-TO-	-do-
1st B.C.	Satakarni – I (Satavahana)	3	- Occupied -	-do-
7th A.D.	Pulakesin – II (Chalukya)	4	- do –	-do-
- do -	Sasanka (xx)	11	- do –	-do-
9th A.D.	Govinda III (Rastrakuta)	6	- do –	-do-
11th A.D.	Rajendra Chola (Chola)	5	- do –	-do-
12th A.D.	Kalucheri	7	Intruded	Kesari end
-do-	Afghan – (Sheran Brothers)	9-12	Defeated	Ganga\SB
13th A.D.	Afghan (xx)	11-12	-do—	-do-\SB
14th A.D.	Afghan (xx)	3-7	- do -	Suryavansi\SB
16th A.D.	Mogul	8	TO	KN\NDB
17th A.D	Bengal & Hyd. Nawabs	13, 2	-do-	-do-
18th A.D	Maratha	16	- do -	-do-
19th A.D.	East India Co.	1, 14, 15	- do -	Maratha

Index: N K = Not Known; SB =; TO = Silent Take over; SB = Sanguinary battle; NDB = No decisive battle.
Issue Illustration Table – discrepancies & disagreements be over looked.

Table – II : The members of the Garh-Kataka scheme.

Code.	*Garahs*	*Katakas*	General Names	Drainage	Special Remark
1 -			Raibania	Suvarnarekha	Costal tract
2 -			Nilagiri	Salandi	
3 -		Jajpur		Baitarani	
4 -		Amravati		- do -	
5 -	Chowdwargarh			Mahanadi	
6 -		The Kataka		- do -	
7 -	Keradagarh			Hansua	Delta mouth & connector
8 -	Arighagarh (Righagarh)			Brahmani	- do -
9 -	Paradeepgarh			Mahanadi	- do –
10 -	Sisupalgarh/Badagada			Gandhabati	
11 -	Khurdhagarh			Chilika Head	
12 -	Nayagarh			Mahanadi	
13 -	Daspalla			- do –	
14 -	Fatehgarh/Khandapada			- do –	
15 -			Kantilo	- do	Watch tower
16 -			Banki	- do -	- do –
17 -	Barangagarh			- do -	Delta head
18 -	Rodhangagarh			Chilika	lake mouth
19 -	Parikudgarh			- do –	lake central
20 -	Khalikot \ Garh Huma			- do -	Costal tract lake south
21 -	Jaugarh			Risikulya	
22 -	Chikitigarh				Costal tract
23 -			Parlakhemendi	Vansadhara	- do -
24 -	Raygada			Nagavalli	
25 -		Bisama kataka		Vansadhara & Nagavalli	
26 -		Puruna kataka		- do -	Gorge
27 -	Kaintaragarh (Athmallik)			- do –	- do -
28-			Boudh	- do –	
29 -	Asurgarh			Tel	
30 -	Dharmagarh			- do -	
31 -	Titlagarh			- do –	
32 -	Patnagarh			Suktel & Mahanadi	-Tel head areas
33 -		Sunapura Kataka		- do - confluence zone	
34 -	Bargarh			Mahanadi	
35 -	Sarangagarh			- do -	
36 -	Raigarh			- do –	
37 -	Dharmajaygarh			- do –	
38 -	Sundargarh			- do –	
39 -	Junagarh			- do –	
40 -	Tigiria			- do -	
41 -	Athagarh			- do -	
42 -			Hindol	Brahmani	
43 -			Kamakshyanagar	- do –	
44 -	Deogarh			- do –	
45 -	Keonjhargarh			Baitarani	
46 -			Deogan	- do -	
47 -	Khichingagarh			- do –	
48 -			Puri		New settlement.

Table-I may be read along with Fig.1 shows select invasions / occupations that covers the period from c.3rd B.C. to c.19th A.D. (2200 yrs). The principal defenders in two instances were strong while in the rest were either weak sovereigns or dynastic interlude or are not known. In the last case, the defender himself was the previous occupier. Pre c.12th A.D., all invasions seem

to have met by weak defenders, which suggests that the *Garh-kataka* concept and the tentacular defense system possibly became operational from c.12th A.D. Invasions were successful during weak periods.

Various *Ragirs* (principalities) dot the river valleys of Orissa. Using Geographical Information Systems (GIS), this study identifies urban centers that have geo-strategic locations, which acted as the center of erstwhile *Rajgirs*, many of which had a long list of *Rajas* (kings). *Adhi Rajas* (subordinate) and *Thata Rajas* (Regimental Kings). Locational plan suggests, that such principle settlements avoided the hills and ravines (which had hill streams, mud slides, due to seasonal heavy rain), instead chose *sakata bhumis* (carriagable ground), which were proximal to ancient passes and routes, which in turn further suggests that macro area geo-strategic aspects were taken into consideration even for locating the *Rajbatis* (palaces). These study shows that the *Ragirs*, jointly and severally functioned as a bulwark against any invader.

On a physical map, we mark out 48 urban centers. Of these, 29 have the suffix *garh*, 10 are general names, 6 are *katakas*, 2 are river bank vantage posts for observation and 1 new settlement (29 + 10 + 6 + 2 + 1 = 48). All the centers when connected by imaginary lines form deltas (triangles) and trapeziums type of geographical domains and tentacles (flexible paths). Worldover, the delta and the trapezium formats have been used in sea and land battles[11] and flexible paths have been used to deploy forces. **Table-I** interphases invasions, defender, dates, routes and geography i.e. Fig. 2. **Table-II** gives the constituent members of the garhs and the *katakas*, with their numeric identifying codes. T**able – III** gives the list of the drainage with their alphabetic identifying codes as mentioned in Fig. 2, 3 & 4. **Table - IV** gives the constituent members of the delta formats,

represented by the alphabet 'D'. **Table V** gives the constituent members of the trapezium formats, represented by the alphabet 'T' **Fig. 2** graphically presents the locations of all the 48 constituent members. **Fig. 3** graphically presents the delta and the trapeziums. **Fig. 4** graphically presents the tentacular system.

Fig.3

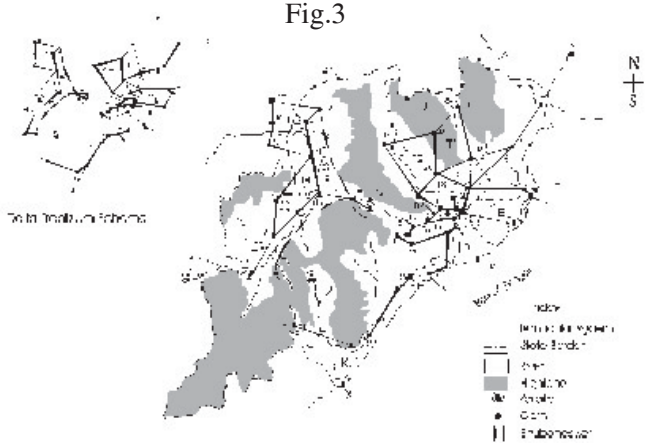


Table - III : Drainage members and their Codes.

Code	Drainage	Code	Drainage	Code	Drainage
A	Suvarnarekha.	**G**	Tel.	**M**	Birupa.
B	Salandi.	**H**	Indra.	**N**	Devi.
C	Baitarani.	**I**	Hatti.	**O**	Kathajhudi, Kuakhai, Kusabhadra, Daya, etc.
D	Brahmani.	**J**	Nagavalli.	**P**	Chilika.
E	Mahanadi.	**K**	Vansadhara.		
F	Ong.	**L**	Risikulya.		

Cantonised Formats: Urban Centers

In **Fig. 2** (of the 48) we can observe that the 38 member centers can conveniently be joined with imaginary lines forming triangles and trapeziums. **Table - IV** gives the constituent members of the delta formats, represented by the alphabet 'D '.

Table – IV

Code.	Constituent Members of the Delta formats.	Drainage.
D1 -	Jajpur kataka(3)- Deogaon(46) –Nilgiri (2) ::	*Mid- Baitarani & Upper-Salandi.*
D2 -	Jajpur kataka(3) -Kamakshyanagar (43)–Deogan(46) ::	*Bramhani – Baitarani connect valley.*
D3 -	Kataka (6)- Amravati kataka (4) - Jajpur kataka (3) ::	*Mahanadi , Birupa & Brahmani.*
D4 -	Jajpur kataka (3)- Chowdwargarh (5)- Athagarh (41) ::	*Mahanadi ,Birupa flood plains.*
D5 -	Kataka (6)- Sisupalgarh/Badagada (10)-Barangagarh (17)::	*Mahanadi south Delta.*
D6 -	Puruna kataka (26)-Kaintaragarh (27)- Boudh (28)::	*Mahanadi Pre-Gorge picket.*
D7 -	Patnagarh (32)- Sunapura (33)- Titlagarh (31) ::	*Mahanadi – Tel confluence south west.*
D8 -	Patnagarh (32) - Sunapura (33) – Bargarh (34) ::	*Mahanadi – Tel confluence north west.*

Table-V gives the constituent members of the trapezium formats, represented by the alphabet 'T '.

Table – V

Code.	Constituent Members of the Trapezium formats	Drainage.
T1 -	Khichingagarh (47) – Deogan(46) – Kamakshyanagar (43) – Keonjhargarh (45) ::	*Upper Baitarani*
T2 -	Kamakshyanagar (43) - Hindol (42) - Deogarh (44) - Keonjhargarh (45) ::	*Upper Brahmani.*
T3 -	Jajpur kataka (3) - Amravati kataka (4) - Chowdwargarh (5)- Athagarh (41) – Hindol (42) - Kamakshyanagar (43) ::	*Mid Brahmani.*
T4 -	Kataka (6)- Barangagarh (17)– Tigirai (40)- Athagarh (41)- Chowdwargarh (5) ::	*Mahanadi delta head*
T5 -	Kataka (6)- Jajpur kataka (3) – Keradagarh (7)- Arighagarh (8)- Paradeepgarh (9) ::	*Combined delta & mouth*
T6 -	Sisupalgarh/Badagada (10) – Khurdagarh (11)- Nayagarh (12)- Daspalla (13)- Khandapada (14)- Kantilo/Fathegarh (15)- Banki (16)- Barangagarh (17) ::	*Mahanadi mid-lower, and south bank.*
T7 -	Boudh (28) - Asurgarh (29) - Dharmagarh (30)- Titlagarh (31) - Sunapura (33) ::	*Tel & its tributaries.*
T8 -	Sunapura (33) - Bargarh (34) - Junagarh (39)- Sundargarh (38) – Boudh (28) ::	*Upper Mahanadi.*
T9 -	Bargarh (34)– Sarangagarh (35)- Raigarh (36)- Dharamjaygarh (37)- Sundargarh (38)- Junagarh (39) ::	*Outer Mahanadi.*

Trapezium Aspects

1 - The head areas of the Baitarani drainage system provide a land route connection directly into the flat land territories of Bihar and West Bengal. The defense trapezium (T1) that can be generated is as follows: Khichingagarh (47) – Deogan (46) – Kamakshyanagar (43) – Keonjhargarh (45).

2 - The head areas of the Brahmani drainage system is locked into the high lands of the Chota Nagpur , which has acted as a natural barrier. Yet it allows sufficient pass for an odd intrusion. The defense trapezium (T2) that can be generated is as follows : Kamakshyanagar (43) - Hindol (42) - Deogarh (44)- Keonjhargarh (45). T2 is less compact than T1.

3 - The head areas of the upper Mahanadi is divided into three segments. They are the (i) Outer Mahanadi and upper Mahanadi segment, which includes the present day Hirakud dam areas (ii) river Tel and in its distributaries that flow in from the south west (iii) tributaries of the Mahanadi and the Tel, which flow in from the west .

(i) the proper Mahanadi drainage system provides a land route connection directly into the mid Mahanadi drainage system that leads into the coastal heartland. Two defense trapeziums that can be generated here, are as follows: T8 – Sunapura (33) - Bargarh (34) - Junagarh (39) - Sundargarh (38) – Boudh (28) and T9 – Bargarh (34) – Sarangagarh (35) - Raigarh (36) - Dharamjaygarh (37) - Sundargarh (38) - Junagarh (39).

(ii) the drainage system of the tributaries of Mahanadi and Tel provides a land route connection directly from Chattisgarh

into the mid-Mahanadi drainage system that leads into the coastal heartland. The defense deltas that can be generated is as follows (D6) Patnagarh (32) - Sunapura (33)- Titlagarh (31) and (D7) Patnagarh (32) - Sunapura (33) – Bargarh (34).

(iii) the drainage system of the Tel and its distributaries also provides a easy land route connection from Chattisgarh and Andhra directly into the mid Mahanadi drainage system that leads into the coastal heartland. The defense trapezium (T7) that can be generated is as follows : Boudh (28) - Asurgarh (29) - Dharmagarh (30) - Titlagarh (31) - Sunapura (33) .

From the above study, we observe that in the scheme of defense and consequent urbanisation, the Mahanadi was divided into two segments. One to the west of the Satkosia gorge and the other that was to the east of it. Puruna Cuttack of Boudh and Kaintaragada (Athamallick) seems to have acted as the base camps on the either banks of Mahanadi for all military-cum-river traffic related activities in the outer and upper sections of the Mahanadi-Tel drainage systems i.e., to the west of the Satkosia *Ganda*. The Rani pathar hills (nearby to *Puruna kataka*) acted as a excellent natural high level watch and ward tower for observing in either of the directions. This includes a significant stretch of the Mahanadi. Puruna kataka was the old cantonment. In the eastern segment of this drainage, Kantilo and Banki offered similar natural observation vantage posts, while the Kataka acted as the cantonment of the eastern side. Therefore, two Katakas bounded the trunk portion of the Mahanadi. Puruna kataka, Kaintaragarh, Athagarh, Fatehgarh, Chowdwargarh, Barangagarh and the Kataka facilitated easy evacuation, quick and effective redeployment of forces, reinforcements and resources mobilisation in a east by west direction with north by south

sub axises. This takes into account, the use of water ways for heavy trans-shipments (over long hauls and over difficult terrain) and land route for the light infantry and for the elephant squadrons[12]. This is conscious use of natural assets and resources for military purpose and civil purpose.

4 - The mid-Mahanadi has a gorge at Satkosia popularly known as *Ganda*. The term '*Satkosia Ganda*' means '14 miles Gorge'. It is one of the largest low-land gorge in India. It is a natural geo-strategic point, which when allowed to pass unhindered throws open to a invader the entire coastal belts of Orissa which includes the properties and assets as in the Mahandi lower valley, the united delta zones and the Chilika. The defense delta (D5) that can be generated is as follows: Puruna kataka (26) - Kaintaragarh (27) - Boudh (28). D6 was of extraordinary strategic importance. It is noteworthy that the cantonment (*kataka*) was located on the right bank.

5 - Central Orissa could also easily be accessed via the rivers that intermesh the lower delta zones. The entire delta is also fertile property and even Kanika was a rice exporting *Rajgir*. The defense trapezium (T5) that can be generated is as follows: Kataka (6) - Jajpur kataka (3) – Keradagarh (7) - Arighagarh (8)-Paradeepgarh (9)[13].

6 - Central Orissa and her maritime assets could also easily be accessed via the Chilika which has waterway connection with the lower delta zones, as well with the mid-lower mid-Mahanadi and as well with the extensive *sakata bhumis*, which lay to its west. The military establishments are as follows, Khurdagarh (11) – Rodhangagarah (18) – Parikudgarh (19) – Khalikote (20). Thus, we find, that, even the possibility of ingression through

the Chilika or thorough the delta region or a possible take over of the lake or marine pirate activity, seems to have been consciously taken into consideration in such scheme of cantonisement. The mud, slush, the veritable flora and the fauna, it seems were also considered as state property and defended on a schematic basis. Every route to the central zone (capital) was marked.

7 – Map rotation studies also indicates that geographically, Amaravati kataka (4) was an all weather logistic center for the Birupa-Brahmani-Boitarani inland waterways, for the collinear land route access for D1, D2, and T1, T2, T3, T5 zones. Khurdhagarh was the logistic center for defense of the right bank distributaries, northwest segment of the Chilika, the inland waterways and as well the land route access for T6 zone. Khurdhagarh and Amaravati kataka are nearly equi-distanced from the Kataka i.e. from Mahanadi channel. The above facts also reinforce the observations that the threat of invasion was less from the sea and from the Chilika.

8 – The Mahanadi's right bank also act as a vestibule to the Sunapura, Boudh, Daspalla,Nayagarh , Khandapada and Kataka, while the left bank is a vestibule to Kaintaragarh, Tigiria and Athagarh royal families in a series. The right bank, which offers less precipitous topography (*atavika*), allowed easier conditions for surface transport. It is marked by defense trapezium T6, namely Sisupalgarh / Badagada (10) – Khurdagarh (11) - Nayagarh (12) - Daspalla (13) - Khandapada (14) - Kantilo/Fathegarh (15) - Banki (16) - Barangagarh (17). T4 along the left bank and T6 along the right bank are observed to be defended in a very close knit manner. T4 and T6 are close knit trapeziums. They seem to have jointly positioned as frontal fortifications for Kataka and Bhubaneswar / *Ekamra*, which lay to the east, from

incursions via the Mahanadi channel. Therefore, histo-geographically, invasion from the direction of the sea (delta and lake) was given less weightage. Excluding the gorge areas, the *garh-katakas* of the Tel-Mahanadi drainage system also seem to augment each other in a manner so as to maintain round the year physical communication lines between the western and the eastern parts of Orissa. The deltas and the trapezium formats of defense could have been used by the *Rajgirs* jointly and severally for individual and as well for zonal defense.

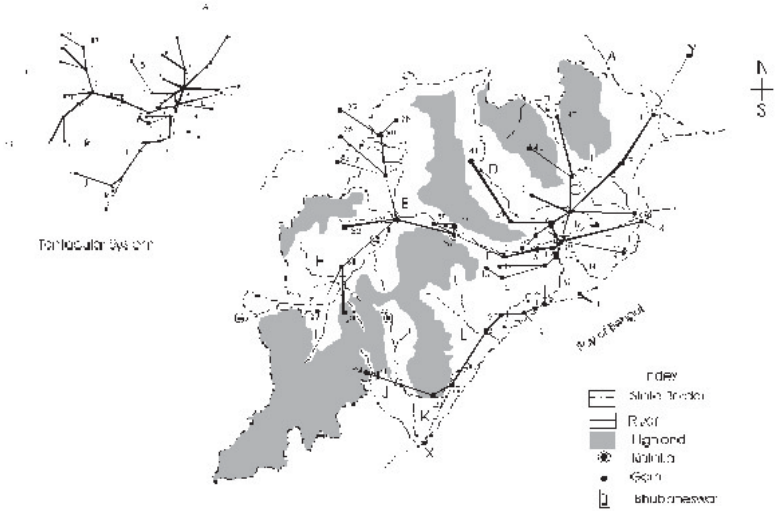
Tentacular System

Similarly, radiating lines can be traced on a map connecting the 47 centers. They radiate out from Bhubaneswar-Cuttack area. These have been termed as tentacles[14]. If we consider the well consorted defense efforts and campaigns, under a centralised command of a paramount power, which also had centralised location as was the case from the mid tenure of Chola Ganga Dev (c.1200 A.D.) through Ananga Bhima Dev –III (c.1211-38 A.D.) and Sri Narasingha Dev – I (1238 – 64 A.D.) of the Ganga dynasty and again during emperor Kapilendradeva (1435-67 A.D.) and Sri Purushottama Deva (c.1467-97 A.D.) of the Suryavansi dynasty (i.e. 300yrs), we then find that force deployment was more a matter of the scope of the objective (distance – direction-season-enemy's size, etc.). Technology enabling higher mobility, the scope of the objective was also flexible. Tentacles indicates the gross lines of the scope in relation to any known direction, when the stimulus be (i) militarised enemy (ii) internal administration (iii) climatic inclemency. The tentacular system is primarily also a product of military activity. Most of these tentaclular paths over a period of time metamorphosed into seasonal carriageable tracks, which in turn facilitated in the kinematics of non river side urban centers[15]. Alike the riparian system, the tentacular system facilitated in defense-cum-offense and also in urban kinematics.

9 - The defense tentacle that radiates towards the north (from Bhubaneswar), connects the following frontal urban centers cum battlements (among others) : Barangagarh (17) – Kataka (6)– Chowdwargarh (5)– Amravati kataka (4) – Jajpur kataka (3)– Nilagiri (2) – Raibania (1). This tentacle continues upto Mughal mari[16] near Dantan of Minapore district in West Bengal (where the Moslem forces beaten and Ganga sovereign's son-in-law had laid down his life in gallantry[17].

10 - The defense tentacle that radiates towards the south, connects the following frontal urban centers cum battlements (among others). Khurdagarh (11) – Rodhangagarh (18) – Parikudgarh (19)- Khalikote \ Garh Huma (20) - Jaugarh (21) – Chikitigarh (23) Parlakhemendi (23)– Raygada (24) – Bisama kataka (25). Later on this tentacle went via Puri (48). This tentacle continues upto Kalingapatna in Srikakulam district (see Fig. 4).

Fig.4



11 - The defense tentacle that radiates towards the west , connects the western group of tentacles with the eastern half via the southern bank of Mahanadi at the Satkosia gorge .

12 - Top sheet study cum field survey also indicates that the tentacular system cross the rivers at fjordable points.They are collinear to drainage and the highlands, but do not cut across the highlands .

Fig. 4 graphically presents the tentacular format of defense lines. These tentacles had logistical function. They allowed retention of connection with the central authority even during the *chaturmasia* (monsoon-cum-flood period). No invasionary force ever got through so long as the central command did not suffer any incumbency vaccum. Krisna Deva Raya had stopped south of river Nagavalli. The Islamic occupation, followed by the Maratha intrusions and the British takeover had bridged these natural barriers and these unique defense formats only when there was no central unified command in Orissa i.e.(post c.1560 A.D.) . Probably for such reasons, the expeditionary forces of the East India Company had simultaneously used the north and the south routes and also the sea route (and bribe) as part of its multi-pronged strategy of invasion of Orissa in 1803[18]. They too had followed the (ancient) tentacular paths. A tentacular system is also traceable between the heritage centers that were located along the upper and lower Nile. Caesar, Napoleon, Jai Sing, Rommel, Eisenhower, Mac-Arthur, Hamada and Maneckshaw, etc., we know, had also laid great stress on logistical paths.

The *garhs*, the *katakas* and the tentacular scopes were also used by the Ganga and Suryavansi expeditionary forces. The connected centers therefore also acted as the launching pads

during expeditions and they had two way function[19]. Evidence, as yet has not emerged to suggest the existence of these centers either as frontal advanced fortifications or as organised human settlements on the eve of the Magadhan invasion in 3rd B.C. or on the eve of Emperor Kharvela's expeditions in 2nd B C. Yet however, it can be logically argued, that, the lower date of an embryonic cantonisement can be pushed back to Emperor Kharavela's reign. There being no alternative to these tracks and passes, Emperor Kharavela, during his repeat long scope military campaigns, surely required frontal positions and base camps for logistical purposes along these tracks and passes. We know that, Asoka and Kharavela were great generals. World over, every good general has always valued natural geo-strategic locations . The above named sites/centers are indeed natural geo-strategic locations. On the basis of Table – I, it can only be said that the Garh-Kataka-Tentacular system of defense, although may have been in position, was possibly not operational until c.12th A.D. A robust policy for concerted defense via the Garh-Kataka-Tentacular system is traceable from Ananga Bhima Dev –III's (c.1211-38 A.D.) reign[20].

The term *Garh* means embattlements or fortification[21]. The term *Kataka* is of *Prakrit* genealogy. Alone Orissa has numerous *katakas*. The term *kataka* means military camp alias cantonment and it also means 'wrist', alias pivot [22]. If we rotate **Fig 5** (in a angular manner), we will then see that in either of views D3 and D4 are at the base of the Baitarani-Brahmani-Mahanadi defense format conglomerate and at the head of the combined delta zone. D6 is at the base of the Mahanadi-Tel combined defense format conglomerate. Puruna Kataka and the Kataka have near identical geo-strategic locations along the Mahanadi drainage system. Such a (theoretical) complementing interlay of defense system has not been reported from any other drainage-delta systems.

Fig.5

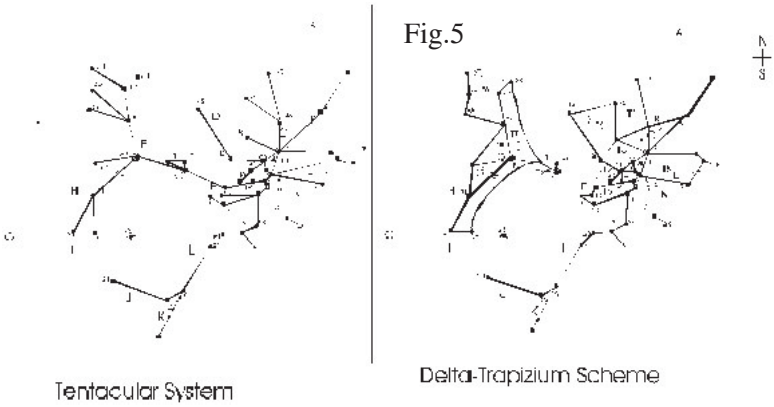


Fig 5. juxtaposes the delta, the trapezium formats and the tentacular system. This graphic method, clearly establishes that Orissa was divided into two segments, namely the eastern and the western halves. The central highland ridge separated them. The Mahanadi rift valley system joined both the halves. The tentacular system ran only along the Mahanadi to join either of the zones. That, between the either zones. D6 provided comprehensive defense to the gorge section, while Puruna kataka (26) was its cantonment. D7 and D8 provided comprehensive defense to the main confluence point of the tributaries of the Mahanadi to its north, while Sunapura kataka (33) was its cantonment. Similarly, D3, D4 and D5 provided comprehensive defense to the Mahanadi delta head, while Chowdwargarh (5) and the Kataka (6) were the two cantonments across Mahanadi's either bank in the south. Sunapura kataka, the gorge and the delta head were considered as vital geo-strategic positions, whose defense was augmented with cantonments. Neither geographically nor historically, can it be said that Orissa possessed the best of fertile alluvial tracts or produced the best quality of rice, which may have acted as a cause for invasions. The afore given figures and tables jointly and severally, graphically present, that, the main drainage, the riparian zones, the channels, the urban,

the built and the maritime assets there, were selectively defended. Not the arable tracts.

As per the system prevalent in Puri, 16 *Vendias* (well bodied lanky youths) make a *Jaga* (alert full place, presently known as gymnasiums). Even to this date, all *jagas* have numerous *shastra Guru*(s) i.e. arms teachers and *Pahelwan*(s) i.e. musclemen/front man as the head and leaders respectively of each faculty of physical training. The v*endia* graduated to become *Samartha* (capable one) and on to become a *Pahelwan*. Numerous *jaga*(s) would meet at a *Pentha* (congregation place), numerous pentha(s) alias congregations constituted a *Thata* (regiment), numerous *thata*(s) may be said to constitute a *Kataka* (cantonment). All these constitute a institutionalised system of defense personnel selection and a graduation hierarchy. At this juncture (of our study), it cannot be said that the *Gotha-Pentha* and the *Garh -Kataka* concepts were independent of each other.

Again, application of historical phonetics in relation to geography suggests that Kataka had shifted from west towards the east. In relation to caption, we stand to profit, if we may apply in brief, a self set limited model of histo-cultural phonetics in relation to select place names of various location, not having 'garha' as the *suffix*, they are Samalkota same as *Sambala-kota* (resource warehouse), Khali-kota (backyard warehouse), Bajra-kota (thunder/lightning warehouse) i.e. armoury, *Sambala-pore* (resource centre), Puri (abode), Patna/s (river-port). All these are suggestively connected as well to our *Garh-Kataka* concept by the trapezium and tentacular schemes. All these constitute a institutionalised system of defense personnel selection and a graduation hierarchy. Therefore, the *Garh -Kataka* concept includes all the micro cum macro constituents of urbanization and associated mechanics thereof.

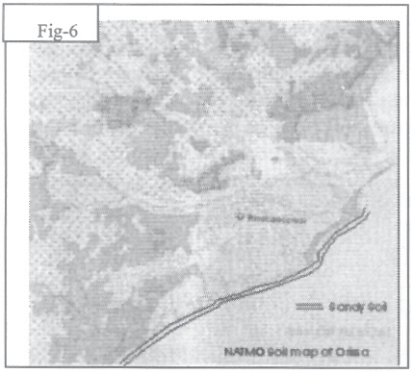
Invasion and Resettlement: A New Urban Center

To understand the kinematics as to how settlements also shifted in face of invasions, we take a select case study. The Rastrakuta sovereign, Govinda III (798 – 829 A.D.) alias Raktavahu's invasion of Orissa had happened during the Bhauma sovereign Sivakara – II's reign (790-829 A.D.). K.C. Panigrahi [21] has cited Sanjan plates of Amoghavarsha and the tradition as is preserved in the *Madala Panji*, which states that *Raktavahu* had come via the sea. The Rastrakutas were monarchs of the land-locked Central India, they could not have taken the sea route. They were Saivas and apparently were also on the outlook for rooting out non-faithfuls. Although they overran Orissa , they did not touch any of the extant Saiva monuments of Orissa. They used Orissan *shilpis* and *stapathis* at the world heritage site of Kailasnath at Ellora[22]. As a outcome of author's field surveys, he has indicated in another popular article[23] that Jagannath's shrine during Rastrakuta invasion was located at a place called Odisinga in Athamallick block of Angul district. Jagannath was then known as *Kalia*, a independent Sabara deity (of the *Vaisnava* order). Evidently, the Kalia's cult and sect were not sponsored by the then state. As per local tradition (at vill.Odisinga), *Kalia's* shrine was devastated by one *Raktasangita*, who had come from the west, through the Mahanadi. This *Raktasangita* can be none other than *Raktavahu*. Local lore also holds that post such event, Kesari (i.e Yayati - II, c.1025-40 A.D.) had helped in the shifting of *Kalia's* shrine to Puri (48). We therefore find, that the mid-Mahanadi belt was possibly the germination pan of *Kalia's* cult and initial settlement, it had provided shelter to his shrine and had also acted as the route for the invader cum theistic opponent(s). The Mahanadi and Orissa's inland waterways were again used for the immigration of *Kalia's* cult, to a new safe location. The new chosen place was adjacent to a shore-based place called Puri (abode), that had a extensive network of rear

riparian system. Prior to such resettlement, no evidence of Puri being a urban center or as a religious center is encountered. Therefore using this model the date of Puri works out to between 1025-40 A.D .

Maritime Facility as Adjuvant Factors

Fig-6



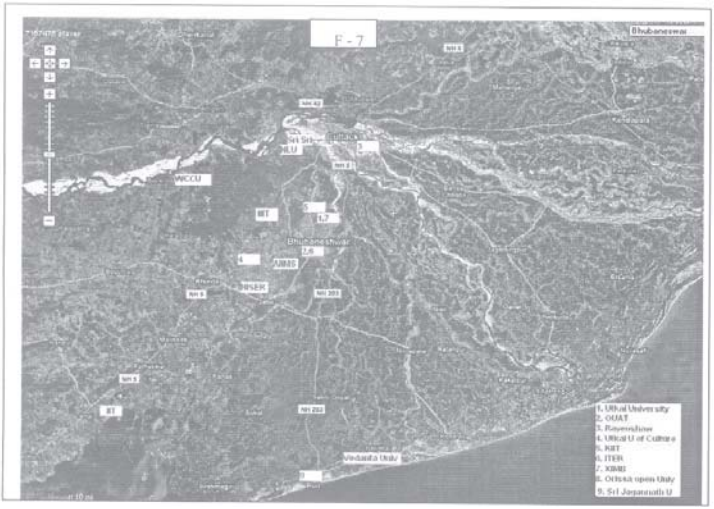
The shifting of the Kalia's shrine to Puri was need based. That need had arisen out of foreign attack. Therefore, security for faith and the Jew, led to wholesome resettlement. The orography of Puri is unique. It is a small parcel of land mass that juts out into the sea, which is why, it is only along the Puri shore, one can see the diurnal Sun rise and Sun set (as alike at Ganga sagar, Fig-6

Narasapatna, Krishna mouth, Pt. Calimere, Dhanushkodi & Cape Comorin, etc.). From the point of coastal hydrology and coastal engineering, such a land mass will normally have steady shoreward sea breeze, which helps in high sand dune formation and an annual average climate of pleasant bearing. These sand dunes act as natural dykes against sea surge. Our Fig.- 6 is NATMO soil map. We have marked the regions that have high shore sand dune, with double line. D.Bhattacharya and P.K. Kar[24] have presented that the south Orissa-north Andhra shore sand dunes have in turn assisted the hinterland to have a year round arable, with once a year, fixed duration low amplitude, low energy floods. The erstwhile drainages perennially irrigate the region with low velocity sweet water discharge, which

supports lush green vegetation, dense population, aquaculture, animal husbandry and aviary. D.Bhattacharya, et.al.,[25] have presented that the hinterland is therefore also full of dead basins, meanders, ox-bow lakes, bight, lagoons, lakes and natural ponds having a orientation towards SE and N Chilika. A jutting out orogrpahy also cleaves the incident atmospheric gradient, which is why, cyclonic storms do not home in head on to such land mass. Puri therefore, rarely experiences localisation of the eye of any cyclonic system. Geologically, Puri is a sand fan. Puri also has a back water system, the channels being either tangential or inclined to the shore. This does not allow deep incursion of tidal bore into the back waters. Puri is connected to the sea by the east by the Musa and Bhargabi rivers. Puri is also connected to the Chilika and to the sea via the Chilika on the west and to the north west by the Matia *nala* and Mangala river [26]. These perennial channels are terminal members of the great Mahanadi riparian system. It is via these links that the ancient mariners also used to sail out in pursuit of subcontinental trade. The Chilika is connected to the sea, to the southern provinces and also to the Mahanadi riparian system via the Luna/Luna-Daya-Bhargabi-Kuakhai-Kathajhodi link. The Mahanadi is the principal feeder. During a outward sojourn by such route, Puri would then be among the last ports of call. Such rear riparian system is also unique, extensive and is not noted at any other place, except at Ang-Kor-Wat. However, Ang-Kor-Wat does not have as unique a riparian country side as is *Odra desa.* Kerala also has a extensive hinterland water-ways system, with river Periyar as the fresh water feeder. However, Kerala's do not constitute a riparian system for it is sea fed and brakish i.e. it is back waters. Kerala also had remained a independent Hindu domain until the advent of the Europeans. The contiguous territory around Puri is also referred to as *mala* (archipelago) in local *lingua*. It also has year round fine climatic condition, good cultivable land and plenty of veritable food. Natural sand pilings

(fans) also act as very good substrata for load structured edifices. Thus, Puri offered the right conditions (i) as a sanctuary (ii) for the great and magnificent shrine construction, (iii) urbanisation. Similar efforts at Chandrabhaga's mouth failed, as it neither had the unique orography nor the geomorphology, neither the meteorology. Comparatively, Puri's location had better natural drainage and a favourable maritime interface, which acted as adjuvant factor.

Fig.7



The natives of Orissa are known as *Odiya,* they speak a *lingua* called *Odra,* their country is also known as *Odra desa.* Our Fig.- 7 is a satellite image of Brahmani-Mahanadi-Chilika region (erstwhile *Prachi* valley domain), which has been availed from Google Sat. services (with thanks). For better appreciation, we discuss in brief the related linguistic-phonetic aspects. Citing various authorities, S.K.Panda[27] has indicated that by the first quarter of c.7th A.D., the coastal tracts of Orissa (specially the Mahanadi delta valley regions i.e. *upataka*) has been mentioned as *Odra* in epigraphic records, that Islamic records pronounce

it as *Ùdisa.* The Tirumalai inscription of Rajendra Chola (c.11th A.D.) mentions Orissa as *Odra visaya.* The votive inscription in Simanchalam (temple) dated to c.1352A.D., mentions it as *Odiya desa. ÀdiKavi* Sarala Das (c.15th A.D.) mention as *Odiya rajya* while emperor Kapilendra Deva mentions such regions as *Odiya Rashtra*[28,29]. Let us consider the phone *Odra* along with few select phonic variants. The lexicons[30,31] indicate the following variants along with their connotations as *Ùdu* for 'water/aqua/ nakshatra', *Ùdupu* as 'vela/velaka', *Odra* as '*paikas* of *Ùtkala'* (the native martial class of Orissa), *Ùdika* as 'rice type', their choice rice dish is known as *Oriya*. The *Sabda Kalpa Druma* again sites Medini the Grammarian and gives the synonym of *Odraa* as *Jaba phula* (*H.rosa-sinensis L*). We may profit to note, that the pattern on its *corolla* and the whole plant have an architecture that is reminiscent of delta type. Similar architecture is noted in our Fig.7. We have also compared our Fig.7 with the delta heads of Mekong, Padma (Ganga-Brahmaputra), Godavari, Nile, Congo and the Amazon from geo-spatial, temporal and orography aspects (identical map scale). None of the deltas offer anything alike as does the Mahanadi-Brahmani delta. We discuss all these aspects to point in the direction that on the basis of Phonetics, known History & Culture, Hydrology, Geography, Topography, Orography, Meteorology that, there are no other candidates, *Odra desa* means 'riparian country'. It conjures to the informed beholder that this unique riparian country is/was singular on the globe.

We may further apply theoretical history by adopting a self set model of historical phonetics in an attempt to arrive at some possible relationship between our caption and the cultural aspects (intangible heritage). Plenty of water (*Ùdu*), a flood and inundation prone deltaic riparian architecture (*Odra*) on one hand allowed cultivation of only rice (*Arua*), which is why the staple food even of the native aristocrats got to be cocked rice (*OriyÁ*) *and*

on the other, allowed or caused the native martial class (*Odas*) to live in and live off *Ùdupus* (flotillas and armadas) and thereby attain mastery over watery tracts (*Ùdu*). Even the mariners till date we know as part of their Global Positioning Systems on high seas, chart course with the help of stars (*nakshatra/Údu*). Such a life style along with their speech/dialect (etiologically) came to be known as '*Odiya*' (boatmen/mariners). All of these are *Prakrit* phones and as well are nouns of simple syllable. The terms *Oda* and *Odra* form a compatible pair. The term *Ùdisa* again also pertains to a masculine usage denoting *Siva Àgamas* (advanced works on *Saiva* philosophy), the graceful feminine of which is '*Odissi*' (a medieval coinage), which also connotes *kallolini* (chattering & flowing). The term *Ùtkala* denotes 'excellent' and is the opposite of *'vikala'* (break down). The term *Kalinga* denotes 'clever and intelligent'[32]. For example, the phrase '*odra odas kalinga-O- Útkala* (the odra land's soldiers were clever and excellent). All this, mostly sans vowels! This apart we may also consider the following for topical levity. A native arithmetical series of *Odra desa* is as 3,6,10,15,21,28……is termed as *Ùdanka* (flying numers)[33]. The Tamil term for stream is *Odai*[34]**.** A native Raya (noble) of the Kongu-Nadu, had from c.1271-83A.D., constructed a 56 miles and 4 furlongs long irrigation canal in (present day-Erode Tamil Nadu). Till date it is operational and is known as 'the *Kalinga Raya(n) Odai*'[35, 36]. The core delta region of *Odra desa* was drained by a river called *Prachi* (Orient), the banks of which are loaded with man made Hindu-Buddhist heritage of ancient period (still being discovered), archaeologically delineated to the period of '*Prachi savyata'* (Orient valley F - 8 civilization). The *Prachi* valley is also (one of) the original home to rice cultivation. The botanical name of rice is *Oryza sativa* Linn. Our Fig.8 seeks to schematically explain the sand dune rim that is noted between the see and the alluvial fan of the Prachi valley. Our Table-VI indicates the elevation of select location in the hinterland of the sand dune (Prachi valley).

Fig.8

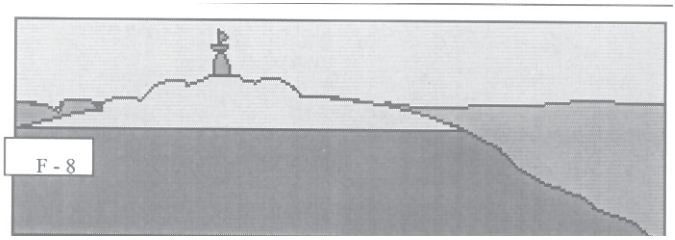


Table - VI

Cuttack – 27 Mts
BBSR – 46Mts
Paradip – 8Mts
Gop - 7Mts
Pipili - 6.5Mts
Kalupadaghat -5.7Mts
Sakhigopal – 5 Mts
Kanas – 4Mts
Balugaon – 4.5Mts
Puri – 6Mts
Gopalpur -17Mts
Chatrapur -30Mts

For additional topical levity, we again discuss, in brief, the case of Bhubaneswar and Cuttack together in relation to maritime facility. We do this so that scholars may find it convenient to camp and conduct surveys (early), as because urbanization mechanics is fast changing the landscape. Bhubaneswar is located on the right bank of river Gandhabati. This river takes a ' U ' turn at southeast of Samantarayapur and flows in a west by north west direction i.e. *uttarvahini* before it turns in a south west direction to merge into the Chilika. Throughout the Hindu land, *uttarvahini*s are known for their *sakta* and *sakti pithas*. Bhubaneswar is a *sakta* cum *sakti pitha*. Therefore, drainage

flow direction have also influenced the character of urban centers in Orissa[37]. We know, Kalinga had the best of maritime assets. Deepak Bhattacharya & P.C. Naik[38] have identified a site as one of the largest inland river docks to the east of Bhubaneswar. Asoka may have on his agenda, the capture of such large inland river dock cum integrated maritime facility and its effective use thereafter. R.C. Majumdar[39] cites noted historians Prof. S. K. Aiyangar, Radhakumnd Mukharjee and others who have held 'mastery over the ports of Kalinga, gave Rajendra Chola well equipped ships and sailors accustomed to voyage in the very regions which he wanted to conquer. Defense of such tangible and intangible assets required concepts and deployment of equal order = settlements. Thus, we find riparian location and a dock in the case of Bhubaneswar also as factors in urbanisation. Urban center and large maritime facility invited invasions. In the case of Kataka, river Mahanadi and its distributaries as we know, provided a excellent year round security from invaders. The author has identified a magnificent royal throne at Kataka and has read its *chitra bhasa* (art dialect) as that of Yayati Kesar – II (c.1025 – 1040 A.D.)[34] . Therefore, the Kataka was the capital urban center in early c.11th -13th A.D. The Kataka was serviced by the river Mahanadi offered alternative routes to the sea and also navigable connections to various other *Garhas* and a riparian route to 3 other *Katakas* and even to the peripheries of the then state. The Kataka had a near central location in terms of geographical distance from various directions and also in terms of the Mahanadi's year round navigable section, the trade zones and merchandise type. The Kataka was year round effectively moated by this mighty perennial river. In 11th and 12th A.D., no other cantonment in the Indian subcontinent had such natural geo-strategic location and function. None so far have either been reported .

Discussion

The river beside urban centers and the inland waterway resources, the maritime docking facilities, and the contiguous and extensive rear riparian navigation system of ancient Orissa were considered as great assets and were constant military targets. These were all in the head delta and in the lower coastal zones that had low amplitude tides, which greatly facilitated loading and unloading. These areas also had short inter-tidal zones, which facilitated quick and easy sail out and sail in.

The invading forces used the shore oriented drainage channel routes and the contiguous passes. They came in from the west/ south west and from north/north west. The invasions were directed towards the delta head zones. Therefore, riverine coastal Orissa was the hub of all activities, which means, it housed the vital urban centers or the vital assets, the defense of which seemed to have been paramount. For the defense of such assets, had evolved the *garh-kataka* concept that straddled the entire geography of Oriya speaking territories. The *garh-kataka* concept had taken into account geo-strategic aspects, as per the then technology and operational methodologies. The scheme at macro level was an inlay of triangles and trapeziums, tethered by a tentacular system. It was a typically indigenous alias *Kalingiya* concept. This is a unique pattern of cantonisation. Orissa as a whole was internally secured. Which is why, Orissa remained as a Hindu state even between c.2nd B.C to c.1650 A.D., whence most parts of the Indian subcontinent to the north of the Narmada-Godavari had fallen to the historical process of Islamic take over. Alone Brahmaputra, Bagmati valley (Nepal) and the Kerala backwater civilisations are the other that outlived Orissa. Like Orissa, they too are natural isolates. With the wane of authority of the central command, the cantonised system of organised defense had wilted resulting in successful invasions. The garhs

and the *katakas* were proto-urban centers that evolved into urban settlements. The choice of Puri as a settlement for a devastated cult indicates that such decision was made because Puri was more naturally secured location and offered multitudinal escape routes (i.e. an isolate within a isolate). Prior to such resettlement, Puri was a unknown entity. That, the then sovereign of Orissa, had assisted in such resettlement. Each of the member centers [see Table – I] have been under the command of a *kastriya Raja* of royal lineage , who have for ever remained in charge of these centers and its peripheries, and who's mother tongue was either Oriya or had domiciled running into many generations. Three levels of urban kinematics are discernable (i) the riparian system facilitating invasion –defense-counter offense, as the primary cause in the initial kinematics of the *garhs* and the *katakas* (ii) evolution of seasonal carriageable tracks and paths facilitated urbanisation in off river side locations (iii) military victory also contributed to urbanisation as we know from the case of emperor Kharavela's *Maha-Vijaya Prasada, Parasurameswara* and *Lingaraja*. Urbanisation trailed the military. Highrise structure followed and commemorated military victories.

Conclusion

Denuded and seasonally discharging drainage channels in their head areas, in non rainy seasons acted as passes, which allowed foreign invasion. The perennial rivers also acted as robust conduits. Similarly, the coast-shore tracks also provided good pass during non rainy seasons. To defend her urban, riparian, navigable and maritime assets, Orissa had evolved the unique *garh-kataka* concept, which had stood her in good steed. The location of Orissa's forts and her battlements prove that the coast-shore tracks and the drainage channels were the most extensively defended. All these military camps, sites and

fortifications evolved into urban centers, most of which at present are urbane. To protect indigenous thought (i.e. proto Jagannathyam), her administration had even resorted to resettlement technique. Natural geostrategic locations had been utilised. Geomorphological and topographical conditions facilitated migration of people, thought and of urban centers from west to east and from north towards the center. Orography assisted in the location of maritime assets. Such maritime assets were unique prime properties and also acted as adjuvant factor in urbanisation. In Orissa, urbanisation thrived under the cloak of the military. This exploratory study relies only on field exercises. Secondary sources have been adduced. Incipiently, it is an exercise in Theoretical History. It generates scope for further multi-disciplinary study. This study also as co-laterally points in the direction that (i) the natives of Orissa never migrated en-mass (ii) such studies cannot be made single handed on pan-India basis. Numerous regional or sub-regional studies (adopting or non-adopting this model) will help in generating a sub-continent wide picture in relation to time and place.

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present the part findings orally in 2005, it provided fillip. This paper is the outcome of author's field study between the year 1992 – 2008.

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12. Inter-principality and Intra Kingdom trade and pilgrimages appears to have also taken such a axial route. The river

banks also have few civilian settlements, few sect and cult based religious centers and few composite centers.

13. We know, it is the forces of Paradeepgarh and Kanika who had resisted the initial European intrusion (18th A.D.) and had also sunk few foreign vessels . Col Harcourt , commander of the East India Co's invasionary force, had opined about the stubborn defense and severe casualties that was inflicted by the Kanika boat mounted military system against the Marathas.
14. The term tentacle is used as because these are not fixed corridors but are flexible paths that could be used upon need in respect to the scope of the objective.
15. The non river side urban centers in turn facilitated the seasonal tentacular system to evolve into all weather tracks, which are the fore-runners of a large section of present day state highways. Further we note that with the evolution and development of all weather tracks, the focus of urbanisation shifted away from the river sides.
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Ganga sovereign, Ananga Bhima Dev – II (1190 – 98 A.D.). This new adoption was termed as *Kanika*, which arose out of the usage to demarcate the parcel of land in the *Kona* (corner). This had triggered settlement and urbanisation, which arose out of non-invasion cause. The nomenclature arose out of geography.

20. The other Katakas of Orissa are, Puruna Kataka, Sunapura Kataka, Jajpur Kataka, Amravati Kataka, which are all on the right banks of the drainage. Chowdwar Kataka is located on the left bank. The Kataka is on the right bank of the Mahanadi and marks the delta head. The identity of Avinava Banarasi Kataka has remained a matter of learned debate. Banaras, the site of Lord Viswanath in U.P., is located on the left bank of the river Ganga, whence the river flows in a northerly direction. The town plan of Banaras old city clearly indicates reducing concentric circles (having 8 x 8 = 64 *Dig-gajjas* alias cosmic direction markers), as alike the whorl of a Galaxy, which suggests the city's plan to have been designed as a *Tantra pitha*. The Ganga and the Baitarani in general flow from the north west, towards the south east and their channels over- all have similar *ardha-chandrama* type curve. The river Salandi which joins the Baitarani also has close call with river Gandaki that joins the Ganga south of Banaras. The Salandi and the Gandaki have higher gradients and are swift flowing streams. The lay and orientation of the inter valley between the Ganga and the Gandaki also has close call with the inter valley between the Baitarani and the Salandi. At Jajpur, the site of Goddess Viraja and the *Saptamatrakas* are located on the right bank of the river Baitarani, which face east and west respectively. Jajpur is a *Tantra pitha*. Banaras was taken over by the Afghans by 10th AD and whereas Jajpur remained a Hindu domain till 16th AD. From such perspective the easy serviceable Orissan river bank establishments, with

their evergreen hinterland, may have attracted resettlements on all India basis.

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MODERN HISTORY

MAHARAJA KRUSHNA CHANDRA GAJAPATI: A TRIBUTE

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Man is mortal but his deeds make him immortal. He attains immortality by dint of his brave and heroic actions. The Maharaja of Parlakhemundi was such an immortal man. His dedication to the creation of a separate province for the Oriyas proved the depth of his love for his motherland. It was due to his hard labour, foresight and determination that the Oriya speaking people could receive their separate identity in 1936 after centuries of subjugation, torture and exploitation. Respected as a messiah and admired as an epitome of courage, Krushna Chandra stood like a colossus. He was respected by the masses for his charisma. He was a man who created history, changed history and shaped history. And the history, he shaped was the history of modern Orissa. His main mission was the emancipation of Orissa from illiteracy, poverty and negligence.

Sri Krushna Chandra Gajapati was born in the royal palace of Parlakhemundi on 26th April 1892. He was the scion of the great Ganga dynasty[1]. His father was Goura Chandra Gajapati Dev and Mother Bishnupriya Devi. Krushna Chandra was fortunate to have two great scholarly tutors namely Shyam Sundar Rajguru, the first Oriya graduate of the district and Appana Panda, the great writer[2]. He received his higher education at the Newingthon Residential College, Madras, where the royal Princes or sons of aristocrats were taught[3]. Two English tutors namely Cameran Morrison and Dela Hay[4] personally guided him there.

In 1913, at the age of 31, Krushna Chandra was coronated as the Maharaja of Parlakhemundi Zamindari[5]. He was honoured with the titles of Vira Sri Viradhibara Sri Sri Sri Gajapati, Sri Sri Sri Khetrapati, Sri Sri Sri Krushna Chandra Gajapati Narayana Deo, and '*Meherban - E – Dostan*', which was used only at time of royal ceremonies[6]. The title of '*Meherban – E – Dostan*', was offered by King Mahammad of Golconda as a token of love and respect for him[7]. This *zamindari* was one of the 18 old *zamindaries* of Ganjam District[8]. The rulers of Ganga dynasty ruled over this town for a longtime. It was during this period of stress and strain that Maharaja appeared in the political scene of Orissa. The years before his coronation, Orissa was under the Bihar Government[9]. Taking up the decade old demand of the Oriyas, Maharaja Gajapati came to the forefront to lead the people of Orissa for the creation of the special province of Orissa on 1st April 1936[10].

The Utkal Union Conference served the best purpose of shedding a new light based on nationalistic inspirations in the minds of the Oriyas. Harihara Maharaja, the Raja of Khalikote laid the seeds of the *Utkal Samilani* in his Rambha Palace in the year 1902 A.D., which was really the symbol of the Oriya awakening[11]. Since 1902, Utkal Union Conference was organized at different places in different times. The 10th session of the Utkal Union Conference was held at Parlakhemundi on 26th and 27th December, 1914, under the Presidentship of Shri Vikram Dev Varma, the Maharaja of Jeypore. The young Raja of Parlakhemundi being the Chief host and organizer of the Utkal Union Conference had become a very attractive figure in the Conference[12].

The reflection of the Utkal Union Conference was made manifest when the Oriya demand for unification of the outlying Oriya tracts under one administration was moved in 1922 A.D.

in the Provincial Legislative Assemblies of Madras, Bihar and Orissa. There after the Central Government appointed a Commission with two prominent I.C.S. Officers namely C.L. Phillip and Mr. A.C.Duff to enquire and report about the willingness of the people of Ganjam and Vizagpatnam Districts regarding amalgamation[13]. The leading Oriyas of two districts including the Raja and Zamindar of Jeypore, Parlakhemundi, Manjusa, Tekkali, and Jalantara - expressed their views in strong and empathic terms, supporting the demanded amalgamation. Krushna Chandra Gajapati, the Maharaja of Parlakhemundi suggested the formation of the separate province for the Oriyas on linguistic basis instead of mere amalgamation of bits.

Maharaja Krushna Chandra Gajapati was the first person who gave a new shape to the Oriya movement, as it was based on the principles of formation of linguistic provinces. He was able to motivate Mr. Phillips, the Commissioner of Orissa Division. He at last gave a favourable report to the Government in support of the demands of the Oriyas. The Government of India appointed a Commission known as the Simon Commission[14] in 1928 as per the recommendation of the Attlee Sub-Committee, to present a report on India's territorial reforms. Krushna Chandra Gajapati personally appealed to the Commission at Madras. Mr. Simon was at last impressed and recommended the creation of a separate Orissa Province.

The Simon Commission said, "An urgent cause for consideration and treatment is that of the Oriya speaking people". The members of the Simon Commission were so much impressed with Oriya's claim that they appointed a special Sub-Committee presided over by Major Atlee[15] to look into the matter. The Sub-Committee was of the view that the grievance of Oriyas was genuine. The report of the Sub-Committee indicated that the Oriya case deserved sympathy and a separate province of

Orissa was a unanimous demand of the Oriya speaking people. The report provided much inspiration to the people of Orissa to pursue the matter at the highest level.

In 1930, Krushna Chandra Gajapati won in the Madras Legislative Assembly Elections. He contested from the Ganjam Constituency[16]. After this, his reputation and popularity at Madras attracted not only government officers but also many top leaders of Southern India. He pleaded for the creation of Orissa on the basis of language.

The Historical Round Table Conference was held at London in 1930 under the auspices of the British Government. The Maharaja of Parlakhemundi Krushna Chandra Gajapati was requested by the Government of Bihar and Orissa to represent the Oriyas in the first session of the Round Table Conference.

The opening of the Round Table Conference in the Royal gallery of the House of Lords on Wednesday, 12th November, 1930 was attached with stately splendour[17]. As has been observed for the first time in the history of the British connection with India, the King of England, presided over the Conference and gave his Royal blessings to the historic gathering and was called upon to deal with momentous problem of India's future constitution. There were 86 delegates in all, 16 from the Indian States and 57 representing British India. Of all, Krushna Chandra Gajapati, the Raja of Parlakhemundi was the sole representative of the Oriyas in the Round Table Conference.

Unfortunately by the time Maharaja reached London, the presentation of agenda for the session of the Round Table Conference was over. Thus, he lost the chance to move any resolution for the creation of a new province for Oriyas. He found that the aim of Oriya people would be frustrated unless

he used his personal influence on the British Prime Minister and the Secretary of State for India.

His personal influence was tremendous over the British Prime Minister and the Secretary of the State. It enabled the Maharaja of Parlakhemundi to move the resolution in the conference on the strength of a special permission from the President which surprised the delgates[19]. On 16th January, 1931, while moving the resolution for the formation of "Orissa Province" he delivered an excellent speech on the history of the Oriya People.

After the Round Table Conference there was a Boundary Committee Meeting with Sir Samuel O' Donnell as the Chairman. The other members of the Committee were Tarunram Phooken, R.N.Meheta, S.N.Sinha, Krushna Chandra Gajapati representing Orissa and Rai Bahader, Narasingha Raju from Madras and Barrister Sachidananda Singh from Bihar. The Committee visited different places where they received representations from the people and states, they later submitted their report. But, the report was not acceptable. Finally, it was decided earlier not to include the regions of Parlakhemundi, Jeypore, Midanapur and Singhbhum in the proposed Orissa Province. Such an unreasonable decision was the result of the combined conspiracy of the neighbouring states and certain selfish leaders[20].

Maharaja Sri Krushna Chandra Gajapati did not attend the Second Session of the Round Table Conference. The third session of the Round Table Conference was held from 17th November to December 24, 1932. It was attended by Sri Rama Chandra Marderaj Deo, the Maharaja of Khalikote on the concluding day of the Conference on 24th December. It was declared that Orissa would be a separate state[21].

On 17th March, 1933, the white paper was published in which the details of the working process of the new Constitution of India were given, where some important portions of the Oriyas were left out. This caused great displeasure among the Oriyas who protested vehemently against the British decision on the boundary of the new Orissa province. An All Parties Conference was held at Cuttack, in which a resolution was passed condemning the White Paper decision[22].

A new phase of Fresh Movement for amalgamation of Parlakhemundi and Jeypore was started throughout Orissa. Maharaja of Parlakhemundi moved the Viceroy to reconsider the portion of boundaries left out from the new province of Orissa. A strong deputation headed by the Maharaja met the Viceroy Lord Willingdom at Simla[23]. The Viceroy was fully convinced by the argument put forth in the memorandum represented to him at Shimla. Accordingly, he submitted a report to the Secretary of State, London, suggesting the formation of a new Committee headed by Major Atlee to review the boundary question of Orissa. At last, the Atlee committee recommended the amalgamation of the majority Oriya speaking portions[24].

Reginald Craddox, a member of the Select Committee had commented, that "the proposal to create a new province of Sind was intended to placate Muslim sentiment and similarly the creation of new province of Orissa was intended as a counter poise to gratify sentiments" [25].

On 1st April, 1936, the province of Orissa was inaugurated with a Darbar held in the Ravenshaw College Hall at Cuttack. It consisted of six districts namely Cuttack, Puri, Balasore, Sambalpur, Ganjam and Koraput[26]. Sir Courtney Terrel, the Chief Justice of Patna, administered the oath to Sir John Hubback, as the First Governor of Orissa.

The Statesman of 1st April, 1936 published from Calcutta, stated that the creation of Sind and Orissa had led to an end of long agitation and praised those who served the cause of these lands, and greeted them as they proved their case to the satisfaction of the British Government by demonstrating unflagging zeal.

In brief, it can be said that if the Oriyas have a homeland of their own at present, it is due to certainly not to any others but entirely due to the efforts and sacrifices of the person who sowed the seeds, laid the foundation and kept the flame alive at enormous personal sacrifice and that was Maharaja Krushna Chandra Gajapati of Parlakhemundi. He is indeed, the architect of Modern Orissa.

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ROLE OF TOURISM IN THE ECONOMIC DEVELOPMENT OF THE NILGIRIS

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Tourism plays an important role in the economic development of any region. Majority of the writers on tourism are having the opinion that tourism can make a positive contribution to the economic development of the state. It is unanimously believed that the economic effect is variable[1]. It depends upon the stages and types of the growth of tourism. The important economic effects are currency effect, income effect, employment effect and regional equalization effect. Foreign tourists spend money in our tourist spots for various purposes. This gives foreign exchange to the Government. Income effects mean that the direct income, resulting from expenditure by tourists and the indirect income resulting from the tourism discussion and conferences. Employment effect means that tourism creates direct and indirect employment opportunities[2]. For example, jobs in hotels are direct employment. Supplying food, beverages and other items are called indirect employment. Regional equalization effect means that tourism makes development in the underdeveloped region that makes equalization of a remote area with the highly developed areas. Tourism changes the economy and society from an agricultural society into a tourism society.

The aim of my paper is to bring to limelight the economic development of Nilgiris district through the movement of tourists.

The Nilgiris 'the Queen of South Indian hill stations' is one of the most beautiful place in the region, noted for natural

scenaries. It is situated at the meeting point of the Western and the Eastern Ghats in the Deccan Plateau of Tamilnadu. The Nilgiris is located at an elevation of 900-2,636 meters above the Mean Sea Level. The Nilgiris is bound by Kerala in the West, Erode district in the East, Karnataka state in the North and the Coimbatore district in the South. The Nilgiri hills standing aloft from the uplands of Coimbatore, is a plateau at a length of 55 kms. and width of 32 kms. approximately having an area of 2,452.50 sq.kms. It is watered by the river Bhavani on the Southern side and by the river Moyyar in the north[3].

Lord Lytton, Governor-General of India happened to visit Ooty in 1877 and he wrote to Lady Lytton that "the morning was fine and for the first time I have seen Ootacamund. Having seen it, I affirm it to be a paradise, and declare without hesitation that in every aspect it far surpasses all that is said to us about it by most enthusiastic admirers and devoted lovers. The afternoon was rainy and the road muddy. Imagine Hertfordshire lanes, Devonshire towns, Westmoreland lakes, Scotch trout streams, and Lusitanian views". Udagamandalam had a good reach to the English and got the infrastructures and cultural domination from the British[4"].

Within the Nilgiris plateau, there are different minor plateau land forms due to erosion. The plateau with fewer dissections by rivers are represented by Udagamandalam and Gudalur plateaus, while Kotagiri, Coonoor and Mayar plateaus represent the moderately dissected plateaus. The Ooty plateau consists of high peaks like Doddabetta and it has an average elevation of 2,200 metres above sea level. W.Francis recorded that the plateaus are true table lands, with their average height and size being very uniform[5].

Impact of Tourism on the Agricultural Economy of Nilgiris

Now-a-days agricultural tourism receives fresh impetus from the Government. Many people interested in forming agricultural farms visit places of agricultural importance. Nilgiris is famous for the cultivation of pepper, ginger, carrot, beetroot, beans, cabbage, potato, tomato and other vegetables. This district exports agricultural items to various parts of the country through Mettupalayam market. Nilgiris vegetables are exported even to the Middle Eastern countries from Bangalore.

The British who came to this hill district during the first quarter of the 19th century introduced from England plants of numerous varieties, fruits, vegetables and ornamental flowers. The main contribution to this development was reported to have come from Mr. John Sullivan Arons in 1820 A.D. He had started a farm of his own in a village called Thimpatty near Kotagiri [6]. A fillip was given to the growing of different kinds of vegetables by the distribution of seeds brought from England to the British settlers and then to the local people as well. As such temperate vegetables like the beans, cabbage, cauliflower and carrot thus came to be introduced by the English and began to be called as the 'English Vegetables' even today. Tea plants were introduced in Nilgiris by Dr. Christie in 1832. Lord William Bentinck, the then Governor-General of India sent an agricultural mission to China for the procurement of quality seeds. He invited tea makers from China to India. In Nilgiris, tea cultivation was started on commercial basis from 1855 onwards. Presently tea is cultivated in more than 30,000 hectares of land in the Nilgiris District. Private and Government are involved in tea plantation. Public sector undertakings like Tamilnadu Tea Plantation Corporation cultivated tea in large areas. During the early fifties, coffee cultivation was also started. Now, the coffee cultivation

in this district covers an area of 8,983.94 hectares. The development was fairly rapid and the peak of prosperity was reached in 1979[7].

The Nilgiris is famous for its high quality rose plants. A large number of nursery gardens are run by private parties. These gardens consist of varieties of flower plants. Many tourists come to Ooty mainly to purchase of flower plants, in particular rose plants of different colours. Ooty rose and Ooty flower shows are famous all over India. Tourists spend much on the purchase of flower plants, tea plants and coffee plants. Kerala tourists purchase tea and coffee plants for their estates. Tourists from other parts of Tamilnadu and other states purchase flower plants. These activities of the agricultural tourists have greatly enriched the income of Nilgiris. According to Collectorate records, Nilgiris district earns large amount of money through agricultural tourism every year.

Economic Development through Transport

The Second World War and 1973-74 energy crisis had affected tourism industry. However, after 1975, the technological advancement and improved transportation system had a positive impact on tourism. Before the nationalization of private buses in 1973, there were 200 buses owned by 15 private companies plying in the Nilgiris[9]. Tamilnadu Government's nationalization policy removed the private bus operators from the district and the Government owned Bus Company 'The Cheran Transport Corporation' was given the monopoly in plying buses. It had a fleet strength of 287 buses with 757 drivers and 748 conductors[10]. Apart from this, inter-state buses were also operated by Tamilnadu, Kerala and Karnataka State transport departments[11]. Besides the aforesaid public transport system, there were 462 taxis, 306 auto

rickshaws and 277 tourist vans of multifaceted models which were in service mainly for the purpose of the tourists. Now, the scenario has further improved a lot and a three-fold increase is evident everywhere in the district. Everyday during the season more than 7000 people visit the Nilgiris. During off-season, more than 3000 people visit the on an average. Half of the visitors to Nilgiris travelled earlier through their own vehicles. They now take vehicles for rent and visit various tourist places. Government buses are also operated to all the tourist spots of Nilgiris. State Government and Private parties in Nilgiris earn huge amount of money through this movement of domestic and foreign tourists.

Mettupalayam-Connoor train service was started in 1898 and it was extended upto Udagamandalam in 1904[12].

Impact of Hotel Industry on Nilgiris Tourism

There are not less than 184 hotels of different kinds, which are functioning in the Nilgiris for the convenience of tourists. Among them Star hotels are 12, budget class hotels are 60, cottages are 8, middle class lodges are 59, resorts - 16, restaurants - 25 and bhojanalayas - 4[13]. Besides, the Government has constructed youth hostels in all the tourist places of all the 6 taluks of Nilgiris. Luxury hotels like Welcome Group, Taj Group and Oberoi Group also have their branches in the Nilgiris. The Tamilnadu Government Guest House is a place of attraction and generates respectable income. There are number of inspection bungalows, traveller's bunglows of High Ways Department and guest houses of private companies like WIPRO, Ramco Cement, Hindustan Lever Limited, etc. Hotel industry yields a good income to the State governments and private parties as well. Foreign tourist arrivals brings foreign exchange to our country[14].

Income to the Travel Agencies

Travel Agencies help the tourists with their ticket reservation, sight seeing transport arrangements, accommodation and other chores related to tourism. In Nilgiris, 43 travel agents are operating at different places like Ooty – 31, Connoor – 2, Gudalur – 6 and Masinnagudi – 6. The Travel Agents by performing their duties politely and convincingly, generate income. Travel Agents also arrange guides to the tourists. They are the working forces, who improve the local tourist business [15].

Economic Development of Shop Keepers through Tourism

Traditional Art Gallery attracted large number of tourists. In Nilgiris, besides the Botanical garden and the lake, there are many handicrafts shops. They sell materials like wood and pearl handicrafts, textiles, sweaters, toys, technical and electrical appliances[16]. Most of the tourists who visit Ooty, purchase eucalyptus oil, tea, coffee and spices. Through the sales of the above items, local business people receive good income during the season in Ooty.

Economic Promotion through the Places of Attraction

The money flow is through multiple ways. For example entrance fee to the Botanical garden is Rs. 5/- for children, Rs. 10/- for adults with Rs. 30/- being charged for an ordinary camera and Rs. 500/- for a video camera[17]. In the boat house, Rs. 5/- for entrance and Rs. 10/- for carrying camera and Rs. 100/- for the video camera. Boat hiring charges are also collected according to the size of the boat[18]. In Pykara dam Boat house too similar rents are collected. At Connoor Sims Park also a fee is charged for visiting the park and enjoying

the different facilities available in the prk. Charges are also collected for elephant riding and forest round trip through the forest vans at Mudumalai. Parking charges for the vehicles are collected in all the tourist spots. Annually celebrated fruit show, flower show, boat race, horse race, dog show and tea festivals attract the attention of tourists from all over. Ooty Mariamman festival, Bokkapuram Amman festival and Gudalur Vaneswari festival attract people from the adjoining states like Kerala and Karnataka[19].

Kennadian dam, Kuntha dam, Mukurichi dam, Pykara dam, Kamaraj sagar, the pine plantations, Pykara and Singara Power projects, Doddabetta peak, Kodanad slope, Thengumarakada village, Kinnakorai village, Aravankadu Cordite Factory, DSSA College at Wellington add scenic beauty and give a panoramic view to Nilgiris. All this attract more visitors resulting in a lot of income for Nilgiris either through direct or indirect ways.

Conclusion

The Nilgiris district is noted for its natural beauty. It is a 'heaven on earth' and it remains to be a tourist attraction at all times.The inflow of tourists is high enough to get an annual amount of Rs.5 crores from Toll gate entry points in Nilgiris. The proportionate sales generated in the sector of petrol, diesel and in hotel and restaurants run into multiples of crores. The sales of TANTEA products like eucalyptus oil, geranium oil and other traditional and artistic items certainly have boosted the economic prosperity of Nilgiris. The Government is getting a respectable amount of tax collection through tourism in Nilgiris. All the aforesaid sources of income have a vibrant effect and impact on the economic development of the Nilgiris.

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MEMORIAL FOR A MISSIONARY

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The St. Mary's Church in the precincts of Fort St. George, (modern Chennai) Madras, consecrated way back in 1680, is a monument containing a multitude of monuments. It is a museum of historical artifacts reviving in us memories of a bygone era, of orient lists discovering the majesty of Indian civilization, of civil servants and military officers serving the Company and the Crown, of ecclesiastics spreading the Word of God. The memorial tablets and the grave stones it contains are legion. A walk across the St. Mary's Church is a walk across the corridors of history, where one can hear the echoes of voices of soldiers and statesmen who raised an empire in this part of the world.

A marble sculpture with a magnificent epitaph on the northern wall of the church beckons visitors for a hand-shake with history. I gazed at the sculpture with wonder; I read the epitaph with admiration. After some research in related records, I am putting in words in the paper; I have the honour to present the thoughts that consequently flowed in my mind.

The East India Company caused the memorial to be erected to perpetuate the sacred memory of the Reverend Father Christian Fredrick Schwartz[1] (1726-98), the far-famed German Missionary, "whose life was one continued effort to imitate the example of his Blessed Master".

The marble monument is of large proportions - may be the largest of its kind in the premises of the church. It represents C.F. Schwartz on his death-bed taking farewell of his flock, inducting *Prince Serfoji* (1777-1832) of Tanjore. Apart from Schwartz and Serfoji, some half-a-dozen people whom the inscription describes as "his disconsolate brethren" are also seen in the sculpture; the chronicler of the St. Mary's Church suggests that they are 'orphans'; may be he is right because I see a few children clinging to the father, feeling desperate. But of course the various dramatic personages in the sculpture cannot be identified at this distance of time with any degree of definiteness. One can only presume that they were all associated with the ascetic in one way or the other. Whatever it is, one cannot but feel that there is an air of anxiety, of distress, of sorrow writ large across the length and breadth of the scene. In a corner at the head of the piece, there is an angel holding a cross and hovering over the group. I take it as a symbolism that Schwartz was in the last moment of his life, and was about to depart on his Journey to his heavenly home.

The sculpture is important; far more important is the epitaph beneath the sculpture. It reminds me of the Allahabad Pillar inscription of Samudra Gupta describing the qualities of the head and heart of the warrior-king. Written in lucid and elegant English, and spread over forty-three lines, it is a gigantic piece of condensed history-history of Schwartz, of his gifts and graces, of his mission and movement, of his mixing with princes and people, of his life and death.

The script was composed by John Huddleston of the Civil Services. He was a British Resident at Tanjore, knew his subject well and was familiar with many of Schwartz's public services.

The epitaph begins with the beginning of Schwartz's career in India and ends with his end. It says that he came to India

as a Protestant missionary from Denmark, "went about doing good" during a period of fifty years, erected a church at Tanjore, and established Christian seminaries at Ramnad and Tinnevelly. It goes on to say that Hyder Ali "sent orders to his officers to permit the venerable Father Schwartz to pass (through the war-ridden Carnatic) unmolested and show him respect and kindness". Proceeding further, it informs that "the late Tulajee Rajah of Tanjore... desired to entrust to his protecting care his adopted son Serfoji ... with the administration of all affairs of his country"[2].

Between the lines, the respect which Schwartz commanded and the benefits which he bestowed on his people are brought to focus. He was beloved and honoured by the Europeans; he was held in deep reverence by the natives of every degree and every sect. People had "unbounded confidence in his integrity and truth; ... the poor and the injured looked upto him as an unfailing friend and advocate"; the great and powerful paid him the highest homage[3]. He made his house an asylum for orphans. He spent the last years of his life in maintaining and instructing free of cost children of indigent parents. In a style that has a restrained dignity of its own, the company's scribe writes that "in, him religion appeared not with a ... forbidding mien but with a ... placid dignity". The epitaph, on the whole, may be described as an unvarnished account of the patriarch.

An interesting feature of the sculpture is that, unlike most other sculptures in the church, it mentions the name of J. Bacon Jr. as the man who sculpted the piece; the year was 1806, and the place, London.

There is more to know about Schwartz than what is known from the memorial. He became the guardian of Prince Serfoji, shielded him from harm, educated him in liberal arts and sciences,

and ensured his succession to the throne. Schwartz made Serfoji a scholar among princes and a prince among scholars. Serfoji acknowledged his gratitude treating Schwartz his *Rajaguru.*

Schwartz inspired confidence among the British and Indian statesmen. The rulers in Fort St.George chose him to negotiate peace with Hyder Ali and Hyder Ali responded by saying "him I will receive and trust"; Schwartz's stature as a statesman and diplomat rose overnight like a shooting star.

Wherever Schwartz moved and worked - Tranquebar (1750-62), Tiruchi (1762-76), Tanjore (1776-98)-schools sprouted like mushrooms where even the poorest of the poor were taught languages, sciences, and mechanical arts. He wanted that education should be "life-oriented". Schwartz founded the first English school in Tamilnadu in 1786 and thus lives today in the grateful memory of English speaking Tamils all over the world.

Schwartz's biographers make it a point to underline his social concerns. He wanted poverty to disappear, demanded a fair price for the paddy of the peasants, planned the protection of the people from pestilence, built houses for those who had nowhere to live, and wanted to safeguard the environment. Mostly he walked from place to place so that he could meet people, mix with them, listen to their woes, heal their wounds, console them, and fill them with hope.

Protestant churches in the Tamil country today reverberate with sounds of songs, sung in Tamil. The chances are that they are mostly P. Vedanayaka Sastri's (1774-1864) compositions. And Sastri was discovered by Schwartz - not only discovered, but brought up as a beloved son, taught as a disciple, and ordained as a minister; Sastri wrote hundreds of devotional hymns in Tamil, and found them the best medium to express

his theological beliefs. There is hardly a Protestant home in Tamil Nadu and Sri Lanka which is without a copy of his *Jepamalai,* a rosary of songs and prayers. Serfoji showered gifts and praises on him, and made him his court poet. The Tamil society conferred on him titles like Veda Sastri, Veda Siromani, Suviseda Kavirayar, Gnanadeepa Kavirayar, etc. Sastri was the greatest evangelical poet of his time, and was never far from the thoughts of Schwartz and Serfoji, and yet the epitaph in the St. Mary's Church does not even mention his name; history will not excuse this omission.

Schwartz served the people of the Tamil country for almost fifty years, and became a legend in his own life time. He was a Christian in the most comprehensive sense of the term — a Christian who promoted social harmony, a Christian who practiced charity, a Christian who did not distinguish between princes and peasants, a Christian whose character was flawless, and a Christian who breathed humanism in every fibre of his being.

I wish that the marble memorial in the St. Mary's Church[4] remains for ever like the pyramids of the pharaohs and pillars of Hercules, and inspire countless generations of my countrymen. Schwartz, Serfoji, and Sastri may have died, but the legacy that they have left is sure to live for ever and ever.

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1. The Company writes his name as Frederick Christian Swartz, but I prefer to follow the form Christian Fredrick Schwartz his biographers use.

2. Elsewhere, I read "This is not my son but yours; you must be his guardian and protector." What a moving passage - an ailing native king handing over his adopted son to the care and custody of a foreign missionary who had come over from Sonnenburg in Prussia to the singing waves of Tranquebar.

3. When the news of Schwartz's death reached Serfoji, "Serfoji came to look at him before the coffin was closed, wetted him with tears, and folic wed him to his grave". I wish to know whether there is a similar instance any where else in history.

4. Rajah Serfoji, commissioned a similar marble plaque in 1801 as a memorial to his mentor; it was sculpted by John Flaxman,- and was installed in the Fort Church at Tanjore. The sculpture shows Schwartz and Serfoji clasping hands.

THAT LOATHSOME DISEASE": AN EARLY 19TH CENTURY BATTLE WITH SMALLPOX IN SOUTH INDIA

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The following study addresses a little-known attempt in early 19th century South India to use religious and other cultural forms to control and eradicate smallpox, at the time arguably the most horrible medical threat to both India and the British East India Company. That moment in history suggests ways in which the appropriation of myth and symbol in the past attempted to offer some assistance in controlling disease and, even today, may offer possibilities for convincing the public of the necessity for controlling other viral threats, including HIV/AIDS.

When word reached India of Edward Jenner's 1798 discovery that cowpox lymph acted as a prophylaxis against smallpox, no news could have been more welcomed in the medical community of the East India Company. At the time, smallpox was the most malignant epidemic disease facing not only India but also the rest of the world. India had a long history of attempts to manage the disease both through smallpox inoculation and through propitiation of regional smallpox Goddesses; but no control - medical or sacred ritual - had worked effectively or safely for the majority of the population in the eyes of the more-recently-arrived colonial medical community. In Europe, India and elsewhere the dangers inherent in inoculating with lymph from smallpox victims had included both the potential severity of

transmitting the disease itself to the patient inoculated and the real fear that such inoculation, in turn, would spread the disease to others. Though no one at the time knew exactly how the disease spread, various medical opinions in the late eighteenth century suggested ethers from damp swamp areas, imbalance of various humors in the body, and/or changes in both the weather and seasons. So serious was concern in the west over the disease, the search for its control and an eventual cure, that a duel had been fought in France over the proper method for attending to the disease.[1]

Smallpox Treatment in India when the British Arrived

In India, it is difficult to know exactly when smallpox inoculation (not vaccination) began.[2] A disease with a description similar to smallpox called *masurika*[3] is found in the *Susruta Samhita*, a Sanskrit medical text of the fourth century C.E. This and other traditional medical texts primarily emphasized various cooling treatments for the fevers attending smallpox. That may be the reason that the smallpox Goddess of North India is called *Sitala Mata*, "the cooling mother," i.e., the one who cools the fevers. In the North, most early colonial records indicate that John Company found inoculation widespread in Bengal, but not in many other parts of the region.

Early Smallpox Treatment in the Madras Presidency

On the other hand, Madras Presidency records in the Tamil Nadu Archives indicate that as early as the mid-seventeenth century inoculation by what the records call "native practitioners" is prevalent in villages in the Presidency as well as in the south central region of Mysore and along the southwest Malabar Coast.

Like the North, the southern region of India, too, had its smallpox Goddess propitiated by devotees for protection against the disease and whom devotees petitioned when the disease was contracted. Among her names, the most common was (and still is) Mariamman, the protector from smallpox and other bad fortune as well as a powerful fertility goddess. Though some ritual association between Mariamman and Sakti or Siva's consort is drawn in the minds of some Indians, generally speaking Mariammam is not a part of the Vaisnava or Saiva Sanskritic group of deities throughout India, but rather a regional or village deity whose power, nevertheless, is quite strong in the minds of devotees, who may worship one or more of these Sanskritic deities as well. She may also act as a village guardian deity in South India and her shrine can be prominently found throughout the region. The color "red", often associated with this Goddess, suggests both life, fertility, passion and her darker aspect as the one who not only heals but may infect the body with disease. Prior to its eradication in 1979, smallpox was believed to be her most onerous "gift." Even today, many South Indians believe that since smallpox victims were inhabited by Mariamman, if the "possessed" individual died, the corpse was not cremated but buried in order to honor the deity. For, as a fertility Goddess associated with the earth, she was to be returned to the ground from which she has come rather than suffer the trauma of cremation. The hooded Naga shielding her crowned head further suggests her association with the earth Goddess; as Nagas, by virtue of living in the ground, are prominent intermediaries between humans and the earth goddess. The presence of the Naga also helped establish her role as fertility goddess and healer. Moreover, sometimes associated with this Naga-Mariammam connection are South Indian serpent stones (tablets with caduceus-like, intertwined cobras) that act as local shrines to fertility and healing.

The beginning of Cowpox Vaccination in the Madras Presidency

These cultural ideas associated with Mariammam and the inoculation practice of native practitioners confronted Scottish Physician James Anderson as he began to introduce Jenner's cowpox vaccine—shipped from England—into the Madras Presidency in 1802. Appointed as Surgeon to the Madras Army in 1762, Anderson became Surgeon General in 1781 and President of the Madras Medical Board with the title of Physician General in 1786, retaining that title until his death in 1809. While he is best known in scientific and Indian Historical circles for his research into and publications on the cochineal moth and production of the red dye from this moth,[4] his efforts on behalf of cowpox are much more significant historically as they demonstrate a genuinely humane concern for Indians and appreciation for the region's culture not always exhibited by the colonial members of the East India Company or its medical community.

Anderson and most of his co-practitioners saw their mission as that of providing relief both to Company's military and civil employees as well as to the people of India.[5] Even before the hope attending Jenner's cowpox came to Madras via Bombay and Ceylon, Anderson and his associates had been inoculating soldiers and "friends and children of English soldiers and sepoys"[6] from human smallpox pustules as they were doing in Europe and the United States at the time. The Madras Presidency Hospital Board encouraged the Governor, Lord Clive, to have the children of the Male Orphans Asylum in Madras inoculated (*Surgeon General's Record*, Vol. 10, 41) as well as "all descriptions of persons" (*Surgeon General's Record* Vol. 10, 24 November, 1794). Though native practitioners had been engaged in the same practice, opposition by Indians to inoculation is often

mentioned in the company records at the time. So, as an incentive, the Madras Presidency gave rice from its own granaries to every Indian who agreed to be inoculated.[7] In the midst of frequent famines, this bribery of rice offered added encouragement to those who may have been reticent about inoculation.

Though word of Jenner's discovery arrived in India soon after he had published his paper on the subject in 1799, it was not easy to get cowpox matter from England. The first ships from England bound for India either were shipwrecked or brought matter that was ineffective. Yet, from early 1802, Lord Clive encouraged its wide dissemination by arguing that it was from the cow "which the Hindoos hold so sacred" (*Public Consultations*, 1802) and held the possibility of destroying this "loathsome disease." At first, Anderson recommended using either cowpox or smallpox matter, "for we have none of those apprehensions of ill consequences from a mixture of the two, but believe the inoculation of either or of both will generally produce a milder disease than when gradually communicated in any other way amongst the natives who are less subject to inflammation than Europeans."[8] Unfortunately, Anderson's advice meant that for some time it would be difficult to ascertain if the genuine cowpox was even being used in India. This may provide a plausible reason why Jenner's cowpox serum never became effective in Anderson's time: either in transit or on arrival in India it likely had become a corrupted substance, and not at all the variolus vaccine Jenner used.

From September 1802, not long after cowpox vaccination began in Madras, Anderson's correspondence indicates a growing prejudice against Europeans vaccinating Indians. He reports that a "native practitioner, Nagalingam, has vaccinated 18,000 for smallpox without an accident, with a pencil of small needles hidden in the corner of a muslin handkerchief...as the brandishing

a naked lancet in the hand of a European not only sets the children a screaming and crying, but likewise calls up the tender affections of the parents...."[9] And, later that same year (24 October 1802), John Hay, Surgeon at Erode, writes to Anderson: "A meddling and as usual talkative old woman had done me some mischief here...and has been very busy telling the villagers about that this inoculation is to be a means of enslaving all such as submit to it—for that some time hence they will all be known by the mark in the arm—which she terms the company's chop...."

Acculturation to Indian Beliefs as a Convincing Case for Cowpox Vaccination

A major premise of Nineteenth-century Orientalism insisted on the discovery and use of "correct" and "authoritative" texts for understanding and interpreting India and the Indian mind—that is, the discovery of what they considered the "essential Hinduism". Though Anderson was neither a Sanskritist nor one who had a scholar's understanding of Indian traditions, he did try to identify both textually and ethnographically, the most appropriate ways of describing the relationship between his own medical designs and Indian culture. In doing so, occasionally, he succumbed to an assumption often made by these Orientalists: that Brahmanical or "classical-texts" traditions were the essential Hinduism. Yet, his own practice indicates that, as well, he also listened to and described cowpox in terms of village praxis around him.

A. COWS AND BRAHMANS. In the same aforementioned letter to Surgeon John Hay at Erode, in several successive letters, and in the Medical Board minutes in the Surgeon General's Records,[10] special note is made of Anderson and his colleagues vaccinating the teats of cows with cowpox or smallpox lymph. In Anderson's mind, this practice had three goals: (1) to

preserve the available cowpox serum in much the same manner as procured by Jenner himself, (2) to obtain a true cowpox serum from cows in India, and (3) to demonstrate to Indians who were being vaccinated that they were being given a product of the cow (that is, to identify the vaccine with the traditional *panchgavya* or five sacred elements of the cow: milk, dung, urine, curds, and butter). In one instance, one of Anderson's physicians writes: "I have also inoculated a cow, hoping by this means to induce the Brahmans who are very numerous here,[11] whose veneration for that animal is well known, to countenance me in propagating the disease from this [cow,] to them, [an] unexceptional source." Though Anderson did understand the special nature of the cow and the role of *panchgavya* in the ritualistic tradition and is to be commended for an appreciation of this, he never quite realized that blood and other extraneous excretia from a wound is ritually polluting to Indians. Therefore, the use of matter from a cow's pustule might not be acceptable to the Indians.

In several other instances, Anderson also received letters from doctors under him indicating that they were vaccinating Brahmans to convince lower castes of the propitious nature of the vaccine. He also tried to enlist Brahmans to endorse cowpox vaccination: "The Brahmins likewise being principal agents in the drama of popular religion are the most capable of expounding to the general satisfaction of the country how the Deities whom they hold up for adoration such as Patragali, the Daughter of Sive [sic][12] may be influenced to permit a new dispensation, themselves initiated in the omnipotence and universality of the first cause, and on that account more capable of instruction that the exotericks,[13] who have a thousand stumbling blocks laid in their way, as a barrier to mythological record."[14] Again, though Anderson realizes the important ritualistic role of Brahmans in society, he never quite grasped the dynamics of

the socio-religious limitations between Brahmans and other castes which might prevent success, thereby trying a tactic which though seemingly valid will lead him, inevitably, to failure. Like most in his time, he never quite grasped the reality that what Brahmans did was not always a universally-sacred and therefore acceptable pattern for others, despite Brahmins' "elevated" social status.

B. MYTH AND COWPOX VACCINATION. Anderson also became fascinated with the possibilities of using traditional Indian medical texts to convince South Indians of the benefits of cowpox vaccination. In a letter to Helenus Scott on 5 October 1802 he suggests that one must discover "symptoms of diseases termed *Latchana*[15] in the Medical Shasters", before convincing people to adopt a new practice such as cowpox vaccination.

In fact, it is in Anderson's prolific use of myth and mythic language in his correspondence with both English surgeons and Indians that demonstrates more than his mere passing acquaintance with Indian myth and his sense of its power in their thinking. In the best sense of the term, he uses the "Orientalist's" fascination for text and myth to promote a potential prophylaxis for smallpox. Evidence for this is discernible both in his correspondence and actions as he began to develop an awareness of the significance of mythic language that identifies who an Indian understands himself/herself to be. In the same letter in which he discussed *latchana*, while discussing treatments of the eye, he referred to Dhanvantari, the physician to Sansksritic deities and one of the fathers of Ayurvedic medicine who was created with the churning of the cosmic ocean and who rises at that churning with the *amrta*[16] in his hand. Tradition says that this Dhanvantari gave Susruta, the "father of Ayurvedic surgery," much of his understanding of that practice. And, in a letter in which he thanked a minor Indian prince for the use of two of his Indian doctors for vaccination training, Anderson says:

"Divine Providence however, having now bestowed a blessing to humanity, that may without impiety be considered an avatar, since a physician named Jenner, the Dahwantaree [the same Dhanvantari] of this Calpa,[17] has discovered cows in England that like Camadenu[18] have teats and udders stored with Amurtum [*Amrta*] that without risk of life is a shield against the loathsome pestilence of smallpox. The Amurtum introduced here is now under the investigation of your Doctors….[19] From that time on, in public announcements and correspondence, Anderson often refers to cowpox vaccine as *amrtum or amrta*, thereby suggesting to Indians that by identifying cowpox lymph with the mythic *amrta* is to believe that one is being vaccinated with a sacred nectar which the gods churned from the cosmic ocean and which vaccination, by implication, gives one the same strength and power that *amrta* did to the gods. Moreover, this *amrta* is a gift from the gods—by inference, from Visnu, the deity who protects *dharma*, thereby restoring order to society. Later that same month, in a letter to one of his surgeons, J. King, in Bellary northwest of Madras, he continues identifying the cowpox serum with *amrta* and Kamadhenu, and suggests that the benefits derived from it are as great as the "gold, jewels, contentment and ease, and all the temporal benefits which the heart can wish or desire" that come from devotion to Kamadhenu.

Anderson's understanding of the power of sacred language and names in the Indian tradition is reflected further in several letters in which he writes about the "*amurtum* produced at Bombay from an English ship that churned the sea, over the back not only of the turtle, but of all the monsters of the deep, [and which] opens the existing channels of imagination without which there is no road to the heart."[20] And, two weeks later in a letter to Thomas Christie, the Medical Superintendent at Colombo, Ceylon, he reflects on what he has been doing: "In Europe where the sciences are taught by induction from facts,

a name is of little importance; but here where authority is the only source of information, and a name directs the understanding, and conceptions of the mind, things must be managed differently....*Amurtum* will pass more easily through the Kingdom of Candy, the Peninsula of India and Hindustan that the vulgar name cowpox....and I have yet found none that takes with them so well as the Sanskrit word *amurtum*, immortality, as it prevents death from smallpox, and is pleasing to them in calling up recollections of their sacred history, of this gift of Dhanwantaree the Prince of Charity, of medicine, etc. and the cow Camadenu, being a personage in the same Avatar; amurtum has become the generic name for cow's milk."

In another letter, a short while later, Anderson provides another reason for using *amrta* as his name for cowpox: that is, to identify it with Visnu, a protector of *dharma*, rather than with the more localized South Indian village Goddess Mariammam, whom he sees as a fearful power and one not to be offended. In Anderson's mind, Indians are neither savage to be subdued nor are they pagans to be converted to "the true faith". [Missionary activity was not encouraged by the East Indian Company in early 19th century India]. Indeed, as with many Orientalists, he perceived Indians as a kind of innocent but intelligent child who only needs to understand that their Gods and Goddesses were being acculturated to the cowpox serum. For Anderson, the same power that these deities manifest elsewhere, mythologically and ritualistically, is present in Jenner's own discovery. In effect, what Anderson is suggesting is the exact opposite of the later evangelical drive to save the soul and redeem culture. For him, Indian traditions already possess the necessary symbolic values; all that is necessary is to suggest these symbolic values which have manifested themselves elsewhere as well and are now being brought to India by sympathetic colonial physicians. It is an attempt to merge sacred

and secular structure, blurring the lines which distinguish one from the other, in order to conquer a pervasive pestilence that is damaging both to the body, the society, and the economic well being of Indians and their colonial masters.

Conclusion

In his *History of Indian Medicine* (125) Girindranath Mukhopadhyaya makes the following observation about the introduction of cowpox vaccination into the Madras Presidency:

"On the introduction of vaccine inoculation into India it was found that the practice was much opposed by the natives. In order to overcome their prejudices, the late Mr. Ellis, of Madras, who was well versed in Sanscrit [sic] literature, actually composed a short poem in that language on the subject of vaccination. This poem was inscribed on old paper, and said to have been found, that the impression of its antiquity might assist the effect intended to be produced on the minds of the Brahmins while tracing the preventive to their sacred cow. The late Dr. Anderson, of Madras, adopted that very same expedient in order to deceive the Hindoos into a belief that vaccination was an ancient practice of their own. It is scarcely necessary to observe that had any authentic record of such a practice existed, these gentlemen never would have resorted to such a contrivance to gain their object. It is further to be observed that smallpox inoculation was frequently practiced by the Hindoos, but there is no proof whatever that they employed vaccination."[21] This conclusion is critically uncited and is actually a reworked quote from John Barron's *Life of Jenner*, which data Baron obtained from the 19th century British Indian historian, Sir John Malcolm. Moreover, it does not support the available evidence from both the letters of John Anderson and from the British records of the East India Company at Madras at the time.[22]

Both Baron and Mukhopadhyaya are critical of Ellis' and Anderson's attempt to "deceive" Indians into accepting vaccination. While a case may well be made for indicting Ellis for passing off his poem as ancient Sanskrit verse in order to convince Indians of the antiquity of cowpox vaccination in India, it is not difficult to argue that the method employed by Anderson is quite "Indian" in its approach, the evidence for which is found both in his letters and John Company records. By appealing to ideas present in Indian religious and medical traditions to justify the use of cowpox, and identifying cowpox with *amrta* and the concept of the god Visnu's *avataras* descending to earth, Anderson engages in a very "Indian" practice of justifying an act by an appeal to tradition: in this case a powerful tradition of deity intervening in the world to restore *dharma*. Though he never quotes Bhagavad Gita 4: 7-8 Anderson's implication vis-à-vis traditional India already had existed for two thousand years as an acceptable Indian belief in the power of Visnu through his *maya* (illusion) to assume human or animal form to restore *dharma*: "For whenever *dharma* [order] diminishes, O Bharata, and *adharma* [chaos] is great, I make myself a body. In age after age, I assume an existence to restore that which is good and destroy that which is evil in order to preserve the *dharma*." [23] Mukhopadhyaya's contention that Anderson's actions were an attempt to deceive Indians by contrivance demonstrates his own lack of appreciation for what Indian medical texts themselves had been doing for millennia as they themselves appealed to the gods for their medical understanding and practice. Both Anderson and ancient Indian medical texts were encasing rather sophisticated medical evidence in traditional cultural forms which Indians could appreciate.

Rarely, throughout Anderson's correspondence, there are even subtle references to the economic expediency of cowpox vaccination in the East India Company's territories. In almost

every piece of his correspondence, as well as in the official *Surgeon General's Records* and in other Records of the Presidency, the primary aim is to eradicate smallpox in order to remove "that most loathsome disease" from the lives of British colonial subjects. And, Anderson's use of traditional and religious language is always directed towards that end. In all, he is a sensitive and sympathetic colonialist—albeit, seemingly paternalistic—but always tireless in his efforts to make the lives of those in his Presidency worth living. And, if the use of religious language will do that, then he sees no objection to it. Moreover, only once does he refer to the Hindus as "infidels." Generally, he follows in the tradition of William Jones and other East India Company Orientalists of his time in attempting to understand and appreciate Indian culture, not to the ends of colonialist expediency, but to bring wellness to the colonial subjects of India.

If Anderson's attempt to merge Western medical practice with Indian myth is at all perceived as imperialistic, it is primarily as a means to promote healing, not to control disease for a political or economic end. One may argue that Anderson's own scientific interest and research for the East India Company belies a non-imperialistic motivation when promoting *variola vaccina* or cowpox serum. However, nowhere in his correspondence does he suggest using the vaccine as an economic or political control. It is, to be sure, a social and medical control—but not for the benefit of John Company as much as for the well being of the people of India. Moreover, Anderson is neither trying to "convert" Indians from Mariammam *bhakti* (devotion to the smallpox goddess) to Christianity, nor is he trying to supplant traditional practices. For almost two millennia prior to this, Indians may have used both inoculation against smallpox *masurika* and propitiation of the smallpox Goddesses: Sitala, Mariammam, etc., as well as other medical (e.g., surgical) and religious practices to defeat disease.

It is reasonable then to conclude that, during Anderson's tenure as Physician General of the Madras Presidency, at worst a kind of benevolent paternalism covered the attempt to introduce cowpox vaccination into the Presidency, without an attendant disrespect for the prevailing traditions. Such a goal certainly was not maintained for the remaining hundred and thirty-seven years of the Raj.

It is also difficult to argue that Anderson is guilty of the criticisms Edward Said levels against "Orientalists", particularly that too much is made of the "exotic" outside Western culture. While it is true that Anderson concentrates on some aspects of Indian culture which are quite alien to him as a Western physician, his principal aim is not to assess it in terms of his own values; but rather to discover ways of communicating a Western medical practice in terms Indians can understand. Towards the end of his correspondence on the subject in 1804 Anderson remarks in the *Government Gazette* (29 August): "…there can be but little doubt, that a steady attention to the practice may be productive of the extirpation of smallpox, and such persons as are restrained by the fear of offending Mare Umma [sic], the Goddess of smallpox in the Country, will in due time acquiesce in the use of cowpox inoculation, as well as those who entertained the notion of diseases being a dispensation of Divine Providence in that; all of whom will now thankfully acknowledge a beneficent Deity, permitting human capacity to discover and estimate Laws of Nature, or Second Causes, for the welfare of Society." Such commentary reflects a prevailing causal philosophy in the late eighteenth and nineteenth centuries and disparages the village folk traditions regarding Mariammam. This is only to be expected of a Christian physician who has charged himself, and those under him, to eradicate smallpox. And, soon after cowpox is introduced, his comment in reference to the "objections to cowpox inoculation even among infidels"[24] is not so much a

disparagement of Indians as it is a commentary on the vocabulary of the time. His correspondence rarely if ever belittles Indians as Indians or as Hindus, Muslims, Jainas or any other tradition. Never in his correspondence or in the various reports to the Boards does he compare Christianity with the Indian religious traditions in an attempt to explain the ignorance of the region vis-à-vis smallpox. In fact, in one instance he even suggests that when the efficacy of the cowpox lymph is realized, then Mariammam's "...votaries [may be persuaded] to consign smallpox to the Tomb, and elevate cowpox to the Temple."[25] Though a Western scientist, physician and member of the Church of England,[26] there is no evidence that he was seriously encumbered by a dualistic conflict of evil and good, Christian and pagan, primitive and civilized, science and religious myth, Western medicine and folk tradition. For him, proving that *variola vaccina* successfully controlled the spread of smallpox took precedence over any juggling of warring binaries in the rational mind. What was important was discovering ways to acculturate his own process to those of South Indian traditionalists.

Unlike many fellow colonialists up until the mid-twentieth century, Anderson realizes that there is some efficacy in the understanding of the "Wholly Other" in Indian religious praxis and using it in his medical practice. Moreover, he used that understanding not to deceive but to educate, not to manipulate but to heal. He never suggested one should destroy the Indian tradition and replace it with an entire Western cultural schema but to accommodate what the Western physician knows with what the Indian believes. His goal was to heal by whatever means he could. And, he found that accommodation and acculturation suited him perfectly.[27] The vaccine serum he used may have been tainted throughout and may never actually have been a true cowpox serum similar to Jenner's. Nevertheless, Anderson's honest professional commitment to the control and

eradication of a disease using both Western medicine and processes of acculturation offers him a more honorable place in the annals of the East India Company than his statue with its reminders of the cochineal larvae in the narthex of St. George's Cathedral in Madras may suggest. Moreover, his use of traditional Indian symbolic forms in his practice should provide for him an honorable mention among those who understood and appreciated the dynamics of language and praxis in Indian religious life.

NOTES

1. Cf. Genevieve Miller, *The Adoption of Inoculation for Smallpox in England and France* (Philadelphia: University of Pennsylvania Press, 1957), for a history of the European response to inoculation with smallpox lymph.

2. Many studies of smallpox treatment in India were done by the British during the nineteenth and twentieth centuries. The earliest one in this century is S. P. James, *Smallpox and Vaccination in British India* (Calcutta: Thacker, Spink and Co., 1909). A more recent summary of smallpox in India is in Donald R. Hopkins, *Princes and Peasants* (Chicago: University of Chicago Press, 1983), Chapter 4.

3. From the Sanskrit word, *masura*, lentil, i.e., the eruption of a lentil-shaped pustule.

4. The memorial statue to Anderson in St. George's Cathedral in Madras shows Anderson seated with a cactus (the food of the cochineal larvae) in his lap rather than a lancet or some other means of inoculating patients against smallpox. Because of his work on cochineal as a dye, he became the first member of the prestigious American Philosophical Society from the East India Company as well as its first

member from India. While such recognition established his "value" for capitalistic ends, he was never recognized for his untiring efforts in medicine to control smallpox in India.

5. Though it is beyond the scope of this paper, it may be noted that at the beginning of the second decade of the nineteenth century, the Governor in Madras, Sir George Barlow, adopted a non-interventionist policy toward political and economic matters. This is reflected somewhat in a confusing and shifting vaccination policy as well. Cf., the various records (*Public Consultation Records*, *Board of Revenue Records*, *Judicial Board Record*, *Surgeon General's Record*, etc.) in the Tamil Nadu Archives, Madras, from 1809. Admittedly, this humaneness was joined with a pragmatic reason by non-medical officials. The Governor, Lord Clive, arguing for a dispensary in Black Town, Madras, in 1802 reasoned, "...if the attention [of giving no medicines] was consistent with humanity, it is evident that while the only source of supplying wholesome drugs continues to be the public Store, the expense must necessarily be defrayed by the Company, either by avowed or surreptitious means. It is reasonable therefore to conclude, that the institution of a Dispensary for general convenience would not only relieve the Company from an immediate expense [of replacing stolen drugs], but may ultimately increase the demand for European medicines to an object of commercial importance." *Surgeon General's Record*, Vol. 12, 13 October 1802, 203-212.

6. From a report by Nicol Mein, Surgeon to the Madras Army in the Southern Division, in the *Surgeon General's Record*, Vol. 3, 8 January 1788, p.11.
7. On 2, August 1802, Anderson and the Medical Board recommended to the Governor in Council that "Brahmin or Hindu inoculators particularly from the Masulipatam and Guntor Circars" be hired to inoculate at the Presidency and

in addition recommended that "until the prejudice of the people could be overcome" rice continued to be granted to indigent patients to encourage them to be inoculated as little rice is being given at the present as an incentive. (*Surgeon General's Record*, 1802, 501).

8. Letter dated 23 July 1802 from Anderson to Helenus Scott, Physician General in Bombay. Unless otherwise noted, all references to letters are to James Anderson. *The Letters of James Anderson*. Madras: n.p., 1809.

9. From Anderson's letter to Dr. Helenus Scott of Bombay on 27 September, 1802 in response to a letter from Scott. The number, 18,000 is suspect as later records indicate both native practitioners and European doctors greatly inflated their vaccinated patient numbers in order to be paid the equivalent of 8 shillings per one hundred patients.

10. E.g., Vol. 14, 1803, p. 13, "Resolved... to refer to the consideration of that Board [Medical Board] the expediency of taking measures for insuring a continued supply of vaccine virus by preserving a succession of cows for that purpose."

11. The letter is written from Trivillore, a pilgrimage town twenty-six miles west of Madras which contained a large Brahman population because of its major sacred status in the South.

12. Here and elsewhere, he uses this to mean Bhadrakali, who is not the "Daughter of Siva" but rather one of Siva's consorts, the goddess Kali.
13. I assume he means the temple priests or *pujaris* who perform the *pujas* or rituals of worship before the deity's image in the temple.

14. This is Anderson's 1 November, 1802 reply to a letter from Mr. Matthew Christy, Surgeon at Wallajabad, who has raised some concerns about inoculations in his area.

15. From the Sanskrit meaning to mark, sign, indicate, define. Chapter One and elsewhere in the *Caraka-samhita*, an important traditional Indian Ayurvedic medical text of the first century C. E., discusses three kinds of signs by which an illness may be classified: *laksana-nimitta* (signified, caused and noted by the characteristics of the body in which the disease appears), *laksay-nimitta* (signified, caused and noted by the manifestations of the disease in the body), and *nimittarupa* (some special forms or characteristics which cause the disease).

16. *Amrta*, a special potion with restorative powers for the gods, which was produced with the churing of the ocean from the back of Kurma, the turtle avatara of Visnu, (one of that god's descents to earth to restore *dharma* or order on earth).

17. In the traditional Indian system of time, a *kalpa* is 4,320,000,000 human years.

18. He refers here to Kamadhenu, a cow also created at the churning of the ocean, who gives people what they desire. The cow belongs to Vasistha, a great *rsi* of the Vedic period to whom is attributed many of the hymns of the Rgveda.

19. From Anderson's letter to a Telegu prince, Vassareddy Vankatadry Naiker Bahader, Munnasaolutal of Moortezanagar, Mustoobanagar, Kumbabadoor, on 2 December, 1802.

20. From a letter dated 28 December 1802 to Pierre Sonnerat, a famous French traveller and chronicler of the period, who

was at the time in Pondicherry, the French colony south of Madras.

21. New Delhi: Oriental Reprints Corporation, 1974.

22. In a 1985 paper, "A Pious Fraud: the Indian Case for Pre-Jennerian Smallpox Vaccination," published by the "International Workshop on the Study of Indian Medicine," of September 4 at the Wellcome Institute, London, and on deposit at the British Library (Selfmark W725 (b) OIOC, the distinguished British historian of Indian medicine, Dominik Wujastyk, argues that both Ellis and, likely Anderson, are at fault for manipulating the texts to defraud Indians vis-à-vis cowpox vaccine. After presenting a form of this paper at the South Asia Seminar at the School of Oriental and African Studies, University of London, in January of 1999, Dominik agreed that while his judgment about Ellis may stand, the Anderson evidence as presented in this paper suggests that Anderson had a more altruistic motive in his activities.

23. yada yada hi dharmasya glanir bhavati Bharata
abhyutthanam adharmasya tadatmanam srjamy aham
paritranaya sadhunam vinasaya ca duskrtam
dharmasamsthapanarthaya sambhavami yuge yuge

24. In a letter, Anderson writes to David White, Surgeon at Angarypar on 16 October, 1802.

25. Anderson's letter to Mr. William Ord, Surgeon of the General Hospital, Madras, on 3 January, 1803.

26. After his death in 1809, the East India Company erected a commemorative statue in the narthex of the church he

attended in Madras, St. George's Cathedral, (where it still stands, though the statue celebrates his commercial research on the cochineal larvae not his efforts on behalf of smallpox eradication).

27. The success of this accommodation is revealed in the next several years in the various Board reports and consultations of the hundreds of thousands vaccinated throughout the Madras Presidency. Though some of the figures may be suspect, the evidence does suggest that Anderson's sensitivities were rewarded, despite the fact that smallpox never was eradicated in India until 1979. However, this was not so much because of a failure on the part of Anderson or his successors as it was a lack of understanding about the nature of the containment of smallpox as a virus in a population. In his careful study of the British and their relationship to disease in India in the later 19th century, *Colonizing the Body (Berkeley: University of California Press, 1993)* David Arnold notes that "One of the critical moments in the expansionist career of Western medicine in India has been identified with the mid-1830s, when the triumph of the "Anglicists" over the "Orientalists" is seen to have ended colonial patronage of indigenous medicine and marked the confident assertion of the Western system as the only legitimate form of medical practice" (p. 13).

This study is dedicated to Dr. K.V. Raman, who for many years has been both friend and colleague in the exploration of the relationship between the cultural and religious traditions of India. It was in a conversation with him years ago that I first discovered the integral role of Mariammam in South Indian life and medicine.

PROHIBITION MOVEMENT IN TAMILNADU: AN IMPORTANT ACTIVITY OF THE CONGRESS DURING THE FREEDOM MOVEMENT

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Prohibition movement was the agitation for the state prohibition of intoxicants so that no one might manufacture or deal with them except for strictly medicinal or industrial purposes. The work of the Congress was to keep the people away from intoxicants and also to bring pressure on the Government to pass laws prohibiting them. But the real intention of the Congress was not only to further temperance, but also to hit the akbari revenue thereby to cripple the resources of the Government. It was especially the case in the Madras Presidency where nearly a quarter of the Government revenue came from alcohol sales.

An attempt is made in this article to explain about the various steps taken by the Congress to bring into effect total prohibition such as prohibition campaigns, picketing of liquor shops as part of the Non-Co-operation and Civil Disobedience Movements and caste compact. It concludes with the passing of the Madras Prohibition Act of 1937 by the Government of Madras headed by the Congress Party.

From the beginning, the Indian National Congress viewed with much concern the growing consumption of intoxicants. The Allahabad Congress Session held in 1888 passed a resolution urging the Government of India to adopt an improved system

that would discourage drinking[1]. In the subsequent Congress Annual Sessions as well as in the provincial and district conferences, the same was discussed and passed as resolutions against the use of it. Thus, towards the end of the nineteenth century and the beginning of the twentieth century there began a prohibition movement. The Congress and its conferences passed a lot of resolutions demanding the Government to eradicate the evil of drinking. But, year after year more shops were opened for the sale of intoxicants.

In the Madras Presidency in 1920, the number of coconut and palmyra trees tapped for toddy was 12,47,841 and the number of toddy shops were 10,729[2].

The details of income and expenditure incurred by the Government of Madras through the sale of intoxicants are indicated in Table 1.

TABLE 1

Year	Income Rs.	Excise Duty Rs.	Total Income (2) + (3)	Expense	Excess (4) - (5)
(1)	(2)	(3)	(4)	(5)	(6)
1880-81	31352260	3798360	35150620	954040	34196580
1885-86	41521320	4198100	45719420	1243720	44475700
1890-91	49477800	600900	55486800	1749810	53736990
1895-96	57224170	6625860	63850030	2079570	61770460
1900-01	59088030	6938205	66026235	2417640	63608595
1905-06	85317300	9740000	95057300	3871740	91185560
1910-11	10545475	12053394	122598869	5089904	116508965
1915-16	129483132	11790000	141273132	7061095	134212037
1917-18	154425590	10996886	165422476	7300000	158122476
1918-19	173552770	11065351	184618121	8200000	176418121

Source: *Navasakti*, 18 March, 1921.

It is apparent from the table that the income derived from the sale of intoxicants also increased year after year.

The total revenue from country spirits in excise tracts of the Madras Presidency for the year 1919-20 amounted to

Rs.22,60,905 while it was Rs.18,89,630 in 1918-19. The increase occurred under both excise duty and rentals[3].

It was the Non-Cooperation Movement which gave a momentum to prohibition and thus the prohibition movement was launched throughout Tamil Nadu. But the original non-co-operation resolution did not contain any provision for prohibition campaign. It was not planned or anticipated by Mahatma Gandhi or the Congress. It was purely a spontaneous move by the masses, but the Congress encouraged it once it had read the pulse of the masses and included it in the non-co-operation programme[4]. From then onwards, prohibition was made a major item in the Congress programme.

As early as 1920, the Madras Provincial Congress Committee in its election manifesto included prohibition as one of its legislative programmes. Under dyarchy, the transfer of the excise portfolio to an Indian Minister brought prohibition within the realm of practical politics. The Justice Party also claimed that prohibition was one of its aims[5]. The Congress took it as an easy way to provoke the Government to order arrest and imprisonment thereby earns mass support and sympathy for the Congress cause.

Prohibition movement had spread in almost all the districts of the Madras Presidency before the end of February 1921. The sale of arrack and toddy shops had been boycotted in many places[6]. The campaign reached its zenith at the time of the auction sales of toddy shops in August 1921 and lasted till the end of that year. C.Rajagopalachari, E.V.Ramaswami Naicker and N.S.Rangaswami Iyer organized volunteers' corps known as *thondar padai* to picket liquor shops throughout Tamil Nadu[7]. Picketing took place in innumerous parts of Tamil Nadu. The

volunteers induced the workmen employed in the liquor shops to leave their masters, prevented the cart men from carrying liquor to the depots and shops, burnt down few arrack shops, persuaded the owners of the coconut trees not to give the trees to the renters for tapping or where such persuasion failed, they instigated the breaking up of pots on the trees and cutting of the spathes. All these naturally affected toddy sales so much, that in several places resale of shops were ordered[8].

In Erode, E.V.Ramaswami Naicker along with other volunteers organized picketing before arrack and toddy shops. When Mahatma Gandhi ordered the Congress to cut the spathes in order to prevent the tapping of toddy, E.V.Ramaswami Naicker felled down 500 coconut trees in his garden. The campaign succeeded in reducing the Government's excise income, and the sale of toddy fell by thirty percent[9].

The Government of Madras placed substantial reliance on its income from excise duties and the prohibition campaign put it under serious pressure. Prosecutions were started on a large scale. E.V.Ramaswami Naicker, C.Rajagopalachari, M.V.Subramanya Sastri and others were imprisoned and the Government thought that the movement would die in the absence of leaders. During E.V. Ramaswami Naicker's imprisonment, his wife Nagammal and his sister Kannammal along with many other women were drawn into it. They pursued passive resistance to make it a success at Erode[10]. The campaign succeeded in decreasing the Government's excise revenue. But the sudden suspension of the non-co-operation movement led to the decline of the prohibition movement also. Due to that, the excise revenue of the Government of Madras also showed a tremendous increase.

Though picketing was suspended, the "Congress No-changers" who concentrated on the constructive programme of the Congress

assigned a place of honor to prohibition[11]. Having lost the control of the Tamilnadu Congress Committee, C.Rajagopalachari, the leader of the Congress No-chargers retired from politics and founded an ashram at Thiruchengode in Salem district to encourage both hand weaving and temperance among the local weavers and Harijans[12]. C.Rajagopalachari carried out prohibition propaganda and was successful in converting a considerable number of drunkards[13]. He asked the Swarajists also to make prohibition their major issue in the 1926 election. The Tamilnadu Swarajist Party accepted his suggestion and included total prohibition in their programme[14].

In spite of the sustained effort of the Congress, the consumption of liquor increased tremendously in the Madras Presidency. The number of toddy and arrack shops opened and the number of trees marked for toddy tapping also increased. For the year 1928-29 alone, there was an increase of eighteen percent in the consumption of liquor and the consumption of beer also doubled. The number of licenses issued for sale of foreign liquor or locally manufactured also showed an increase[15]. This compelled the Congress to take stern action.

The Legislative Council became a constant scene of attack on excise policy. Questions were asked and discussions on that policy were held. Resolutions were moved with a view to securing a total prohibition. In order to bring into effect total prohibition, the All India Congress Committee which met in Delhi on 27th March 1929 decided to revive the picketing of liquor shops, cutting of spathes of coconut and palmyra trees and also to prevent bidding of liquor and arrack shops[16]. The meeting of the Tamilnadu Congress Committee held at Vedaranyam on 31st August 1929 also appealed to the people to strengthen the agitation against the drink traffic and bring about a total prohibition[17].

The Civil Disobedience Movement further gave a fillip to the prohibition movement. In Tamil Nadu, it was vigorous in Madurai, Tinnevelly, Coimbatore and Salem Districts and it resulted in violence in several places. In Madurai district, the Congress volunteers began picketing of liquor shops on 17th July 1930. A crowd there stoned the toddy shops. Police intervened and dispersed the crowd by opening fire and lathi charges[18]. Again on the same day evening, they started picketing at Madichiyam and Kosavapalayam. The picketers resorted to hustling people who wanted to drink and they were arrested by the police[19]. On 6th August 1930, picketing was begun at Bodinaickanur. A mob attacked the police and the local police station. Firing was resorted to by the police and two members were shot dead and several others were injured and three volunteers were arrested before the situation was brought under control[20].

Picketing in Tinnevelly district was very peaceful. When volunteers started picketing at Tuticorin on 11th August 1930, police arrested fifteen of them[22]. Picketing in Coimbatore district was accompanied by violence. On 28th July 1930, a crowd gathered and began to throw stones at the shop. They were dispersed by the party of reserve police after a lathi charge. At Pollachi and Udumalpet also the picketers were dispersed by using lathi charges by the police[23]. Congress volunteers picketed liquor shops in Salem and Trichinopoly districts. Hence, orders under section 104 Criminal Procedure Code were passed at Trichinopoly town. Unmindful of the orders, volunteers continued to come in every day to disobey them. Finally, the Congress office in which the volunteers took refugee was raided[24]. Many volunteers who did peaceful picketing were also arrested. The Government issued counter propaganda leaflets to encourage drinking[25]. It is obvious that though the Government constituted the temperance committees, it was not serious in enforcing

prohibition. Whenever the Congress volunteers began any serious attempt to put an end to the evil of drinking, the Government of Madras began to suppress them.

By Gandhi-Irwin Pact published on 5th March 1931, the Congress was permitted to undertake peaceful, non political and non aggressive picketing. The Government in turn had instructed the Commissioner of Police, Madras to take no notice whatever of picketing unless and until it threatened serious disorder or danger to the public peace[26]. The police or the toddy and other liquor shop keepers or the public should not do anything to the picketers as long as the latter did not adopt violent methods[27]. The Pact conceded the right of peaceful picketing that had not existed before. During the months after the signing of it, picketing of liquor shops in Tamil Nadu was intensified. April, May and June being school holidays, there were much recruitment of students to picket liquor shops.

In accordance with the Pact, the Koilpatti Taluk Congress Committee first made propaganda about the evils of drinking for a month and passed a resolution to commence picketing on 1st May, 1931. R.Guruswami Naidu, its President issued the following instructions to the volunteers to be observed strictly:

- The volunteers should do their picketing at a distance of sixty feet from the shops
- They should not obstruct any addict by falling across his path
- They should request persons to give up drinks by words only
- They should not touch anybody in their picketing
- They should not touch any vessel carrying toddy or any intoxicants to the shops.

The Government was also requested to enforce strictly the rules of sale of intoxicants. Then picketing was commenced on 1st May, 1931 at Koilpatti as planned and it went on very peaceful until 12th instant. It was so effective that it affected the sales of liquors to such an extent that the sales, which was two gallons per day was reduced to two drums per day[28].

On 12th May, there was a police raid on the volunteers and their camp. Their umbrellas, flags and placards, stools and other articles were either taken away or destroyed. On the same day, the volunteers were arrested along with their leader N.Somayajalu, the President of the Picketing Committee. Then a strong body of reserve police was posted. It was desirable that where the picketing was peaceful, there should be no demonstration of police force. Hence, C.Rajagopalachari asked the Government to withdraw the reserve police or to instruct them not to interfere with the peaceful picketers[29]. From 1st June 1931, seven lady picketers stood at a distance of twenty to thirty yards and started picketing. However, there had been no report of police high handedness after 12th May, 1931[30].

Picketing of liquor shops was commenced at Sankarankoil on 20th March 1931 under the auspicies of the local Congress Committee. It was reported in *The Hindu* that the picketing was a complete success. A vast majority of the local Adi-Dravidas had decided to give up drinking. But on several occasions, Congress volunteers were subjected to violence by the agents of the renters. Toddy was thrown at the volunteers and was taken in pots outside the village for being distributed to the Adi-Dravidas, to encourage them to drink[31].

On 13th June, 1931, one arrack and two toddy shops were picketed by nineteen Congress volunteers in three batches at Rajapalayam. K.V.Desingu Raju, leader of the volunteers visited

the shops to watch picketing. The Police Circle Inspector asked him to stop picketing for a period of two months so that the then contractors might not incur loss. On his refusal, the Circle Inspector began to preach the good effects of evening drinks to laborers and promised to give protection to those who wanted to come there for drink. But most of the people replied that the volunteers were doing good service for them and they would not drink[32]. Such was the impact of Congress propaganda on the masses. Vigorous and persistent propaganda was carried on in and around Thiruchengode ashram. As a result, a large number of shops were closed by the Government during the years 1930-32. This completely weaned the Adi-Dravidas from drinking[33].

The Congress organized picketing of liquor shops at Madurai city on 30th September, 1931 with nine volunteers and on 4th October it was increased to sixty four[34]. It was suddenly disturbed on 5th October by the police who attacked the volunteers with lathis and the bullets of guns injuring several of them[35]. In Coimbatore, picketing tended to become aggressive and the District Magistrate issued certain restrictions in consultation with the local Congress leaders and limited the number of picketers to six at each shop. Picketing then became peaceful[36].

Picketing at Ranipet in North Arcot district was prohibited by passing an order under section 144 by the Sub-divisional Magistrate[37].C.Rajagopalachari wrote to the Governor of Madras that peaceful picketing of liquor shops at Ranipet had been prevented without justification and was against the terms of Gandhi-Irwin Pact. He also wrote to the District Magistrate of North Arcot, requesting him to take action to have the prohibitory order withdrawn[38]. But the government refused to withdraw it. Peaceful picketing of toddy shops at Thirukattupalli by the volunteers standing at a distance of sixty five yards from shop

which had been conducted for fifty days, was prohibited by police insisting on volunteers to stand at a distance of 100 yards. Picketing was thus made futile as shops were not within the sight from that distance[39]. Conflict developed between the Government and the Congress over the drink issue. Almost daily C.Rajagopalachari sent letters to the Governor asking for details of confidential instructions supplied to local officials regarding picketing.

The Government was opposed to getting rid of toddy immediately. It was deriving a large income from trade in liquor and prepared their budget relying mainly upon the toddy sale. Because of the Congress propaganda, there had been a decrease in income. The income from toddy for the year 1930-31 was Rs.5.25 crores but after intensive picketing in 1931-32, it was reduced to 4.25 crores. The trees licensed to get toddy and the total toddy shops bided also decreased. In 1930-31, there were 9,916 toddy shops and it came down to 9,797 in 1931-32. The trees licensed to get toddy also decreased from 22,21,570 to 20,90,118 in 1931-32[40]. The total number of arrack shops and the revenue derived from that also diminished. As soon as the income from toddy began to decrease, the Government took severe action. It declared an assembly of five or more persons as unlawful if gathered for an unlawful purpose such as picketing and could be dispersed after warning, by force if necessary[41].

It is obvious from the incidents at Koilpatti, Madurai, Ranipet and other places, that the police action were in transgression of the Pact placing obstacles in the way of picketing carried on by the Congress volunteers. Police should not at all come to the places where picketing was carried on in accordance with the pact. In certain places, police themselves beat the volunteers, who were picketing or caused them to be beaten by the toddy shop keepers. Many were arrested and sentenced to undergo rigorous imprisonment.

Caste Compacts (*Oorkattupadu*)

When the picketing became futile, C.Rajagopalachari introduced a new method to eradicate the evil of drinking, which was through caste compacts. He issued a pamphlet entitled *Oorkattupadu* (Village compact) through which he made an appeal to all the people of Tamil Nadu to improve their status socially as well as economically by adopting the practice of total abstinence from drink[42]. He advocated social boycott to enforce prohibition saying that the authorities could not interfere if a drunkard was outcasted and had to pay a fine in order to be reinstated[43]. He emphasized that a pledge of total abstinence was neither a crime nor violence nor it was opposed to public policy, though it might affect the Government's revenue so as to render it illegal for institution or a caste to adopt it[44].

The discouragement of drinking by social boycott and caste penalities had spread in many parts of the Presidency. The scavengers of Arantangi had been compelled to give a verbal undertaking not to drink, while the Pattukottai Union had also threatened the union sweepers that unless they stop drinking, they would be dismissed[45]. In Tuticorin, the fishermen community promised to give up drink[46]. The Congress Party also announced at Tuticorin, that people should not give alms to professional mendicants as they spent the alms on drink. On 14th September, 1931, as a result of that notice, the professional medicants undertook a pledge not to drink. Alms were then freely distributed. At Tirupoondimarudur, some Brahmins invited the Adi Dravidas to a feast paid by the Congress and at the feast, they were asked to boycott the members of their own community if they continued to drink[47]. The Congress volunteers asked the vegetable market dealers at Tanjore not to employ Adi-Dravida women as coolies unless they secured a written undertaking from their husbands not to visit the toddy shops[48]. At one meeting at Arcot on 22nd

September 1931, Congress volunteers exhorted the merchants not to sell any articles to drunkards. Volunteers induced the people to form caste panchayats and fine the drunkards and reward the informants[49].

The Devanga Mahajana Sangam, a local caste association imposed a social boycott on members of that community who continued to visit the toddy shops. The Saurashtras of Salem also boycotted their own community people who drank[50]. C.Rajagopalachari, strongly advocated using caste system to enforce prohibition saying that the authorities could not interfere if a drunkard was outcasted.

Rajagopalachari wrote how an excommunicated person should be treated

- Enquiries should be open, fair, just and impartial; the authority of caste panchayats and village communities could not go beyond refusing the offender the help and communion of the caste;
- His living could not be prevented or ask him to leave the village or give up his business or his occupation;
- Invitation for marriage or funerals might be refused, but water or medical assistance could not be refused;
- A fine might be inflicted on him so that the offender might express his repentance by paying it and remain in the fold, but the fine should be paid voluntarily;
- Barbers, washer men and others who sympathize and co-operate with the movement against intoxicants and who do not like rendering of service to those who would not give up that habit might refuse to render such service. But this is their own right[51].

As a result, the discouragement of drinking by social boycott and caste penalties spread everywhere, especially among the communities which had till then been kept apart as low castes. It was only the members of that caste who were subjected to great suffering and loss by toddy and liquor shops. Their leaders, who were hopeful of improving the social status of their community by abstaining from intoxicants, adopted the system of caste compacts. M.C.Rajah, one of their leaders, supported prohibition and wrote that he would not lend support to anything that his community might do prejudicial to the prohibition movement. He encouraged his people also to render help to prohibition movement[52]. This movement also did not escape government repression. It issued a police circular to village munsiffs to take necessary action to prevent caste boycott[53]. Pamphlets encouraging prohibition through caste boycotts were forfeited by the Government[54]. Despite the fact that the Congress had obtained widespread and unexpected support for its prohibition campaign throughout Tamil Nadu, the Government had successfully resisted its carefully organized campaigns and brought about a gradual diminution of the excitement and enthusiasm which had hitherto prevailed.

It was calculated that the total amount paid by the consumers for toddy, arrack and other intoxicants in the Madras Presidency was Rs.17 crore every year. The land revenue collected in Madras was only Rs.7.5 crore. The amount spent by government on education was Rs.2.5 crore. Madras drank about twice as hard as Bengal and Bombay, taking the population and the total quantity of alcohol consumed into account. The total drink bill of India was estimated to be no less than Rs.100 crore per annum[55]. In the Madras Presidency itself eleven lakhs of coconut trees were tapped every year for making fermented toddy (this is without taking into account the date and palmyra tree). The toddy tapping therefore destroyed an annual estimated yield of

no less than eleven crore of (food) coconut fruits[56]. As against that nothing was gained except an alcoholic drink with no food value but with high poison index of destructive energy in regard to health, public orders, good morals, family happiness and economic prosperity.

The Congress would have succeeded in its effort of prohibition long before if the real difficulty had not come from the side of Government. The Government which mainly depended on the income of liquor shops did not make any legislation in favour of prohibition in spite of the sustained efforts of the Congress.

The Congress Ministry under C.Rajagopalachari immediately after assuming power in 1937 placed the prohibition act on the statute book. The Madras Prohibition Act of 1937 provided for the introduction and extension of the prohibition of the manufacture, sale and consumption of intoxicants in the Madras Presidency. It was first enforced in Salem district from 1st October 1937[57]. Prohibition was the most outstanding reform announced by the Government of Madras headed by the Congress Party.

The Congress in Tamil Nadu was able to intimidate the Government of Madras by (before 1937) cutting at the excise revenue base and was able to act as the spokesman of a large number of groups who came to see the Congress as their national mouth piece. It helped to popularize temperance in a way that made local caste and community goals a part of wider political goals and assisted in the identification of the Congress as a provincial and national spokesman for local communities. Thus, the Congress was able to obviate the danger of alienation from the mass of people through the prohibition movement. It helped the Congress to win an overwhelming majority in the 1937 provincial election.

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reasons for that, he denied the accusation. C.Rajagopalachari put a pair of chappals in his hand and asked him to swear by the chappels that the charge was not true. The man realized his mistake, fell on C.Rajagopalachari's feet and admitted the charge. Then he was put incharge of foot wear unit of the ashram (B.K.Ahluwala and Shashi Ahluwala, *Rajaji and Gandhi* (New Delhi, 1978), p.64.

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SELF GOVERNANCE IN IRRIGATION - A STUDY OF TRADITIONAL IRRIGATION INSTITUTIONS IN THE PERIYARU AYACUT OF CUMBUM VALLEY

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Introduction

A tradition of farmer participation in the operation and maintenance of distributary channels and tanks under small and large-scale irrigation systems is reported to have existed in different parts of Tamilnadu[1]. Historically, in this state, group of water users undertook all critical functions of water management including construction of small diversion weirs and channel networks[2]. Such farmer participation in irrigation management was facilitated through Traditional Irrigation Institutions[3].

Traditional Irrigation Institutions comprise of rules specifying rights and responsibilities of farmers in the performance of irrigation tasks. These rules and practices enable farmers to collectively carry out the operation and maintenance of their irrigation system. These rules and practices have also been adopted to suit their socio-cultural, physical and hydrological environment that makes them productive[4].

Until recently, in some parts of the state these Traditional Irrigation Institutions are reported to be instrumental in the operation and maintenance of irrigation systems[5]. However in

some other parts these institutions have degenerated due to socio-economic and cultural changes[6]. Hence a study of these Traditional and Irrigation Institutions, wherever they exist is deemed desirable in view of their historical significance and relevance in learning their principles of farmer participation. In the light of this scenario, this paper gains pre-eminence in so far as it elucidates the organization and functions of Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum Valley.

Methodology

The uniqueness of the Periyaru Ayacut of Cumbum Valley lies in the existence of Traditional Irrigation Institutions under the administration by Water Resource Organization. The pilot study carried out in 2001 brought to light the existence of the tradition of farmer participation in irrigation management for several decades in this Valley. Such farmer participation in irrigation management is less conspicuous in large-scale irrigation systems. Moreover, this phenomenon is observed in a government run medium irrigation system in this valley. Therefore, the organization of farmer participation in irrigation management through Traditional Irrigation Institution in this valley is the focus of this study.

The specific objectives of this study are:

1. To identify the location and types of Traditional Irrigation Institutions.
2. To portray the organizational structure of Traditional Irrigation Institutions.
3. To elucidate the origin structure and role of the federation of Traditional Irrigation Institutions.
4. To examine the contribution of Traditional Irrigation Institutions to Self-Governance in Irrigation in Cumbum Valley.

This study is based on intensive fieldwork in all the villages and hamlets of Cumbum Valley. The primary data has been collected through the following sources.

1. Census Survey of Traditional Irrigation Institutions

Complete enumeration has been adopted as the method of collecting data about Traditional Irrigation Institutions. After the pilot study, no attempt was made to sample out Traditional Irrigation Institutions, since they seemed to present a variety in their organizational structures. It was felt desirable to contact all the Traditional Headmen, in order to capture the nuances of these institutions across the system.

Therefore snowballing technique was used to identify the Traditional Headmen. All the Traditional Headmen in the Periyaru Ayacut of Cumbum Valley were interviewed in order to capture the subtleties in the organization of farmer participation in irrigation management.

Since there is dearth of written documents on Traditional Irrigation Institutions, these interviews are the chief sources for understanding the Traditional Irrigation Institutions. Moreover, Traditional Headmen are the key informants about Traditional Irrigation Institutions. Thus, all Traditional Headmen belonging to the villages and hamlets served by the Mullai-Periyaru old channels were interviewed for this purpose expending greater time, money and other resources.

2. Sample Survey of Farmers

Survey of farmers was conducted by sampling out farmers in Cumbum Valley. There are three thousand four hundred and ninety farmers in this system of which two hundred and ninety

farmers have been selected on the basis of proportionate random sampling method. Printed schedules were used to collect and record the responses provided by the farmers.

The secondary data for this study was drawn from the Public Works Department & Tamilnadu Water Resource Consolidation Project records and reports.

Locale of the Study

The Periyaru Ayacut of Cumbum Valley Irrigation System provides the geographical setting for this study. It was established as a medium irrigation system with the construction of Mullai Periyaru dam in 1895[7].

It is located in Theni district of Tamilnadu. This command area spreads from Kumili to Theni town comprising 39 villages covering a radius of 51 kilometers.

At present, the fifteen anicuts through seventeen channels irrigate five thousand nine hundred and fifty four hectares of double crop command area. Paddy is cultivated as double crop during June to September and October to February in this irrigation system. Rarely in some areas, are sugar cane, bananas and betel vines cultivated.[9] Thus, the Periyaru Ayacut of Cumbum Valley characterised by common socio-historical, hydrological and geographical setting is chosen for this study.

Location and Types of Traditional Irrigation Institutions in the Periyaru Ayacut Of Cumbum Valley

Elaborate interviews with Traditional Headmen served as the only source of information about Traditional Irrigation Institutions.

It is reported that irrigated agriculture has been practiced in Cumbum Valley for centuries. The Zamindars of this region had organized construction of tanks to store river water and for cultivating crops. Besides the construction of tanks they excavated channels to divert the river water to those tanks. All these construction works were carried out by people under the authority and financial support by *zamindars*[10].

In order to operate and maintain these channels and tanks the users evolved institutional arrangements. These Traditional Irrigation Institutions have facilitated management of this irrigation system and have kept them up in operational condition over decades. This is evident from the fact that these century old channels and tanks are being used to convey and store river water through which agricultural activities are carried out in this valley till date[11].

An attempt was made in the course of elaborate interviews with the Traditional Headmen about the age of these Traditional Irrigation Institutions. It emerges that these institutions have been in existence for generations. According to the *Thanneer Maniam* of Markayan Kottai, who is seventy-nine years old, his authority has been inherited from his grandfather through his father to him. The *Thanneer Maniam* of Gudalur, who is seventy years old stated that his authority was held by his grand father and later by his father, who were also village *Maniams.* This denotes that these irrigation institutions have passed on through generations. Nevertheless due to dearth of records about this Traditional Irrigation Institutions the history of these institutions could not be fully documented. The age of the channels and historicity of the authority of Traditional Headmen prove that these irrigation institutions are traditional.

Location of Traditional Irrigation Institutions

The Chart-A brings to light the existence of Traditional Irrigation Institutions across the Periyaru Ayacut of Cumbum Valley. They are found to exist in all the seventeen channels and nineteen tanks of this irrigation system. In sum, there are thirty-two Traditional irrigation institutions located in this valley.

It is apparent from the Chart-A that a vast majority of distributory channels (77%) are governed under single Traditional Irrigation Institutions. In contrast, *Palayamparavu Vaikkal* 16 kms long *and Uthamutu Vaikkal* 12.5 kms long have eight and five Traditional Irrigation Institutions respectively.

Thus, over a period of time and space, these institutions have been instrumental in governing the entire valley. The historicity and the geographical spread of these thirty-two Traditional Irrigation Institutions call for further inquiry. Therefore these Traditional Irrigation Institutions have been analyzed in terms of their typology.

Typology of Traditional Irrigation Institutions

There are five types of Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum valley. These are

1. *Thannir Maniams*,
2. The farmer organizations
3. Registered Farmer's association
4. Village Committees
5. Irrigation Committees

Nonetheless variations are observed in relation to number of cases of Traditional Irrigation Institutions. There is a majority of them (50%) *Thanneer Maniams.* There is one Registered Farmers' Association.

Among the traditional institutions, there are multi village-hydrology based institutions existing for irrigation management. They include the following three types:

a) *Thanneer Maniam,* who is a water headman distinct from village headman and he confines his roles to irrigation activities within his jurisdiction.

b) Farmer organization which organizes irrigation management.

c) Registered Farmer Association, is a legal entity, organizing management of irrigation and related activities. Thus, these institutions are multi-village entities founded on hydrological basis.

On the other hand there are single villages based on Traditional Irrigation Institutions. They include the following two types:

a) Village Committees that are units of local administration that manage irrigation along with other village functions and

b) Irrigation committees that take up exclusively irrigation management within a village.

Organisational Structure of Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum Valley

Any organization for its effective functioning and execution of roles necessitates the creation and operation of authority to direct, monitor co-ordinate and regulate the activities of its members. For this purpose certain individuals need to be placed in leadership positions with specific rights and duties by means of established procedures.

Traditional Irrigation Institutions have defined the status and roles of the headman and functionaries. The individuals who occupy these positions organize or execute irrigation tasks. These positions facilitated the enforcement of set of procedures and rules in the execution of irrigation tasks.

TABLE NO. 1

Structure of Traditional Irrigation Institutions In Cumbum Valley

TRADITIONAL IRRIGATION INSTITUTIONS	STATUSES				
	HEADMAN WITH WATER SPREADERS F (%)	HEADMAN WITH WATER GUARDS F (%)	HEADMAN WITH WATER GUARDS AND WATER SPREADERS F (%)	HEADMAN, AGENT WITH WATER GUARDS AND WATER SPREADERS F (%)	TOTAL F (%)
Thaneer Maniams	0 (0.0)	9 (56.3)	5 (31.2)	2 (12.5)	16 (100)
Farmer Organisations	0 (0.0)	2 (66.7)	0 (0.0)	1 (33.3)	3 (100)
Registered Farmer Association	0 (0.0)	0 (0.0)	0 (0.0)	1 (100)	1 (100)
Village Committees	0 (0.0)	3 (100)	0 (0.0)	0 (0.0)	3 (100)
Irrigation Committees	7 (77.8)	2 (22.2)	0 (0.0)	0 (0.0)	9 (100)
Total	7 (21.9)	16 (50.0)	5 (15.6)	4 (12.5)	32 (100)

Source: Census Survey of Traditional Irrigation Institutions in Cumbum Valley (2003 – 2004).

Cluster of Statuses

Table-l describes the internal organizational structure of each Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum Valley. It is implicit that the enforcement or rules under traditional institutions is the responsibility of the individual headman or committee within their respective jurisdiction. There are also irrigation functionaries employed under this arrangement to carry out operation and maintenance of irrigation system.

There are four positions forming the hierarchy of the organisational structure. They are the following:

Traditional Headman: The chief authority for execution and enforcement of rules under Traditional Irrigation Institutions.

Agent: Person nominated by the irrigation functionaries to Traditional Headman to manage irrigation activities on his behalf.

Water Guards: Irrigation functionary to operate distributory channel.

Water Spreaders: Irrigation functionary to operate the system below the sluice level.

The arrangements of these positions indicate the descending order of authority within the hierarchy in the organization of Irrigation Management.

Although there are five types of Traditional Irrigation Institutions, there are subtle variations amongst them in terms of their organization. Such nuances pertain to the inclusion or exclusion of committee or agent or water guards in the management of Irrigation System.

Structure of Traditional Irrigation Institutions

The five types of Traditional Irrigation Institutions present variations in terms of the hierarchy of statuses that constitute their structure. The following are the four distinctive structure of organizing irrigation management in Cumbum valley:

1) Traditional Irrigation Institutions with headman or committee are assisted by agent or agents who in turn control water guards and water spreaders. In this category are included *Thanneer Maniams* (12.6%), Farmer Organizations (33.3%) and Registered Farmer Associations (100 %).

In case of one Registered Farmer Association and one Farmer Organizations, two agents have been appointed in the direct Ayacut and in indirect Ayacut distinctively in each to manage water guards as well as water spreaders.

2) Traditional Irrigation Institutions with headman or committee have control over water guards. In this category are included *Thanneer Maniams* (56.3%), Village Committee (100%) and Farmer Organizations (66.7%). In such service area, farmers control the water spreaders.

3) Traditional Irrigation Institutions with Headman managing water guards and water spreaders are found in a sizeable proportion of (31.3%) cases and all those identified are *Thanneer Maniams*. Evidently, the water guards and water spreaders carryout irrigation task under the supervision of the headman.

   Thus, among *Thanneer Maniams* there are cases in which the headman directly manages both water guards and water spreaders.

4) Fourth and final category includes the cases with committee without agents and water guards. In this water spreaders are employed and controlled by farmers. These cases are under the Irrigation Committee. Thus, Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum Valley are characterised by variety in terms of locational differences, organisational types and their internal structure.

Federation of Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum Valley

A Federation of Traditional Irrigation Institutions covering seventeen channels and nineteen tanks governs the Periyaru Ayacut of Cumbum Valley. This federation has been functioning since 1990 and has played a significant role in the governance of Cumbum Valley Irrigation System[13].

Genesis of the Federation

For decades, the traditional headmen had been managing their respective service areas to a large extent independently. During the periods of abundant water supply every village in this command had been receiving sufficient quantity of water. Therefore, these headmen were functioning within their jurisdiction to allocate water and maintain the channels.

However, reduction in water supplies occurred in 1980s. During this period, failure of monsoon, withdrawal from dam for drinking water in Madurai and so on caused insufficiency of water supply for cultivation. Consequently, scarcity occurred repeatedly, which resulted in competition among several villages to secure water for protecting the standing crops[14].

In such eventuality, the upstream farmers used to indulge in diverting the river water by placing obstacles in the river.

Such strategies enable the head-reach farmers to procure large quantity of water, whereas the downstream villagers were deprived of their due share of water. This resulted in scarcity at downstream.

In response, the farmers from the downstream villages used to swim through the river to clear the obstructions placed by the upstream farmers. The upstream farmers tried to prevent such intrusions of other villagers, by patrolling at the head-sluices of the channel. In retaliation the downstream farmers not withstanding the defense by upstream farmers, collectivize themselves along with their village guards and water guards and used to march towards the obstruction with sickles and swords[15].

By such force and threat of violence, they build up pressure on head-reach farmers to remove the obstruction and allow the water to flow. Such collective actions to procure water are reported to result in violent conflicts. The violent conflict involving clashes, butchering, bloodshed, damage to irrigation water conveying structures and sometimes murders. Such violence seems to have occurred in sharing water for cultivation among different villages across this valley in 1980s.

The villagers under the leadership of the Traditional Headmen used to approach the agency officials to increase water supply to their respective villages. Such esoteric efforts by the villagers resulted in manipulations in water supply from the main system by agency staff. These isolated attempts lead to escalation in the expenditure incurred by farmers. Consequently, erratic water supply and poor maintenance flagged the main system management.

Ultimately it was left with the Traditional Headmen to mitigate or put up with water scarcity. Thus the scattered effort by the Traditional Headmen to improve water supply however

yielded little benefits and at times negative consequence to agricultural production and livelihood of people.

The Traditional Headmen reported that the valley for the first time in 1987 experienced total crop failure. They told that they employed various strategies to employ water use amongst the villages of the valley whenever water was made available for irrigation. In this year, not only little water was supplied for this valley but also a large quantity of water was conveyed to other districts, towns and cities for drinking purpose.

This catastrophe accentuated the need to find solution to the problem of water acquisition and conflicts on water sharing among channels. This served as the necessary condition for the Traditional Headmen to come together and form the federation. Thus, the Traditional Headmen of this valley have federated themselves into the Cumbum Valley Periyaru Ayacut farmers union in 1990.

Organisation Structure of the Federation

This federation is registered under the Tamilnadu's Societies Act. The Traditional Headmen, who initiated the process of collective mobilization amongst the farmers, were graduates hailing from influential families of the towns in this valley. They have played a key role in the formation of this apex body and now occupy key offices of this federation[17].

All farmers of old Ayacut of Cumbum Valley are the members of this union. All the Traditional Headmen are the Executive Committee Members[18]. Thus, the formation of Cumbum Valley Periyaru Ayacut Farmers Union is significant in the following aspects.

1. It has united the villagers who hitherto indulged in violence in water acquisition and sharing.
2. It coordinates operation and maintenance of different distributory channels of the valley as a whole.
3. It has brought about a federation of Traditional Headmen who have been traditionally governing irrigation systems within their respective jurisdictions independently.
4. It serves as common forum for discussion and decision making for all Traditional Headmen of the old Ayacut.
5. It has collectivized the farmers' to voice grievances to external agencies including the government.
6. It has facilitated solutions to problems and issues with regard to irrigation management through negotiation and conciliation among Traditional Headmen.
7. It has organized the erstwhile-insulated villagers into a formal Self-governing Entity set up.

Contribution of Traditional Irrigation Institutions to Self-Governanace in the Periyaru Ayacut of Cumbum Valley

Self-governance refers to the ways in which group of users of resources authorise its functionaries to regulate resource use and sanction violations[19]. Self-governance in irrigation exists when the water users enforce procedures of carrying out various irrigation tasks by themselves without involving external authority[20].

In the past three decades, extensive case studies on both small scale and large-scale irrigation systems in various parts of the world have been documented by social scientists. They have revealed that irrigation systems that include elements of self-governance in which rules are established and compliance

is enforced by users - rather than by an outside bureaucracy - have performed better[21]. Through self-governance, users are found to have been operating and maintaining irrigation systems by matching the water availability to irrigation needs, adjust supply in relation to rainfall, carry out maintenance of irrigation structures corresponding to water flow[22].

The existence of self-governance in irrigation can be examined in terms of the following key variables pertaining to the role of traditional irrigation institutions,

1. Organisation of irrigation management.
2. Farmer participation in irrigation management.
3. Self - financing.
4. Participatory irrigation management.

Organisation of Irrigation Management by Traditional Irrigation Institution in the Periyaru Ayacut of Cumbum Valley

A review of Irrigation management literature brings to light the fact that there are certain key irrigation tasks to be performed[23]. They pertain to the fulfillment of functional pre-requisites of every irrigation system in order to be viable to supply water for cultivation. These include

1. Water Acquisition
2. Water Allocation
3. System Maintenance and
4. Conflict Resolution[24]

Therefore, the emergence, existence and sustainability of Irrigation Institutions largely relies on the effective attainment of these functional pre-requisites. In so far as Traditional Irrigation,

Institutions in Cumbum Valley have been evolved by water users, they ought to have been designed for specific purposes. Moreover as these are in vogue over decades, they can be expected to serve certain goals in irrigation. Therefore, inquiry is directed to the contributions of these Traditional Irrigation Institutions in the Management of Periyaru Ayacut of Cumbum Valley.

CHART-B

Key Functions of Traditional Irrigation Institution in the Periyaru Ayacut of Cumbum Valley

Traditional Irrigation Institution	Water Acquisition	Water Allocation	System Maintenance	Conflict Resolution
Thaneer Maniams	Yes	Yes	Yes	Yes
Farmer Organizations	Yes	Yes	Yes	Yes
Registered Farmer association	Yes	Yes	Yes	Yes
Village Committees	Yes	Yes	Yes	Yes
Irrigation Committees	Yes	Yes	Yes	Yes

1. Water Acquisition by Traditional Irrigation Institution

Ensuring reliable and predictable supply of water to distributory channel or system tanks from the main system necessitates effort by users in negotiation, direction and transportation of canal water. As shown in the Chart-B, all Traditional Irrigation Institutions irrespective of their type and location procure water from the main system. They utilise irrigation functionaries to transport water to their service area.

The Census Survey of Traditional Irrigation Institutions bring to light that headmen of each Traditional Irrigation Institution managing command area irrigated by distributory channel or

system tanks, negotiate with the bureaucratic officials and staff for securing their share of water at a given period of time. Further they interact with other Traditional Headmen in order to prevent upstream obstructions or damages from down streamers. For this purpose, the Traditional Headmen develop communication networks with officials and leaders of other villages. Thus, water acquisition is a function of all types of Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum Valley.

2. Water Allocation by Traditional Irrigation Institution

Cumbum Valley receives water supply in two seasons June to October and October to March. Water allocation requires sharing the available quantum of water to meet water needs at different stages of crop's growth. It is evident from the Chart - B, that *Thanneer Maniams* (100%), Village committees (100%), Farmer Organizations (100%) and Registered Farmer Association (100%) allocate water procured from the main system to users.

The water allocation procedures not only mitigate the locational disparities, but also are compatible to level of water supply and seasonal variations. Thereby they ensure water supply to the tail enders by setting rotational turns in water distribution along the distributory channel. Thus, in a vast majority of cases Traditional Irrigation Institutions have been enforcing procedures of water sharing. Irrigation Committees by virtue or their locational advantage of being in the head reach are devoid of this functional requisite.

3. System Maintenance by Traditional Irrigation Institution

The centuries old distributory channels and system Tanks in Cumbum Valley are used to supply water for cultivation even today. This reality bears evident to evident to the fact that these

irrigation structures are well maintained. It is apparent from the Chart-B that all contribute their share of resources to system maintenance.

Thus all Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum Valley take part in distributory channel maintenance. There exists co-ordination among different Traditional Irrigation Institutions within long distributary channels in the sharing of maintenance costs. Such a system of exchange has to a greater extent obviated irrigation related conflicts among villages. Moreover, this institution has largely contributed towards bringing about co-operation and collective action in irrigation.

4. Conflict Resolution by Traditional Irrigation Institution

As shown in Chart-B all Traditional Irrigation Institution are found to have conflict resolution mechanism. Conflict resolution is a pre-eminent feature and function of Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum valley. Each Traditional Irrigation Institution facilitates solution to irrigation related conflicts within their respective jurisdiction. The water users are found to utilize the local conflict resolution mechanism provided by respective Traditional Irrigation Institutions rather than on formal agencies.

Farmer Participation in Irrigation Management

Farmer Participation in irrigation management in the real sense of the term necessitates greater contribution by farmers in terms of cash, kind and labor for the Operation and Maintenance of the distributory channel[25]. Indeed the degree of farmers contributing for system operation and maintenance can be taken as an indicator of farmers' commitment and conformity to the irrigation institutions.

Table-2 brings evidences about mobilisation of resources by Traditional Irrigation Institutions from water users. Evidently, all

TABLE NO. 2

Farmers Participation In Distributory Channel Maintanence in the Periyaru Ayacut of Cumbum Valley

Types of resources contributed by farmers

TYPES OF TRADITIONAL IRRIGATION INSTITUTIONS	CASH	KIND	CASH AND LABOUR	TOTAL
Thaneer Maniams	128 (85.3%)		22 (14.7%)	150 (100%)
Farmer Organization	52 (76.5%)		16 (23.5%)	68 (100%)
Registered Farmer Association		41 (100%)		41 (100%)
Village Committees	16 (100%)			16 (100%)
Irrigation Committees	15 (100%)			15 (100%)
Total	211	41	38	290

the respondents (100%) have reported that they contributed resources through their respective Traditional Irrigation Institutions. This social custom is found in all villages across the Cumbum valley irrigation system.

Classification of User Contribution

The table-2 explains the pattern of resource contribution by farmers to Distributory Channel maintenance. There are three types of resources contributed by water users.

a) Cash
b) Paddy and
c) Cash and Labour

Cash contributions

The majority of farmers contribute cash for distributory channel maintenance. These cases include a vast majority of respondents belonging to *Thanneer Maniams* (85.3%), a majority of respondents from Farmer Organisations (76.5%) and all the respondents belong to village committee and irrigation committee (100%).

Contributions in Kind

It is significant to note that water users invest in kind. These are the farmers who participate in Registered Farmer Associations (100%). This denotes that despite the modernisation of the world economy by the use of money as the medium of exchange, the practice of contribution in kind by users exist in this irrigation system which symbolizes the traditional character of the irrigation institutions in the Periyaru Ayacut of Cumbum Valley. Moreover this practice is reported under the Registered Farmer Association, which shows that despite its legal existence since 1987, it has continued its social custom.

Labour contributions

While there are farmers investing anyone type of resources i.e. cash or kind, there are learners who seem to contribute cash as well as labour. Distinctively they are found to be *Thanneer manniam* (100%). As reported by a small proportion (14.7%). There are two ways in which farmers contribute labour.

Personal Labour in which farmers themselves get into the work.

Labour employed by farmers and deputed for this work.

Perhaps, investing personal or hired physical labour in the maintenance Work signifies high commitment of farmers in the management of irrigation system. Farmers personally attending to maintenance are perhaps the most significant amongst the farmers' contribution and denotes the sense of belonging that farmers have for the irrigation system.

Allocating canal Water from distributory channels involves human effort in regulating water supply and operating water control structures. The persons who perform these tasks need to be remunerated recurrently.

TABLE NO.3

Farmer Participation in Distributory Channel Operation

TYPES OF TRADITIONAL IRRIGATION INSTITUTIONS	CONTRIBUTION IN KIND BY FARMERS	
Thaneer Maniam	150	
Farmer Organisation	68	
Registered Farmer Association	41	
Village Committee	16	
Irrigation Committee	15	
Total	290	

Table-3 collates the responses provided by farmers, with regard to their contribution towards Distributory Channel operation. There are two types of irrigation functionaries employed for carrying out Water Allocation and distribution. It is significant to note from the Table-3 that all farmers (100%) contribute towards expenditure incurred in organisation of Water Allocation and Distribution.

An important finding that emerges from this table is that such contributions are made in kind as reported by all respondents (100%). Water users give about twelve to sixteen Kilogram of paddy per acre at the end of every harvest. The paddy thus received is gathered in a common place of the village and the headman measures them and distributes to the water guards. In addition, farmers at every harvest also pay the water spreaders. Farmers employ the water spreaders and pay them thirty-six to fifty kilograms of paddy per acre.

Thus, all water guards and water spreaders carrying out water distribution under each Traditional Irrigation Institution are paid in kind through the farmers' contribution.

All farmers contribute resources for the Distributory Channel operation that is the practice of paying the irrigation functionaries is in kind through out the irrigation system. This transaction is an ancient form of exchange and the existence of this mode of remunerating irrigation functionaries symbolises the traditional feature of these institutions. Moreover this custom is in vogue in this valley, in spite of the pervasiveness of money exchange and the modern economy. These findings prove that these Irrigation Institutions are still undoubtedly traditional.

Self-Financing by Traditional Irrigation Institutions in Periyaru Ayacut Of Cumbum Valley

Organising irrigation management calls for financial material and human resources[26]. In this record the Traditional irrigations system have a long tradition of fund raising in this valley

TABLE NO. 4

Generation of Common Fund And Traditional Irrigation Institution in the Periyaru Ayacut of Cumbum Valley

TYPES OF TRADITIONAL IRRIGATION INSTITUTIONS	SOURCES OF COMMON FUND				
	LEASING FOR DUCK GRAZING	LEASING FOR DUCK GRAZING AND AUCTION OF FISH FROM TANKS	LEASING FOR DUCK GRAZING, *THARAGU* AND VILLAGE COMMON	LEASING FOR DUCK GRAZING *THARAGU*	TOTAL
	F (%)	F (%)	F (%)	F (%)	F (%)
Thaneer Maniams	3 (18.7)	0 (0.0)	0 (0.0)	13 (81.3)	16 (100)
Farmer Organizations	0 (0.0)	1 (33.3)	0 (0.0)	2 (66.7)	3 (100)
Registered Farmer Associations	0 (0.0)	0 (0.0)	0 (0.0)	1 (100)	1 (100)
Village Committees	0 (0.0)	0 (0.0)	3 (100)	0 (0.0)	3 (100)
Irrigation Committees	0 (0.0)	0 (0.0)	0 (0.0)	9 (100)	9 (100)
Total	3 (9.4)	1 (3.1)	3 (9.4)	25 (78.1)	32 (100)

Table-4 lists the modes of mobilisation of resources for the operation and maintenance of distributory channels under Traditional Irrigation Institutions. There are four major sources by which Traditional Irrigation Institutions generate common fund.

a) Leasing for duck grazing
b) Tharagu
c) Village common fund and
d) Auction of fish from tanks.

At the same time there are vast majorities of Traditional Irrigation Institutions (90.7%) that rely on more than one mode of generating common fund.

Leasing for duck grazing

Leasing out for duck grazing is the major and pervasive mode of generating income towards common fund in all types of Traditional Irrigation Institutions. By leasing the lands after harvest for grazing ducks, respective headmen collect the fee from the duck owner on the basis of size of land. Through this arrangement each of these headmen are able to raise a common fund ranging from rupees ten to fifty thousand annually and this amount varies in relation to the size of the service area.

Village common fund

All village committees (100%) make use or their village common fund for carrying out operation and maintenance of the distributory channels. These findings indicate the nature of these irrigation institutions that treat irrigation management as a part of the general village administration. This source of funding is not available to other institutions that exclusively manage irrigation divorced from village administration.

Tharagu

Another source of income available to traditional institution is *Tharagu.* It is the tax collected from traders for every kilogram of paddy procured from a village. The headman raises this fund during harvest twice in a year. It is a source of mobilising resources in vast majority of *Thanneer Maniams* (81.3%), Irrigation committees (100%). Village Panchayats (100%) and Farmer organisations (66.7%).

Auction of fish from tanks

Finally, there is one Farmer Organisation, which has five tanks that are not under the control of the government agency. They raise common fund by auction of fish from tank. Through this source this Farmer Organisations is said to generate income ranging from rupees twenty to fifty thousand a year.

All the Traditional Irrigation Institutions irrespective of their location, size, coverage, organisation and so on, generate common fund. Thus, it could be concluded that the Traditional Irrigation Institutions in the Periyaru Ayacut of Cumbum Valley raise resources on their own for carrying out System maintenance. It reveals the self-financing feature of these Traditional Irrigation Institutions.

Participatory Irrigation Management

Canal irrigation system relies on water supply from reservoir only for a specified period of the year[27]. Similarly, distributory channel in the Periyaru Ayacut of Cumbum Valley receives water supply from the dam for irrigation, which is scheduled from June to March. Water is not supplied to the channels in April and May every year. This period provides the opportunity to carry out the maintenance of the water conveying structures and

planning for carrying out irrigation tasks in the following year. Under these circumstances major decisions in irrigation management are being taken once in a year.

The survey of Traditional Headmen unfolded that accordingly they conduct meetings in the month of May, three or four weeks in anticipation of water release from the dam every year. Thus the data collected from Traditional Headmen, and farmers bring to light the vitality and relevance with which these meetings are held. Such appropriateness indeed can be said to ensure greater farmer participation and commitment to Traditional Irrigation Institutions.

The Traditional Headmen of this valley have federated themselves into the Cumbum Valley Periyaru Ayacut Farmers Union.

The major functions performed by the union are:

1. Sharing canal water equitably amongst Distributory Channels.
2. Coordinating with the Water Resource Organisation, channels and tanks,
3. Jointly managing the main system and
4. Negotiating with the government to enhance water supply and secure other aid for irrigated agriculture.

Conclusion

Studies on Common Property Resources including irrigation, forest resources and fishing, have brought to light that the problems pertaining to these resources can be solved through self-governance[28]. There are evidences of the possibility of successful and durable management of Common Property Resources based on this principle[29]. Thus social science research

has unfolded new possibilities to ensure sustainable management of common pool resources including irrigation water with self-governing institutions. The present study lends credence to this paradigm with the elucidation of structure and functions of Traditional Irrigational Institutions in the Periyar Ayacut of Cumbum Valley[30].

There are 32 Traditional Irrigation Institutions governing segments of Periyar Ayacut of Cumbum Valley. In these Traditional Irrigation Institutions, resources are raised in cash and kind. In most of the cases, contribution from members is sought in terms of cash, kind or labour towards the operation and maintenance of distributory channels. Besides, these Traditional Irrigation Institutions also raise common fund through sources other than farmer contribution.

These resources are used to carry out water acquisition and allocation for annual maintenance of the distributory channel. Irrigation functionaries are employed to carry out water allocation and distribution. The water guards and water spreaders are paid in the form of paddy through farmer contribution.

Through their traditional authority, the Traditional Headmen make decisions about water acquisition, water allocation and system maintenance. In most cases they organise meetings annually to make major decisions about irrigation management within their respective jurisdiction. The headmen resolve conflicts among farmers and between farmers, water guards and water spreaders.

These headmen have federated themselves into Cumbum Valley Periyaru Ayacut Farmers Union. It constitutes the apex body of Traditional Irrigation Institutions of the Periyaru Ayacut of Cumbum Valley. Thereby the apex body takes up the issues and problems in irrigation exclusively pertaining to the Periyaru

Ayacut of Cumbum Valley. Thus, these Traditional Irrigation institutions along with their federation of Traditional Headmen have instituted self-governance in the Periyaru Ayacut of Cumbum Valley.

Nonetheless, the Government of Tamilnadu has enunciated State Water Policy and enacted the registration on Farmer Management of Irrigation systems[31]. These Institutional and legislating changes to a greater extent are likely to have implications to the survival of these traditional institution. At this juncture, the present study has gained historical significance in so far as it provides an account of traditional self-governance in irrigation as it has existed in the Periyaru Ayacut of Cumbum Valley.

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BOOK REVIEW - 1

1857 – THE UPRISING

Gautam Gupta, Publication Division,
New Delhi – 2008

In the Seisqui Centenary year by the Revolt of 1857, a large number of books have been published. Most of these books are written by professional historians. The book under review however, is written not by a professional historian but by a scholar who had a life-long interest on all aspects related to the "Indian War of Independence" which has also been described as a "Mutiny" and a "Revolt". In writing the book, the author has consulted a large number of documents.

There is a large literature on the events of 1857-58. However, on the actual causes, course and results of these events, opinions vary. The very character of the Uprising is controversial.

Anyone attempting to write objectively and dispassionately about the events of 1857 is faced with numerous complexities. For instance while the glorious achievements of the British army and the heroic deeds of their officers and other ranks are berated, one does not find adequate mention of the equally heroic deeds of the Indian patriots. So, any author writing on the subject has to handle the documents with great care in order to arrive at correct conclusions.

Gautam Gupta has written twelve chapters, apart from an Epilogue, Appendencies and a Bibliography. The titles of these chapters are interesting – what caused the great conflagration

of 1857, The Spark, Delhi, Gained and Lost, Arovili, Jhansi, Kanpur, Allahabad and Varanasi, Bihar and Jharkhand, Central India and Rajasthan, Rohilkhand, Punjab, The Last Phase and The Dying Embers. In the fourth chapter, the author quotes V.D. Savarkar's book - "The Indian War of Independence 1857" – "The terrible volcano which had opened wide its jaws and vomited forth in rage, a regular torrent of flesh, of blood, of corpses, of lightning, of thunder of burning red lava… that volcano had begun, to lose its mouth again, its heated lava began to cool".

The main lacuna in the book under review is the lack of interpretation. In 2007, when India was celebrating the 150th year of the Great Uprising, new angles of vision had emerged such as the regional spread of the Revolt, the role played by the marginalized groups such as the tribals, artisans and peasantry. One of the issues of the Journal of the Indian Council of Historical Research (ICHR), even carried an article on the role of the courtesans in the event of 1857-1858.

Further, there is not a single chapter on the role of South India in 1857. However, scanty this role might have been it is necessary for scholars to write about this. South India played only an insignificant role in the Revolt of 1857, the reasons for this must be looked into and written about. It is necessary for scholars to tap the source materials in the archives of South India such as the Tamilnadu Archives, the A.P. State Archives, the Karnataka State Archives, the Maharashtra State Archives, Baroda Record Office, the Pondicherry State Archives and the Kerala State Archives.

Indeed, there were anti-British Revolts not only in coastal Andhra and the Hyderabad State, but also in many parts of Tamilnadu, Karnataka and Malabar in Kerala. There were also

what were called "Grain Riots" in Quilon in Kerala. It is interesting to note that the army of Tantia Tope marched into the battles of Sorapur, and Mathed during February 1858.

In spite of those errors of omission, it must be admitted that the book under review has indeed given a panoramic view of the 1857 Great Uprising, showing that the event was a turning point in the history of Modern India.

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BOOK REVIEW - 2

RECENT TRENDS IN DRAVIDIAN HISTORIOGRAPHY

(Edited by P.Yenadi Raju, Dravidian University, Srinivasavanam, Kuppam).

The book under review is a collection of seven well-researched papers by senior scholars from all the four states of South India, presented at a National Seminar on 'Recent Trends in Dravidian Historiography' organized in October 2007 by the Department of History, Archaeology and Culture, a Decennial event of the Dravidian University.

The first research paper is 'The Theory of Lemuria (Kumarikkantam) and Recent Dravidian Historiography' by Prof.S.Gopalakrishnan, focusing on the theory that the land comprising the Madagaskar region, the present area of Sethusamudram and peninsular India was the home of Dravidians, which was known as Lemuria and also as Kumarikkantam in agreement with the analogy of Kanyakumari. In explaining this theory, he has cited evidence from different sources, projecting the subject in a clear way. He has concluded that while the concept and reality of 'the Lost Continent' has undergone several 'u' turns, of the tradition and the memory of the tribal people are important linkages which should be explored to find out the facts. Archaeological studies of shipwrecks, legends of South and South-East Asia, satellite radar explorations and the study of the links of south Indian languages like Tamil, Konkani, Coorgi, Telugu and Malayalam, etc. should be studied.

'A Need to probe into the Sumerian and Dravidian Cultural Identities' by Prof. P.Hymavathi brings in literary evidence for

the connection of Sumeria with the Telugu country. She has stated that many of the articles of trade from Indus Valley sites to central Asia were from South India. The author has given a list of words from the Sumerian civilization which are found in Telugu and has suggested that if South Indians, especially Telugus, try to read the literature of the Sumerians, many more such examples can be found. She concludes that the people who inhabited the Euphrates-Tigris Fertile Crescent were South Indians and that they introduced many crops in the region. They constructed temples for many deities, who were similar to those worshipped in South India. The names of celestial animals and birds are referred to by Telugu names.

Prof.V.Balambal's paper 'Recent Trends in Historiography of Tamilnadu', surveys the sources of Dravidian history and stresses the need for objectivity in writing history. The need to minimize the emotional and prejudicial approach has been stressed. She has stated that in the beginning of the 20th century and subsequently too, only Greek, Roman, European and English history was taught to Indian students, and that this trend changed only after the excavations of Mohenjodaro and Harappa when a new approach was needed to re-write Indian history. K.A.Nilakanta Sastri is considered the 'Father of South Indian History' as he was the first historian to write a concise history of South India. Later, in the second half of the 20th century, there were many works written on Tamilnadu. She has mentioned that although many works on Tamilnadu are available in Tamil and English, a lot more remains to be done. It is essential that scholars writing about Tamil Nadu must have a good knowledge of Tamil and for those focusing on ancient Tamilnadu, skill and interest in reading inscriptions are mandatory.

K.R.Basavaraja's 'Recent Studies made in the History of Karnataka' has brought in the latest approach to the writing of

history in Karnataka and the sources useful for a constructive way of writing social and cultural history have been cited. The article contains a brief account of some studies made by scholars over the past decade and a half on various aspects of the history and culture of Karnataka over the ages. There are a number of books on the rule of the Rayas of Vijayanagar in Kannada and English such as 'Religious Traditions of Viajyanagara as Revealed Through Its Monuments' (1995) by Anila Verghese which surveys religion that prevailed in Vijayanagara as seen from its monuments. 'Architecture and Art of Southern India-Vijayanagara and the Successor States (1350-1370 A.D.), by George Mitchell and published in 1995, presents an original and much-needed assessment of buildings, sculptures and paintings that have not been published before. Some Kannada works like 'Karnataka Charitre' (1997), which is a comprehensive history of Karnataka from Old Stone Age to the modern times and 'Chitrakala' in Kannada (2001) are also good contributions to Karnataka history and culture.

T.P.Sankarankutty Nair in his 'Communalization of Historiography in Modern Kerala-Recent Trends' writes against the communalization of the historiography of Kerala in recent times. He has stated that modern researchers in history have found fault with events of bygone times, with their comparisons and contrasts sometimes being unreliable and unscientific. For example, the tendency usually is to assess the immediate reasons for the Mappilah uprising of 1921 staged in Malabar, but actually, its genesis could be traced to 1792. Caste, religion and community are used to locate the position of individuals in society and conclusions are based on all these identities. Communalization of historiography has assumed large proportions today and this trend should be avoided.

B.Narasingaraja Naidu's paper 'The Justice Party and Mysore Politics' focuses on the social and national necessities in forming the Justice Party in Tamilnadu during the last phase of British rule and its impact on Mysore politics. He has opined that the Justice Party had an impact on the Mysore Non-Brahmin Movement and not vice-versa. He opposes the view of Dr.Lelah Dushkin (whose Ph.D. thesis 'The Non-Brahmin Movement in Princely Mysore' was submitted to the Pennsylvania University in 1974)) that the Mysore Non-Brahmin Movement is Mysorean in character and that it developed separately in Mysore.

B.S.Chandrababu's paper 'Periyar E.V.Ramaswamy: A Progenitor of Dravidian Movement and Ideology' states that the Dravidian Movement owes a lot to Periyar E.V.Ramaswamy, with its ideology being largely shaped by his speeches and works spanning nearly seven decades. There were two phases in the development in the personality of Periya E.V.Ramaswamy's personality – an anti-Brahmin phase which was followed by an atheist and rationalist stance. Books written by Indian and Western writers and his own personal experiences and observations helped him shape an ideology of his own. He formulated an atheistic and racial theory as a solution to the problems of the Tamils.

On the whole, this well-produced book is a valuable contribution to the field of Dravidian Studies.

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INSTRUCTIONS FOR AUTHORS

We invite contributions at various aspects of history including Ancient, Medieval and Modern history, Cultural history, Environmental history, history of Science, Anthropology, Geography and Sociology.

- Only those contributions which are accompanied by a letter saying that they have not been published elsewhere and are not considered for publication elsewhere will be accepted.

- The language should be English.

- All manuscripts are subjected to review by the Board of Referees who will decide on the suitability for publication of the same. Their opinion shall be final.

- For refereeing purposes, the 3 copies of the paper must be submitted as a hard copy and, if there are illustrations and if the paper is accepted, then illustrations must be sent on a CD.

- All accepted papers should be typed in MS word only and should be sent to us by e-mail or in a CD. In case there are images, it should be submitted in JPEG form in a CD along with the text.

- The notes must be placed at the end of the paper, not as foot notes.

- The typed script will not be returned, whether accepted or not.

- An abstract of 100 to 200 words with 4 or 5 key words should be provided.

- All manuscripts should include a list of references in the sequence in which they are referred to in the text. The references should give name of author(s) followed by initials, exact title of paper in quotes; book or journal and volume number in italics; year of publication.; and initial and final page numbers.

- All manuscripts should be submitted by e-mail or typed to the

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