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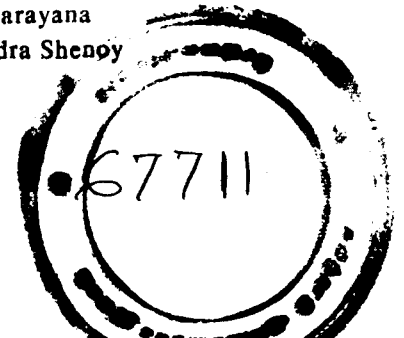
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EDITOR'S NOTE

Sri V. Upendra Rao whose article on Swami Dayananda Saraswati was published in the last issue says that in the second part of his article following para has been deleted. The deletion was not deliberate, and we are reproducing the sentence below:

"He was not satisfied with the British rule in India and desired that foreign rule should end at the earliest so that sons of the soil could get back their right to rule their own country and people".

A reader friend has sent his comments on the article 'Lapidary Section in Bhoja's Yuktikalpataru' in the previous issue. These have been published at the end of this issue. Only point we would like to clarify is that Bhoja lived during the 11th century and this scholarly prince, belonged to the Paramara family ruling over Malwa from Dhara.

The National Seminar on the Scientific Heritage of India was a resounding success. A report on it is published at the end. The B. M. Srikantaya Pratishthana hosted a seminar on Vijayanagara history in October as a part of S. Srikantaya Centenary Celebration during the third week of this month in collaboration with the Mythic Society. Both these seminars were held at the Mythic Society's still incomplete T. T. Sharn: a Sabhamantap.

Please read the Vol. No. as 77 and not 78, as printed on page 245 of this issue.

31-10-86

Suryanath U. Kamath

CONTENTS

Vol. LXXVII, No. 3.	Page. No.
Vaikunda Swamy-A Forgotten Reformer of South India —R. Ponnu.	245
Mysore State from 1947 to 56 —Dr. Suryanath U. Kamath	264
Blade Tool Industry at Chilakapadu Lower Manneru Valley, South India —Murti D. B. and B. David Raju	272
Trade and Commerce in Southern Maratha Country (1750-1853) —K. N. Chitnis	278
Aseptic Precautions Regarding Food and Drink Revealed by Vedic Literature-II —Dr. N. V. Putta Bhatta	290
Archaeological Data on Metals in South India —Dr. A. V. Narasimha Murthy	296
Aladangady Inscription of Ramadevi —Y. Umanath Shenoy	314
Border Dispute Between Karnataka and Neighbouring States —Prof. (Dr) K. V. Vishwanathiah	317
A Note on the Maliyadikkurichchi Inscription of Mara Chendan —Dr. M. D. Sampath	338
Book Reviews	342
National Seminar on Scientific Heritage of India —Dr. B. V. Subbarayappa	348
Commentary	353
A Note on Two Inscriptions at Belgaum G. K. Kuppuswamy	355

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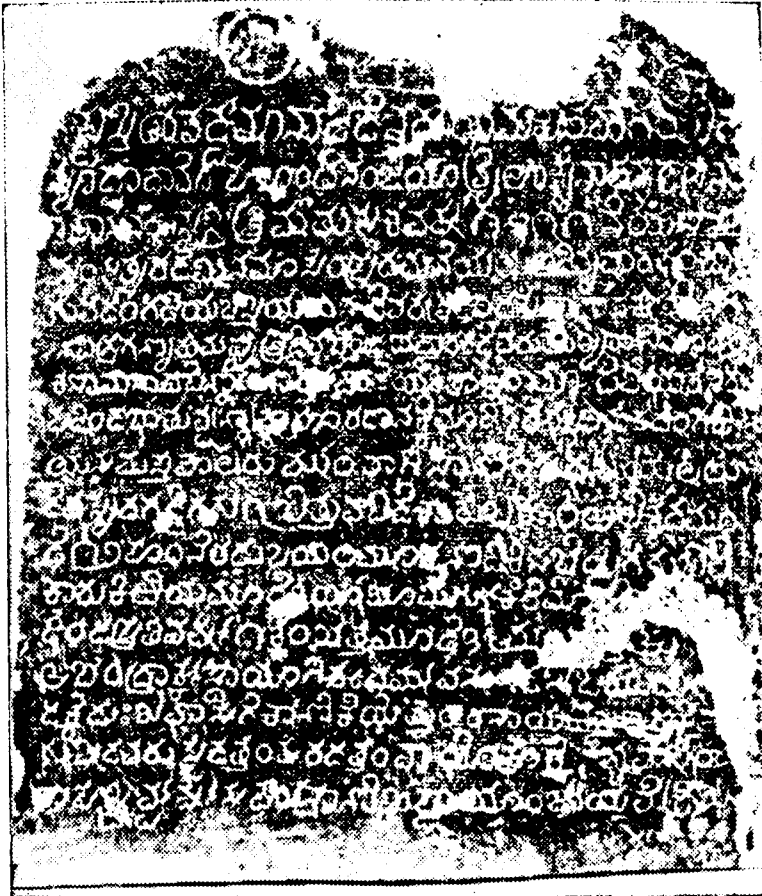
VAIKUNDA SWAMI — A FORGOTTEN REFORMER OF SOUTH INDIA

R. PONNU*

The nineteenth century witnessed the genesis and spread of a number of socio-religious movements which were calculated to reform the Hindu society and religion. It has been generally portrayed as an era of re-awakening in the realm of socio-religious, political and cultural life. A critical outlook on the past and new aspiration for the future marked the awakening. Reason and judgement took the place of birth and belief; superstition yielded to science; immobility was replaced by progress and a zeal for reform of proved abuses overpowered age-long apathy and inertia, and a complacent acquiescence in whatever was current in society.¹ Almost all movements were launched against the age-old fossilised customs and superstitious beliefs.

Raja Rammohan Ray's Brahmo Samaj, Atmaram Pandurang's Prarthana Samaj, Swami Dayananda Saraswathi's Arya Samaj and Swami Vivekananda's Ramakrishna Mission are the major movements originated from North India which tried to end the age-old customs like Sati, female infanticide, enforced widowhood, Parda system and idol worship. But these movements failed to identify themselves as popular movements and

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Aladangady Inscription of Ramadevi (See page-314)

mostly confined among a few educated people and the caste Hindus. The leaders of the movement were unable to come out of their caste circle. Leaders like Raja Rammohan Ray and Devendranath Tagore were not prepared to discard the symbol of their brahminhood, the sacred thread.² The Adi Brahmo Samaj opposed the radical reform in the direction of widow remarriage, renunciation of caste and the participation of non-brahmins in religious functions. None of the movements triggered off a mass movement though the Arya Samaj approached it.³

The socio-religious movements enunciated by Vaikunda Swami, Narayana Guru, St. Ramalinga and Veeresalingam heralded the beginning of the social awakening in South India. But due importance is not given to these movements popular in South India which sprang mostly from the lowest rung of the society. The curiosity of the present author to explore the little known facets of the social history of modern South India made him to undertake the reform activities of Vaikunda Swami for the M. Phil. dissertation in 1980. The degree was awarded to this thesis by Madurai Kamaraj University. The present paper is mostly based on the unpublished thesis. It is an original study made on the basis of the contemporary writings and speeches of the Saint Vaikunda Swami which was corroborated with the evidences collected from the field study.

During the time of Vaikunda Swami, the society continued to be feudalistic in nature. Caste system existed with all its rigidity and severity. The society was divided into two major sections viz., the *savarnas* or the upper class and the *avarnas* or lower class. The Brahmins and the Nairs were considered as *savarnas* who enjoyed vast privileges. The rest of the society including the Nadars, Ilavas, Parayas and Pulayas were regarded as *avarnas* and were treated as untouchables by the *savarnas*.

The Brahmins occupied the highest position in the social hierarchy. The Nairs and the lower caste people looked upon

them as 'the holiest of human beings and the visible representations of God on earth' (*Bhudevans*)⁴. They controlled the kings, regulated their destiny and enacted the laws. They were exempted from all social and religious disabilities. No Brahmin could be sentenced to death however heinous was his crime.⁵ They organised almost a scientific gradation of untouchability, unapproachability and unseeability among the various castes.⁶ If any lower caste one dared to approach within the polluting distance of a high casteman, he could be cut down at once. 'When the Nairs go about the town and come across the villians', says Francois Pyrard, 'they cry Po Po that is, that they should get out of the way, otherwise, if they should touch they would resent it and would strike them'.⁷ If the poor wrtech who tills the soil and reaps the grain should happen accidentally and ignorantly to cross any Nair in his path, the monster draws his sword and kill him on the spot with impunity.⁸ In general the debasing quality of the caste system made the higher classes to dispise the lower strata and push them out of the pale of civilized society.⁹

351
246
The lower castes are called *Nista* or *Candala* that is the contemptible, low impure. To these belong the fishermen, the cianas or labourers in the garden, the parrean or skimmers, those persons who clean ponds, barbers and potters. The last are only slaves, but a very useful kind of men, for they guard the fruits of the earth, keep the buffaloes employed in ploughing, take care of the crops and separate the rice from its husks.¹⁰ They rendered immense service to the society. But in spite of their service, in return they got only contempt and neglect. Their name is connected with plague; the higher classes view their presence with a mixture of alarm and indignation and even towns and markets would be considered as defiled by their approach.¹¹ Col. Macaulay viewed that 'the insecurity of property and miserable servitude of the peasantry in parts of Maharashtra, Arcot countries and in some polygar pollam are well-known but the state of the most oppressed of the

inhabitants of these parts is a state of independent and exalted happiness when contrasted with the wretchedness and degradation of the beings in human shape who have the misfortune to be born in Malabar or Travancore.¹²

The Nadar caste, the parental community of Vaikundaswami was degraded in all walks of life on the eve of his birth. In their social life, many restrictions were imposed upon their personal liberty. Like other lower caste people, the Nadars were also not permitted to approach those of higher castes and fixed distances were prescribed to them. A Nadar must remain twenty four paces away from a Nambudiri Brahman and twelve paces to a Nair.¹³ They had no right to build two storied houses, to wear gold ornaments or to sport an umbrella.¹⁴ They were strictly prohibited from wearing shoes, to milk cows, to use the public roads, bridges and well and to enter the caste Hindus' villages and streets.¹⁵ They were also denied to enter public schools, law courts and government offices and services and to use the ordinary language of the country. Even some items of food such as oil, milk and butter, touched by the Nadars became polluted and cannot be used by the higher caste people. Their women were not permitted to carry pots of water on their hips and to cover the upper portion of their bodies.¹⁶

The Nadars were compelled to pay several burdensome taxes to the government. The Administrative Report for M. E. 1040 gives a surprising list of over 110 distinct taxes. The tax collectors exalted the taxes arbitrarily and inflicted fear in the minds of the poor people.¹⁷ Beyond the oppressive taxes, the Nadars were forced to perform *sirkar uliam* or personal gratuitous services and forced labour for government and temples.¹⁸ On the religious side, the government temples and the temple streets were far away from their look. They practised the spirit worship. Their religious life was founded not upon fear.¹⁹ Amidst this critical situation Vaikunda Swami appeared to

reform the life of the people in the lower strata of the society.

Born in a poor Nadar family in 1808 A.D. at Samithope, a village, five miles northwest of Kanniyakumari, Vaikundaswami, studied the Puranas and the epics of the Hindu religion as well as other literature of various faiths and Tamil moral works like Tirukkural, Naladi and Pazhamozhi and derived a source of inspiration. In his boyhood Vaikundaswami was known as Muthukutti. He displayed signs of greatness and individuality in his boyhood days. At the age of twenty he fell ill and suffered a lot. In 1832 he had taken to Tiruchendur, a famous Hindu pilgrimage centre for sacred bath mainly to cure his disease.²⁰ At Tiruchendur he attained revelation and declared himself the Son of Lord Vishnu. Also he assumed the name as Vaikundar and started his public life. There he appealed to the assembled people that Lord Vishnu sent him mainly for the unification of all human folk without any caste or creed or religious prejudice and also for the beginning of the reign of dharma.²¹

After his return to the native village Vaikunda Swami commenced his socio-religious activities in 1833. Large number of people came from nearby areas to get the blessings of the Swami.²² Using his miraculous power, he cured the diseases of the people and advised them how to lead a peaceful life with good health. His act of healing attracted more people. Utilising the healing ministry as a pretext he stressed the need for the immediate removal of the evil customs and practices. In his preachings he appealed to promote unity, charity, self-respect, love and truth among the people. Some of his preachings were revolutionary in character. On one occasion he declared :

'Since now you all live in unity
Don't give offering to any temple
Don't carry *kavadi* to any place

Enjoy your earnings for your life
 Don't waste it in vain
 Hereafter you should not fear for others'²³

In another occasion he appealed to the people,

'Don't prostrate for anybody
 My children! there is nothing to fear
 I will finish all your enemies'²⁴

— — — — —
 'Kali is not like a rate
 So no need for arrow and stick to kill it
 But self-respect is sufficient to dispel Kali'²⁵

Vaikunda Swami vehemently criticised Swathi Tirunal, the ruler of Travancore (1829-1847) for his negligence in the welfare of the lower caste people. His open criticism earned him enmity of both the government and the high caste people. The high caste people conspired on his life, but failed and finally petitioned Swathi Tirunal. After an enquiry the king ordered the imprisonment of Vaikunda Swami for a period of one hundred and ten days. During his imprisonment he was subjected to several trials and tribulations. Ultimately he was released on the condition that 'he could not invite the people of other caste and take interest on them'.²⁶ However after his release also he continued his work with added vigour.

He struggled hard to remove the inequality based on birth and to establish a casteless society. He condemned those who divided the society into many water tight compartments and severely criticised the conservative attitudes of the Nambudiries. He advised his followers to assume all the special powers and privileges enjoyed by the Brahmins.²⁷

Vaikunda Swami tried to remove the humility which was imposed on the lower caste people by the government and the

caste Hindus. In those day non-caste Hindus were prohibited to wear cloth lower than the knee nor higher than the waist.²⁸ Vaikunda Swami inspired his followers to wear turban on their head. Generally the turban was a symbol of self-respect and heroism. Vaikunda Swami used the turban as a means to inspire the lower sections to lead an independent life. His followers continued to wear turban without fear even in front of the opposition of the caste Hindus and still they wear turban at the time of their worship in the temple, dedicated to Vaikunda Swami.²⁹

Vaikunda Swami organised a society to establish equality among the various castes. It was popularly called *Samattuva Samajam*, an association to establish equality.³⁰ Thousands of people enrolled themselves as members of the society. Among them Vaikunda Swami had five prime disciples viz., Sivanandi, Pandaram, Arujunan, Subbiah and Arigopalan. He trained his disciples how to preach and practise his doctrines among the people. He advised them not to force their message on unwilling hearers.³¹ He requested his followers to practice the principle dharma and urged to establish an equalitarian society. The non-caste people gave a warm welcome to the disciples and sincerely adhered to their teachings.³²

Vaikunda Swami introduced the inter-dining programme with a view to abolish the feeling of the untouchability. He prepared a favourable atmosphere for the inter-dining among the people of various castes. The followers of Vaikunda Swami irrespective of castes brought food material and prepared it in his place and ate together with them.³³ His disciples were sent to the houses of poor people in order to take inter-dining. The Pariahs, the Pallas, the Vannars and the like degraded caste people considered Vaikunda Swami as an affectionate father.³⁴

Vaikundar established many *Nizhal Thankals* or *Inattankals*³⁵ to propagate his faith and to feed the poor. He used

these *Nizhal Thankals* as an institution to unite all castes people, to serve as a charity endowment, to propagate his ideas and to preach equality among the various caste people. He asked his people to follow his words in the strict sense and told that if any one violated his words in their service in the *Nizhal Thankals*, they would be punished. He instructed his followers to adopt strict discipline in the work of the *Nizhal Thankals*³⁶.

He established the *Nizhal Thankals* at Chet ikudiyiruppu, Agasteeswaram, Sundavilai, Vadavililai (all in Kanniyakumari District), Kadambankulam and Parambankulam (in Tiruvelveli District). Followed these, his followers established thousands of *Nizhal Thankals* all over the southern districts of Tamil Nadu and in some places of Kerala. The common people call these *Nizhal Thankals* as *Narayana Swami kovil* or *Narayana Swami pathi*. People of various castes had their regular worship of these *kolls*.³⁷ They conduct festivals generally twice or thrice in a year. The festival is generally called as *palvaippu vizha* by which they endowed charity to the poor people. Their religious function, is mostly concerned with charity. Thus the *Nizhal Thankals* are appeared as the *dharma paripalana illams*. The followers of Vaikunda Swami strictly avoided themselves to make any offerings to other Hindu temples. Their worship is nothing but to do *dharma* in the name of *Ayya* (Vaikundar).³⁸

In those days the lower caste people were not accustomed to regular bath and they rarely washed their dress properly because of their incessant work. Vaikunda Swami wanted to inculcate the idea of purity of body and equality of thought and action. He instructed his followers to lead *dapa* at Muttrappatti, a coastal village near Kanniyakumari and conducted *Thuvayal Panthi* (course to lead a healthy life)³⁹. Nearly seven hundred families participated in that *panthi*. Vaikunda Swami trained them to wash their dress, take regular bath and eat simple vegetarian food. He also instigated them to take food after prayer. He required his followers to have regular prayers at morning

midday and evening in every day.⁴⁰ Thus in *Tuvayal panthi*, Vaikundar prepared his people to have a planned and noble life.

He also tried to change the model of their housing. During that period, many restrictions were imposed on the lower castes, even in the construction of houses. Their dwellings were scattered and not clustered together on either of the street or road. There were no public pathways or streets connecting one dwelling with another.⁴¹ He directed his people to construct their dwellings or settlements in a regular order and to provide door on four directions for all houses.⁴²

The lower castes were prohibited from drawing water from public wells and ponds.⁴³ The high caste people had separate wells so that they eschewed the presence and pollution of the lower sections. The high caste people took bath from temple *teppakkulams* (ponds) before their worship in their temples,⁴⁴ but the lower caste people were strictly prohibited to take bath from the same. Vaikunda Swami transgressed the prevailing order and dug a well, popularly called *Muttiri Kinaru* at Samithope. It was opened to all people irrespective of their caste or religion.⁴⁵ The people took their sacred bath from this well in the name of *Muttiri patham*.⁴⁶ It earned the enmity of the high caste people because they feared the unity of the lower castes. So they tried to prevent the people from taking common bath. They put poison in the well.⁴⁷ Their attempt collapsed in front of the miraculous power of Vaikunda Swami. The people continued to assemble in large numbers and carried out their ceremonial bath, ignoring all differences.

Vaikunda Swami gave much importance to sincere love and affection in their daily life. He considered these qualities as the slogans of his movement. He adopted a flag for his movement which was popularly called as *Anbukodi* or Love Flag. He called his followers *Anbukodi Makkal*⁴⁸ or Love Flag children. The flag is red ochre in colour, which is the symbol of sacrifice

and strong mind, with a white mark. It stands for purity, peace and love. The mark is also in the form of a lamp which stands for wisdom and justice. The followers of Vaikunda Swami even now hoist this *Anbu Kodi* in their *Nizhal Thankals*. Also they conduct the procession carrying this flag on 19th Masi (March), the Incarnation Day of Vaikunda Swami in every year. Large number of people take part in this procession.⁴⁹

Vaikunda Swami was also interested in the welfare of the women. Even in the early half of the nineteenth century, Vaikunda Swami urged for their liberation from the oppression of the caste ridden society. He encouraged the women to wear shoulder cloth and to carry pot on their hip. The caste Hindus attacked the Nadar females, stripped their cloth, prevented them from carrying the pot on the hip and forced them to follow the past custom.⁵⁰ However a few years after his death, the Nadar females staged a great revolt for their right to wear upper garments and secured the same in 1859.⁵¹ Vaikundar emphasised the chastity of the women folk and requested his followers to protect their women.⁵²

The religious reforms were closely connected with social reform activities. The reason is that, in the early part of the nineteenth century, social reform was linked firmly with religious change.⁵³ Besides in a state where religion was used as an engine and even the kings themselves were enslaved to the Brahmin priests, social reform was possible only in collaboration with the religion. But for that purpose, he never attacked any religion or never attempted to set up any new religion like Buddhism or Jainism. However, with the coming of Vaikunda Swami, a new sect of Hinduism has appeared as a curious phenomenon in the religious history.⁵⁴

As the first step of his religious reform, Vaikunda Swami raised his protest against the Brahminical temples. Immediately

after his revelation at Tiruchendur, he preached against the Muruga temple of that town and openly criticised the Brahmins. He directed his people to abandon all their religious ceremonies connected with their temple.⁵⁵

He severely condemned the religious ceremonies of that period and asked his people to give up the meaningless rituals, elaborate rites and expensive ceremonies. He prevented his people from giving *kanikkai* (offering), carrying *kavadi* (a pole for the shoulder with ropes attached for carrying burdens or gifts to any temple), conducting *pūja* (ceremonial or ritual homage), taking *tibatubam* (lights and frankincense) and celebrating car festival.⁵⁶ He also attacked the ceremonies like *arathi* (the waving of lighted camphor, etc., before the idol), *arattu* (divine service and worship by lulling the idols of gods) and *tibarathanai* (lamp of worship). Further he criticised the institution of *devadasi*, seen in the temples.⁵⁷ He emphasised on *dharma* to attain salvation and wanted to see God in the smile of the poor. He stated

'Those who help the poor are my people and
They will attain the place of Eternal'.⁵⁸

Like other reformers of India in the nineteenth century, Vaikunda Swami condemned the worship of idols. On the eve of his reform the lower caste people worshipped spirits and their temples are commonly called *Pev-koils*. In these temples, they raised a heap of earth into a pyramidal shape and covered with white wash and streaks of red ochre, a stone or a small heap of earth serving as an altar.⁵⁹ Vaikunda Swami considered this kind of worship as an uncivilized custom and strictly prohibited his followers from offering of worships in front of such pyramidal idols.⁶⁰ The lower caste people had staunch belief in the spirit worship. They feared the spirit of gods and made offerings for pleasing them.⁶¹ Vaikunda Swami attempted to free the people from the influence of the evil spirits. He declared that

'There is no *pisasu* (evil spirit) no *pilli* (witchcraft)
If you live as one in your thought'.⁶²

Vaikunda Swami severely castigated the practice of animal sacrifice. It was a period of superstitious beliefs that the low caste people never prayed properly to their gods for blessings and attributed to their god's feelings, gentleness and compassion.⁶³ In order to prevent their evil influence and to secure their favour the people sacrificed animals and birds like goats, cocks and hens. Vaikundaswami prevented the animal sacrifice and libation of blood.⁶⁴ His followers immediately stopped the animal sacrifice.

Vaikunda Swami assumed the status of *Ayyā* (Father) among his followers. His followers are generally called *Ayyā-vzhi Makkal* (children of *Ayyā*). They believed that the worship of Vaikunda Swami is similar to that of the worship of the Supreme Being.⁶⁵ The lower caste people satisfied with the worship of their *Ayya* and felt that there is no necessity to worship in the temples. They had their own temples and mode of worship. In the temple of Samithope, they celebrated three festivals in a year in the Tamil months of Vaikasi, Avani and Thai. Each festival last for eleven days, beginning with a flag hoisting ceremony and ending with a car festival throughout the festival days the worshippers carried out charitable work.⁶⁶ There are five major *patis* or temples viz., Ambalappati, Duvarahapati, Muttappati, Vagippati and Mulappati.

In these temples also the worshippers of *Ayya* conducted festivals twice or thrice in a year. Occasional festivals are conducted in the *Nizhal Thankals* also. Their worship is nothing but to do dharma in the name of *Ayya*.⁶⁷

Vaikunda Swami's reform movement opposed the work of the Christian missionaries. The missionaries argued that the doctrines of Vaikunda Swami had a slight tinge of the Christian elements.⁶⁸ They vehemently criticised that work of Vaikunda

Swami. In their annual reports they wrote: 'Formerly they were ignorant of the doctrine of the resurrection, but now they say that Muthukkutti (Vaikundaswami) will come again, raise his followers from the dead and take them to the heaven of the worshippers of Vishnu'.⁶⁹ It is not true. Vaikunda Swami in his doctrines, preached about the *dharmayuga*. He narrated to the nature of the *dharmayuga* that there will be 'only one religion and only one caste for all'.⁷⁰ In the *dharmayuga* there will be no crimes or vices to the people. He also said that there will be only one ruler to all people in *dharmayuga*.⁷¹ He assured the people that *dharmayuga* must come shortly.⁷² In this concept, Vaikunda Swami kindled the spirit of the people in dharma and prepared a society on the principle of one Ruler, one Religion and one Caste. The missionaries considered him as the bitter enemy of Christianity.⁷³ One missionary reported: 'In 1821 there were upwards of 1200 converts in these places (Nagercoil Mission District). It seemed as if the whole population would be brought under the influence of the cross. But a terrible check was given to our operations by the rise of Muthukkuttysion. This cunning contrivance of satan has much impeded our progress in these parts...'⁷⁴ Further the James-town Mission Report for 1863 records: "It is no time for any of us to sleep, for the enemy is atleast as busy as god's people are. No matter how great the folly: almost 'anything' has humanly speaking easier progress than the Gospel".⁷⁵ Thus Vaikunda Swami's reform movement gave a powerful check to the spread of Christianity in the southern part of India.

Vaikunda Swami paved the way for the reform movement of Sri Narayana Guru, a social reformer of Ezhava community in Kerala. A comparative study of Vaikunda Swamis' teaching and work with that of Narayana Guru reveals the fact that Vaikunda Swami was fore-runner to the reform activities of Sri Narayana Guru. During the period of the rapid growth of the sect of Vaikunda Swami, Narayana Guru led his ascetic life in Marunthuvalmalai, near Samithope. Like Vaikunda Swami,

Guru opposed the caste system, emphasised Truth, Charity, Love and Mercy and stood for 'One Caste, One Religion and One God'.

Vaikunda Swami continued his reform activities till the end of his life. In his last days he fell ill and died on Monday 3rd June 1851 at the age of forty three. As a parting advice, he appealed to his followers to live in unity, fearlessness and good faith.⁷⁶ His followers conducted the funeral functions at Samithope. In his burial place a temple was consecrated to the sacred memory of Vaikunda Swami. At present thousands of devotees visit this temple and it became one of the important pilgrim centres in South India. His reforms produced far reaching changes in the life of the non-caste Hindus. His revolutionary ideas found its full effect immediately after his death through the upper cloth rebellion of the Nadars. The followers of the temple entry movements were also prompted by his teachings. It led to temple entry agitations in Madurai, Sivakasi, Kamudi, Tiruchendur and Srivilliputtur and other places in Tamil Nadu and finally secured it through much bloodshed. The social reformers of South India like St. Ramalinga, Sri Narayana Guru, Veeresalingam and Periyar E.V.R. were also indirectly influenced by the teachings of Vaikunda Swami. Thus he became the morning star of the social reform movement in South India and left everlasting influence in the socio-religious life of the South India.

Notes :

1. R. C. Majumdar and others, *An Advanced History of India*, Part III, London, 1967, p. 806.
2. V. R. Narla, *Veeresalingam*, New Delhi, 1968, p. 11.
3. Percival Spear, *A History of India*, Vol. II, New York, 1970, p. 165.

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MYSORE STATE FROM 1947 to 56

DR. SURYANATH U. KAMATH

From Freedom to Unification is a momentous period in Karnataka's history, as the people in Karnataka at large had longed not only for freedom, but also for Unification. These two movements had gone hand in hand in the British areas of Karnataka. In Mysore, the interim period between freedom and Unification is equally momentous as it was a period of responsible government for which the people in Princely Mysore had longed for three decades and were enjoying the fruits of the outcome of their long-drawn struggle.

Though India became free and with that Mysore too secured Independence, the people in Mysore had to struggle for few more weeks to attain responsible government and also to make Mysore accede to the Indian Union. This strong mass agitation cost many lives (deaths of over 20) and also lot of sufferings to the people. This was the price they had to pay in their final struggle. The popular coalition ministry headed by K. C. Reddy came to be sworn in on 29-10-1947, and it had six Congressmen and three Independent members. Arcot Ramaswamy Mudaliar also continued as the Dewan and it may require a separate study to define the powers and functions of the new Cabinet and the Dewan and his council.

This was followed by a decision to convene a Constituent Assembly for Mysore and out of a total of 76 members of the Assembly 68 were to be elected, and Congress won 67 of them (March 1948). "Buoyed by this stunning result, the Congress cabinet spent the first half of 1948 handing down visionary new laws and promise by further advances", says James Manor,

The new ministry, guided by Gandhian principles and Socialist ideas which trade unionists like K. T. Bhashyam had cherished, passed many new laws.

As the Constituent Assembly of Mysore busied itself in framing of a new Constitution to Mysore, the former Representative Assembly and the Legislative Council also continued till November 1949. On the 26th of November 1949 the Maharaja declared that Mysore has accepted the new Indian Constitution and agreed to be a B State in the Indian Union, and the idea of framing a separate constitution for Mysore has been given up. Representative Assembly and the Legislative Council came to be abolished and the Constituent Assembly continued as a lone Legislature. This unicameral legislature with K. C. Reddy as the Chief Minister had the former Maharaja as the Rajpramukh under the new arrangement, and an all-Congress ministry headed by Reddy was sworn in on 6-3-1950. The post of the Dewan was abolished. The Independent members in the Cabinet were dropped. This Cabinet continued in power till 1952 when general elections were held according to the new Constitution of India.

The administration of K. C. Reddy can be taken as a unit for discussion. He was Chief Minister for a period of little over four years, from October 1947 to March 1952. The Bangalore Civil area came to be merged in Mysore on 22-7-47.

Of the actions of the new Ministry were introduction of prohibition in a phased manner, beginning with July 1, 1948 to be enforced first in Kolar, Tumkur and Chitradurga districts and it was to be extended to Shimoga and Chikmagalur districts from July 1949. The immediate reaction to the Act was the beginnings of the liquor lobby in Mysore's public life. The community of producers of toddy and the excise contractors had always been hostile to Congress in Mysore State and were loyal to the Maharaja for apparent reasons. After the introduction

of Prohibition, the excise contractors came together and created a lobby to woo the Congress leaders if possible to their view point and also to pressurise them if necessary, and to prevent the extension of Prohibition as far as possible. They were also eager to seek new pastures in case their major profession was to be totally thwarted. Thus, the leading contractors formed a new company and started publishing an English daily in July 1948, followed by a Kannada daily six months later. The liquor lobby has of late, emerged a powerful group in State politics, though it is not wedded to any political philosophy or principle.

To make good the loss of revenue due to the introduction of Prohibition, the Mysore Sales Tax Act of 1948 was passed, an idea borrowed from Madras, introduced in that State by C. Rajagopalachari. Other Gandhian measures taken by the new Ministry were the banning of cow slaughter, enforced by an Act from August 17 1948, Mysore Temple Entry Authorisation Amendment Act of 1949 and Prevention of Animal Sacrifices Act of 1948.

The new administration was equally enthusiastic in its pre-labour attitudes. The Mysore Labour (Amendment) Act of 1946 which provided for minimum wages. The Mysore Labour Housing Act of 1949, The Mysore Employees State Insurance Act 1949, and the Mysore Employment of Children Act of 1949 and the extension of the Industrial Disputes Act of 1947 to Mysore State in 1950 were some of the notable labour legislations of this period. The *Mysore Labour Gazette* came to be published from October 1948 and its Kannada and Tamil versions the next year. A Pay Commission for KGF labourers was appointed in May 1948. A Commissioner of Labour was appointed in February 1952 as Commissioner of Workmens Compensation. The year 1951 saw the issuing of nearly 60 Rules and Notifications which helped the safeguarding of the interests of the labourers in a variety of ways. The NGO's Association which was functioning for over 17 years was

permitted to hold its first State level conference in July 1948 and it was inaugurated by Dewan Mudaliar.

There were only 10 strikes in 1951-52 in the state as against 13 in 1950-51, 26 in 1949-50 and 29 in 1948-49. This was due to a trade-unionist, Bhashyam, continuing as labour Minister. But during later years, the situation did not continue to be the same. In 1951-52 there were 23 strikes and in 1953-54 their number was 28. The Mysore Government Road Transport and the Mysore Iron and Steel Works had to be declared as public utility services due to labour unrest in 1953.

During the period of Reddy's administration there was unrest in the rural areas too, especially in the Malnad region among the tenants who were being evicted by the landlords and the tenancy rights were insecure. The Kagodu satyagraha of 1951, led by the Socialists was one such notable instance. Nationalisation of bus routes was an important policy initiated in September 1948; 170 routes were taken over in that year. The Cabinet undertook many programmes aimed at rural development too. But the Govt. appears to have been hostile to criticism, especially by newspapers. Even a newspaper run by a Congressman, K. Jevanna Rao, 'Kalachakra' had to close down, unable to face the wrath of the administration.

Elections were held in 1952 both to the Assembly and the Council which had been created by the new Constitution. After the general elections held under adult franchise in 1952, the Assembly that came into existence had a total of 99 members. The Congress secured 73 seats, the K.M.P.P. 8, Socialists 3, C.P.I. 1, S.C.F. 1 and Independents 13 in the elections. The Council had 32 elective member out of its total strength of 40. The Congress secured 19 seats, K.M.P.P. 4, Socialists 1 and Independents 8 in the elections to the Council.

Kengal Hanumanthaiah who became the new Chief Minister was responsible for many important administrative

measures during the period. The first act of Kengal was the removal of food controls. Of the enactment of his times, the Mysore Tenancy Act of 1952 and the Amendment to this Act in 1954 are the most important. The agitation conducted by the Socialists in the Malenadu region and their success in Assembly elections were mainly responsible for this legislation. By this Act, the tenants who had been serving a landlord for a minimum of two years, secured a nine-year extension right. The Act also fixed the maximum rent payable. Some anomalies in the Act were set right by the Second Amendment of 1954. The Inams Abolition Act of 1955 was another notable step. Kengal appointed a Committee to look into the question of reorganising education in September 1952 and as per its recommendation, on January 30, 1955, the new system of education with a view to inculcate the idea of dignity of labour and social service was introduced. The Compulsory Education Amendment Bill which made education for children between 6 and 14 compulsory was another Act passed during his time in 1955. He also launched a programme to popularise literature and culture by arranging lectures by scholars and undertaking publication of classics in Kannada at subsidised rates. The Dept. of Culture with C. K. Venkataramiah, and later Prof. A. N. Murthy Rao as chiefs, was founded.

One of the major development of Kengal's term was merger of the Bellary district into Mysore on October 1, 1953. The State Assembly's strength rose to 106 from 99. Kengal wholeheartedly supported the proposal for merger of Mysore with the new State being framed on the linguistic basis. The Mysore Assembly at his instance, voted for the proposal of merger by 57 for and two against in December 1955. But this support he extended to Unification later cost him Chief Ministership.

Before we turn our attention towards later developments, something has to be said of the industrial growth of Mysore.

The I. T. I. (1950), the H.M.T. (1955) and B.E.L. (1954) were some of the major industries founded in the State by the Central Government. MICO was a major unit in private sector (1952). The number of major industries (employing more than 10), in the State between 1947-48 to 1955-56 with the number of labourers employed in them can be listed as follows.

Year	Number	Labourers
1947-48	486	92,199
1948-49	508	99,306
1950-51	567	1,04,592
1951-52	582	1,06,083
1952-53	504	98,822
1953-54	577	90,804
1954-55	699	1,07,765
1955-56	705	1,04,466
1956-57	945	1,18,086

On the decline of number of industries during 1952-53, the *Report on the Administration of Mysore* for the year 1952-53 says the following: "The condition of slump and increasing competition in many lines of industry which became noticeable in the latter part of the previous year, continued during the year and in some respect become further accentuated." The sudden increase in the number of industrial units in 1953-54 (from 504 to 577) was due to merger of Bellary district in 1953. But a majority of industries in Mysore were in the public sector. (Out of a total investment of 21.53 crores of rupees, only 1.67 crores was private) (1956).

The First Five Year Plan launched in 1951-52 saw the launching of three major irrigation projects in Mysore, namely the Bhadra Reservoir, the Tunga Anecut and the Nugu Reservoir and nearly 10 crores of rupees were spent during the I Plan on them. The Mahatma Gandhi Hydro-Electric works at Jog

was a major project undertaken during the First Plan, producing an additional 1.20 lakh kw of power to the State's existing capacity of nearly 60,000 kw at Shimsha and Shivasamudram together till then.

The fear prior to Unification in Mysore was that a progressive developed region like the State will have to suffer as areas proposed to be merged with Mysore, were comparatively backward. There were serious doubts in the minds of certain sections in Old Mysore that the new State may have the domination of one particular community. Kengal had to face the opposition of three of his Cabinet colleagues for his supporting the merger proposal. The fact finding committee headed by M. Sheshadri had also given the view that Mysore State is going to lose a lot by the merger proposal. All this resulted in the resignation of Kengal in August 1956. By then he had planned and completed the Vidhana Soudha, a new Secretariat and Legislature building. He had also taken steps to initiate a bill to nationalise the Kolar gold mines.

Kadidal Manjappa became the Chief Minister on August 16, 1956. This was only a very short period though a stormy one. Mysore's merger had been certain. Who was to be the next Chief Minister of the new State had also been clear. Mysore was only trying to adjust itself to welcome its Kannada brethren from the neighbouring areas. The newspapers and writers from Mysore had extended unqualified support to Unification. In fact, the idea took birth in their mind, and it was these intellectuals who had nurtured it.

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BLADE-TOOL INDUSTRY AT CHILAKAPADU, LOWER MANNERU VALLEY, SOUTH INDIA

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Recent investigations into the pre-mesolithic leptolithic industries of Andhra revealed that they are quite wide spread both in time and space. A detailed scrutiny of the containing artefacts led Murti, M.L.K. (1979) to isolate three basic groups through flake-blade, blade-tool and blade-burin industries among the Upper palaeolithic relics of India; though these groups need not be sequential but could suggest only regional variations among the Upper palaeolithic assemblages. In Andhra Pradesh typical flake-blade industries are scanty while the blade-tool industries are recognised at Vemula (Reddy K.T. 1970) and the Betamcharla group of sites (Murti M.L.K. 1974; Murti, M.L.K. and Reddy K.T. 1976), whereas the blade-burin assemblages are located at Renigunta (Murti, M.L.K. 1970) Nagarjunakonda (Soundara Rajan K.V. 1958), Giddalur (Cammiade L. A. and M. C. Burkitt 1930), Nallamalai and Erramala areas (Issac, N. 1960), Cuddapah (Reddy K.T. and V. Sudarsani 1978; Srinivasulu, K. and others 1985), Paleru valley (Rao V. V.M. 1981), Yerragondapalem (Sankalia, H.D. 1974), etc. In addition a detailed study of the cave fauna attributed to the Upper Palaeolithic times has been brought to light by Murti, M.L.K. (1974; 1975).

With a view to studying the regional variations in the make up of the Upper Palaeolithic assemblages against their ecological background explorations were conducted in parts of South Coastal Andhra and the following paragraphs present a brief

summary of the typo-technological aspects of the blade-tool assemblage at Chilakapadu in the lower Manneru valley.

Chilakapadu (15°7' N. Latty, 79°25' E. Long) is a small village in the Kanigiri taluk of the Prakasam district. A little to the south of the village flows the Manneru which originates on the flanks of the Veligondas. The present area is studded with isolated hills containing various types of gneissic rocks traversed by quartzite bands. Across the banks of the Manneru scatters of water worn pebbles of fine grained quartzite of grey and brown hues are distributed, which formed the rock resources for the stone age artificer. The archaeological site is located at a couple of kilometers west of the village where undulations caused by the cross currents have exposed the artefacts to surface. The stone age relics could be collected amidst scatters of nodules and half worked pebbles which formed the blank media. Traces of calcareous kankar and surface accumulations of salty efflorescence across the archaeological horizons suggest that the artefacts were exposed to surface at times far enough as to allow the chemical transforms in the setting. The vicinities are depleted of their natural floral though patches of thorny scrubs still remained as pockets here and there.

On typo-technological ground, the lithic tool assemblage of Chilakapadu may be said to be belonging to the blade tool industries of the Upper Palaeolithic times. Of the 800 artefacts collected from the surface, 455 items have been identified to be specific tool types while the rest are waste products. Among the tool types blades, bladelets, retouched flakes, points, and scrapers of a variety are identified. Further, blades are divisible into backed types and retouched varieties. The bladelets possess almost a uniform length and breadth suggesting that the craftsmen deliberately broke the full length blades into bladelets of the desired size.

Among the blades we have very long ribbon flakes having a maximum length of about 14 cms. though blades ranging

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between 8 and 4 cms of length constitute a major part of the collection. Regarding the bladelets it may be mentioned that the average length of them varies between 2 and 4 cms. Normally all the blades possess a longitudinal central ridge emerging from the proximal end and terminating at the distal end. However, in a very few examples instead of a longitudinal central ridge, a longitudinal central flake scar occupies the dorsal surface. The ridge is at times broken by a few flake scars near the proximal end of the blades. It is interesting to note that there are cases wherein the blades retain patches of cortex either at the distal and proximal ends. Probably in these cases, the craftsmen must have employed water-worn nodules of optimum length for flaking and to detach blades from them. Primary flaking of the nodule was in vogue. This is attested by a majority of blades which do not contain longitudinal patches of cortex on their bodies. However the very few instances where in cortical patches are attested on the dorsal surfaces indicate that they resulted in the first or second round of the removal of the blades from the nodules. Invariably all the blades show the remnants of the faceted platform on their proximal ends. The distal ends, however, are not preserved in a few cases. There are some bladelets which possess only one straight cutting edge while the other margin is naturally blunt. Retouch of one of both the edges of the blades is noticed. In certain cases the retouch is done in such a way that it gives the appearance of serration to the edges. Also there are instances where in notches were produced on one or both the lateral margins of the blades. In general, all the above mentioned types of blades possess rather thick cross-sections.

Next to the blade tools is the set of flakes. Under this category we find a variety. They vary in size, shape and technique employed. Among these specimens typical levalloins type is often represented. Almost all the flakes tend to be leaf shaped and have varying functional basis. A few of the flakes retain cortex on either the distal or the proximal ends. There

is however no flake which is typically primary in nature. This is to say that no flake possess a complete cover of cortex on the dorsal surface. Cortical patches however occur near the margins in a few cases. Among the modified flakes retouched specimens and notched specimens are recognized. A few of the flakes are very thin and must have served the functions of flake points.

The retouched and levallois points collected in this area are all of symmetric and leaf types. In certain cases the proximal ends retain patches of cortex. Near the margins retouch is done so as to bring out the features of the pointed end into prominence. In a particular case, one of the shoulders is hallowed to produce a tang.

Among the scrapers both the flake made and core made varieties are noticeable. Depending upon the orientation and the nature of the scraping edge they are classified at side scrapers, endscrapers, convex scrapers, round scrapers and hallow scrapers. Among the core made specimens the convex and end variety are noticeable while the flake made ones exhibit all the types. In a majority of cases instead of producing a flat under surface by chipping, the craftsmen took advantage of the available flat pebble surface. In which case the steep working edge is produced by directing the blows from the ventral surface of the flake towards the margin. In such cases the undersurface is characterised by cortex. It is noticeable that atleast in one case a notched variety of the scrapers is recorded. The cases wherein the scrapers are made on amorphous cores the undersurface is made flat by deliberate chipping of the undersurface. At least in one of such cases the scraping edge extends to almost 2/3 of the margins. Thus showing a variety of forms, the scrapers constitute one of the important set of associates in the lithic tool assemblage here.

The fluted cores available in the industry are the residual nodules bearing longitudinal flake scars on their bodies.

However the available length and thickness of them shows that very thin long and narrow blades were produced by the craftsmen. Unfortunately such nicely worked specimens of blades have not been traced by us. It is observed that the platforms of the nodules contain a number of flake scars indicating that the craftsmen bestowed attention in the preparation of a faceted platform.

Amorphous cores from which flakes were removed in all possible directions constitute another facet of the industry; they contain normally shallow flake scars. Some of the cores after the removal of useful flakes from them must have been converted into scrapers by giving retouch on margins. The number of amorphous cores is considerably high.

Thus it is evident from the above that the blade-flake industry at Chilakapadu is a full-fledged workshop of the Upper Palaeolithic times representing most of the important type fossils.

Statistical Analysis of Artefacts

Type	No.	%
Retouched blades	60	7.50
Notched blades	12	1.50
Blade blanks	128	16.00
Simple points	19	2.37
Levallois points	7	0.87
Side scrapers	17	2.12
End scrapers	20	2.50
Retouched flakes	73	9.12
Fluted cores	20	2.50
Amorphous cores	96	12.00
Amorphous flakes	62	7.75
Debitage	167	20.87
Total	800	99.97

The blade-tool industry at Chilakapadu is comparable on both typo-technological and blank categories with similar industries in Cuddapah and Kurnool regions of Andhra Pradesh. The specimens of the present collection may also be grouped with those reported from Karnataka (Paddayya K. 1970), Madhya Pradesh (Ghose, A. K. 1961; Misra and others 1977), Maharashtra (Sankalia, H. D. 1974, pp. 207-30) Rajasthan (Allchin, B. and others 1972) and a few other localities on typological basis, though the raw materials vary considerably at all those situations.

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TRADE AND COMMERCE IN SOUTHERN MARATHA COUNTRY (1750-1853)*

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The Southern Maratha Country, a term first called so by Thomas Munro, extended over what the Marathas often called the Doab in Karnatak, that is, the land enclosed by the Krishna on the north and the Tungabhadra on the south. This area consisted of the modern Belgaum and Dharwad districts and part of the Bijapur district. It is watered by three other rivers, viz. the Ghataprabha in the north, the Malaprabha in the centre with its tributaries, Tupari and Beenhalla, and the Varada in the South. The Ghataprabha and the Malaprabha are the tributaries of the Krishna while the Varada is a tributary of the Tungabhadra. This was essentially a landlocked country, and had to depend upon the western ports for its sea-borne trade. This area could be divided climatically into three geographical regions, the first, a narrow strip, running in a north-westerly fashion from Ratihalli and Masur in the South to Sampgaon and Azamnagar (Belgaum) in the north-west, the second running from Koppal and Kanakagiri in the south-east to Bilgi and Bagalkot in the north west, and the third one was in between these two. The first strip could be called the Malnad belt, the second the Bayalasinne belt and the third the middle belt. Rice was the staple food in the Malnad area, jowar in the rest of the

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area. The main cash crops were cotton, sugarcane and tobacco. Timber was plentiful in the first belt. It contained a number of urban and commercial centres such as Bagalkot, Kerur, Gokak, Azamnagar, Nargund, Dharwad, Hubli, Annigeri, Gadag, Mishrikoti, Savanur, Bankapur, Haveri, Rañebennur and the like.

There were few good roads but many pathways or tracks joining commercial centres in this region with the markets within and outside the region. Cotton, sugarcane, tobacco, rice etc. were sent along these tracks to distant markets. The Lamanis and such other tribes carried the goods over long distances. The textile industry was scattered and wide spread. Generally everyone in the cultivator's family in the cotton-growing belts did the spinning in spare time. There were many looms in qasbas and pethas such as Dharwad, Hubli, Nargund, Haveri, Havasbhavi etc.

Hubli was "one of the most flourishing towns in the Southern Maratha Country". It contained in 1853 according to a survey made by the Company's Govt. 5,458 houses with a population of about 33,000 at the rate of 6 persons per house. It possessed "a number of old established banking and trading firms, and bills of exchange for large amounts are readily obtainable here on Bombay, Madras, and all the large towns of the peninsula".

The trade of Hubli chiefly consisted in cotton fabrics manufactured in the town itself or neighbouring villages, grain, oil, ghee, tobacco, betel-nuts, chillies etc. Raw cotton was mostly sent to Bombay by way of Kumta. Tobacco, betel-nuts and chillies which were produced in the southern parganas of Hubli were re-exported from Bombay to the interior. The imports of Hubli coming from the coast were mainly salt, metals, British goods, coconuts and the like. (SRBG/XII, Bombay, 185).

In 1853 the taluka of Navalgund contained the Samats of Navalgund Mahal and a part of the jagir of the late Chief of Nippani. The taluka contained 78 villages. Navalgund was in the northeast traversed by the small river Benne, a tributary of the Malaprabha. The water of this stream was too much brackish and not fit for domestic use. Good water was generally scarce in this area. The wells also were few, and the water generally brackish. The only drinking water that the people could get was from the tanks where the rain water collected during the monsoons. In the summer the tanks either dried up or the water was scanty. In time of drought the people suffered much.

Cotton was the chief product of the Navalgund area. There were only two towns here, Navalgund and Annigeri. Women in Navalgund did spinning besides their domestic work, and the yarn spun by them was sold in the market of Hubli.

In 1853 the Havasbhavi division consisted of two Mahals, Tilavalli and Kaginelli, the former mostly coming under Malnad area and the latter under Bayalsime. This area was traversed by the Varada river and many streams supplying the tanks. Sugarcane was grown in plenty.

The market towns in the two mahals were Havasbhavi, Tilavalli, Halebail, Chik-Basur, Kusnur, Kalkeri and Kaginelli. The market towns in the neighbourhood were Chik-kerur, Shashgiri, Alurkar, Dumanhal, Haveri, Karajgi, Devihosur and Baudgi (Byadgi). Kusnur produced different varieties of white cloth which had ready market for local consumption. The yarn was supplied to Kusnur from Davangere and Devihosur. Some village produced coarse cloth called *dhangari* and *kamblis*. The fleece for *kamblis* was procured from shepherds at Huphunsu and Herur. "The district possesses little trade beyond what is carried on at the market towns for the consumption of the inhabitants". It, however, exported dried chillies, jaggery, rice

and castor oil. From the coast were imported salt, dried coconuts, oil cloths of British manufacture, etc. From Hubli, Harihar and Dambal came cotton fabrics. There was a road running from Rattihalli to Kumta, and every year about 12,000 bullocks laden with tobacco, cotton, rice and iron went to Kumta, from Rattihalli, Ranebennur and Kod areas via Tilavalli.

In Tilavalli and some parts of Kaginelli sugarcane was grown, out of which coarse sugar and jaggery were made.

In 1853 the *abkari* revenue from the sale of the juice of the date tree was Rs. 3,310 for the whole taluka. Unfortunately the people did not grow date into full-fledged fruits fit for export nor did they make any attempt at manufacturing sugar from the date fruits which contain a great quantity of saccharine matter. From its leaves mats were made, or they were used for thatching the roofs of houses.

There were many useful tanks in the area such as the Kaginelli tank, Hire Lingadahalli tank, the Tilavalli tank, the two Kachvi tanks, the two tanks of Chik-Basur, the Havasbhavi tank etc., besides many wells and ponds.

The trading activities of Mishrikot may be briefly noted. In the north of the Mahal the Budnigud range of hills runs from north-west to south-east over a distance of eight miles. The western part also is hilly and towards the Kanara border was covered with a fine timber-producing forest. It was full of tanks of various sizes. The principal crop was rice. Sugarcane of the smaller variety was grown. Rice was an important item of export. The jaggery made from sugarcane was locally consumed.

There were about seven bazars held in the neighbourhood of Mishrikot, Hulgop, Kudalgi, Kalghatgi, Bommigatti, Tadas and Halyal.

At Mishrikot there were about 24 looms in 1853, and 50-rupee worth of coarse cotton cloth was manufactured every week. To the Hulgop bazar came merchants from the plains, from Jamkhandi, Ramdurg etc., for buying rice. In Hulgop 450 families, nine-tenths of the whole population, were employed in cleaning rice from husk. Again at Hulgop there were six families of about 40 men employed in iron working: there were six furnaces, employing from five to seven men each. "A furnace turns out about five maunds of iron every week; it is entirely consumed in the neighbourhood: one maund brings about Rs. 1-8 0. The iron is considered to be of bad quality being hard and brittle and unfit for the fabrication of anything but coarse agricultural implements, and pans for boiling sugar".

The Kalghatgi bazar was the most important in the district and was frequented by many merchants coming from the plains, from such places as Ramdurg, Nargund, Bagalkot and Kaladgi. There was a good deal of traffic between Goa and Kalghatgi. The imports from Goa included salt, cocoanut oil, coconuts, coir, cashew nuts, catechu and betel-nuts. Some of which were exported to Hubli from here. Salt however, was the most important item of import. About 2000 bullock-loads, containing 5000 maunds of salt worth Rs. 6000 were imported from Goa every year. There was a direct road from Kalghatgi to Goa going through the Diggee Ghat and another, rather a circuitous one, going through Talivadi Ghat. A loaded bullock took about 10 days for going to Goa from Kalghatgi by the Diggee Ghat, and about 16 days by Taliwadi. The price of salt at the Kalghatgi bazar was Rs. 1-4-0, but in Goa it was just one anna per maund. The Portuguese took the duty of 3 annas on their borders. At Talvadi 12 annas were taken as duty while it entered the Bombay area and 4 annas for carriage and profit. Thus the total of the money spent on one maund of salt would come to Rs. 1-4-0. One single Sawkar of Kalghatgi imported cloth worth Rs. 100 every month from Hubli and Lakshmeshwar.

At the Bommigatti market besides salt, rice and betelnut plantains also were sold. About 30 bullock-loads of plantains, worth Rs. 1-10-0 per load, came to Bommigatti every week from Bartanhalli in Kanara. Most of the plantains were sent to the interior from here. Salt came from Ankola, and cotton cloth from Hubli and from Arlikatti in the Tadas Mahal.

Traffic was going on between Mishrikot and 4 ports on the western coast, viz., Goa, Sadashivgad, Ankola and Kumpta. A road running from Kalghatgi to Goa via Sambrani and Diggee Ghat was about 105 miles in length. The road running from Kalghatgi to Sadashivgad via Yellapur and the Barballi Ghat was about 40 miles. The road was a mere track. The Ghat was not good. The road ran almost along the Kalinadi and in dry seasons sometimes even in the river bed. The Kali river was navigable upto Mallapur, 14 or 15 miles from the sea.

The regular traffic between Hubli and Kumpta was by a made road via Sirsi, 110 miles in length. The made road from Mundgod to Sirsi and Nilkund Ghat joined Kalghatgi to Kumpta by a track about 100 miles long. The direct route, however, from Kalghatgi to Kumpta via Yellapur and the Aribayal Ghat was about 80 miles. This road was a mere track through the jungle, and yet because of its short distance it was frequented by merchants. The road between Kalghatgi and Ankola via Yellapur and the Aribyle Ghat was about 78 miles long.

In the west of this mahal timber was available in plenty; teak, black-wood, *matti*, *honni*, or *hasan*. There was a great demand for logs, about 12 feet long, one foot wide and about 4 inches thick; 10 to 12 such logs carried in a cart and sold at Kalghatgi for about four and a half rupees per load.

Quite a good number of residents of Badami subsisted by manufactures. The chief manufacturing towns were Kerur and Guledgud. Kerur specialised in the manufacture of sarees which were exported to Pune, Bombay and the Konkan. According to Wingate in 1850 there were 500 looms at Kerur. But owing to rise of prices of cotton, and to the competition with similar goods coming from Gokak, Rabakavi and other towns nearer to the coast, Kerur suffered after 1850. In 1853 the number of the looms had come down to 350.

In Guledgud, on the other hand, the manufacture of cloths for *cholis* or bodices was in full swing, there being about 1800 looms in 1853. These cloths were of a high quality, as they contained either a mixture of silk and cotton or entirely silk. Their price varied from Rs. 0-1-0 to Rs. 1-8-0 per *khan* of 20 inches. Generally the English cotton yarn was used. The goods produced by these looms was four lakh rupees. This cloth was mostly exported to Sholapur, Pune, Konkan and Bombay.

The cotton-textiles of Badami and Mudkavi were of a coarse variety, unlike those of Guledgud. The money fetched by these manufactures was used for paying the tax and for the imports of cotton yarn, silk, wheat, rice, etc.

The use of English yarn became popular and profitable for the manufacturers of fine cloths, but it threatened to oust the locally made yarn from the field.

A document dated 1827 from the Sheshadri Papers in the Karnataka Archives gives the transit duties levied on goods passing through Manoli by different roads. Manoli was connected with the outside markets by two roads viz., the Torgal road and the Suladkatti road, and a river-way, obviously the Malaprabha. The tax was paid in three types of coins, viz. *nava-rokka* (new coins), *juna-rokka* (old coins) and in rupees. It also mentions some commercial taxes such as *phaski*. Oil husk, etc. were transported on bullocks.

A number of commercial taxes were levied, one of them being the *muhtarfa*. The payers of *muhtarfa* in this area could be classed under four heads : 1) shop keepers, 2) manufacturers and mechanics, 3) weavers, and 4) miscellaneous contributors. *Muhtarfa* is an Arabic word, and was used as a general commercial tax in Persian, Telugu, Tamil, Marathi, and Kannada.

It signified a tax or taxes levied on trades and professions, on the artificers of a village or their implements, as upon the weaver's loom, upon tradesmen and their shops and stalls, and sometimes upon houses. (Wilson's Glossary, pp 350-51). However the exact nature of the tax is disputed. According to Dr. Marshall (see Bombay Archives, RD. 97/1181 of 1840), it was a ground rent paid by the people for its use, themselves having no proprietary rights in it. This seems to be an extreme view, although there were some cases in which people paid the tax for getting permission to start their craft or build some structure for their craft on land. Later all manner of exactions came to be included under this head such as the loom tax, the house tax, the shop tax, the tax on oil presses and the like.

The *Muhtarfa* was collected usually in instalments by the local hereditary officials such as the Gauda or Patil and the Shanbhog or Kulkarni. These tax-collectors were themselves exempted from the payment of the tax. In due course these tax-collectors became part of a privileged class. They came to acquire different privileges, usually with the connivance of higher authorities. Not only were they exempted from the payment of *Muhtarfa*, but their relatives, and even the occupants or tenants of the houses belonging to these collectors were exempted from this tax. These tenants were also mostly rich traders. For example, in Ranebennur there were 4 Patels, 2 Kulkarnis and 1 Sathe who owned many houses that were rented to rich traders. The Patels owned 59 houses, the Kulkarnis 77 and the Sathe 14. As these 150

houses belonged to the above hereditary tax-collectors, almost all of them were exempted from the payment of *Muhtarfa*. In return for this service of collection of *Muhtarfa* for the Government, they were hereditarily entitled to certain perquisites which were burdensome to the payers who were engaged in various professions such as weaving, trade and commerce. For example, they exacted 18 seers of oil yearly from every oil mill.

Generally those who paid the highest amount of *Muhtarfa* were very rich merchants. They were either bankers, or traders or shop-keepers. Some examples may be given. Naud Naik of Hubli who paid Rs. 115 a year as *Muhtarfa* was a big Sawkar, owned the best house in Hubli and many shops. In Navalgund a certain trader or Baniya who paid annually Rs. 252-80 as *Muhtarfa*, had 11 shops and 3 houses. Ser Appa Naik of Belgaum who paid *Muhtarfa* of Rs. 85 had shops throughout the Deccan, and his yearly profit was Rs. 20,000. A shop keeper of Gokak who paid the *Muhtarfa* of Rs. 66 was at once a silk merchant, a jeweller (or shroff) and a banker (or Sawkar).

The chief products of the weavers in this area were sarees, *dupatta* and coarse cloth.

In 1840 the total amount of *Muhtarfa* from the town of Chikodi was Rs. 1297.15.0. This was collected from 350 individuals classed under 8 profession or castes as under :

- 1) Grocers and grain sellers chiefly Gujars, Jains and Lingayats.
- 2) Cloth merchants
- 3) Perfumers
- 4) Pan sellers and vegetable sellers
- 5) Shroffs
- 6) Artisans ; smiths, oil-men, dyers etc.
- 7) Cloth merchants
- 8) Miscellaneous payers

The cotton cleaner or Pinjar came to have an added importance in this area. Their number was small, probably it required some skill and hence they could manage to have the monopoly of cotton cleaning in some places. In Bagalkot a cotton cleaner enjoyed the monopoly of villages, and for this he paid the Muhtarfa of Rs. 177. He was even included in the list of Balutas. His importance suddenly increased with the greater demand for cleaned cotton.

The road system in this area was not encouraging. Even as late as the forties of the 19th century, it was unsatisfactory. The roads that were constructed by using hard material like stones or *murum* were those between Belgaum and Dharwad, and between Belgaum and the Ram Ghat. Although many cash crops were produced, the cultivator and also the trader suffered for want of good roads. There were of course cart tracks, but it was difficult even to pass small Ghats safely along these tracks. They were then forced to carry their goods in a round about way increasing the cost of transport and raising the prices of these goods.

The road running from Bombay southwards came only upto Satara, and, as noted already, there was a built road from Belgaum to Dharwad. If the distance between Satara and Belgaum was reduced by joining them by this road, then goods could easily move upto Harihar, Bangalore, Chitradurga and Bellary in south and up to Kolhapur, Bombay, etc. in the north. There were also no bridges worth the name, and this was another obstacle to the movement of the goods by tracks.

This was however not confined only to Southern Maratha Country, conditions being more or less similar in other parts of medieval India, especially South India.

The Peshwa Government tried to encourage trade and commerce by setting up markets, mints and giving concessions to merchants. For example, to the east of the Dharwad fort the Peshwa sanctioned the establishment of a Peth or market.

Instructions were given that in the Peth two temples dedicated to Lord Siva and Hanuman were to be built, and land was to be granted for the provision of worship and offerings to God in the temples. A Math was to be built for the Guru of Mrigaya Setti, and the necessary land be granted for the Math. A *kaul* was granted for seven years in the name of the leading merchants of the Peth such as Virat Setti, Sivalingappa Hubli, Ayyanna Wabili, Basavalingappa Angadi, Yellappa Annigeri, Venkappa, Malakappa Nilgar, Mudappa and all the Pattanasettis. The taxes were to be levied only after seven years according to the rules and regulations prevalent in the principality of the Nawabs of Savanur. Rs. 25,000 were to be made available for the *masahat* (survey, measurement) expenses, through the Sawkars by granting them the Potdari Sanads. The money was to be repayable in two years (after the establishment of the Peth).

A mint for minting *hons* and rupees was to be set up in the Peth. The transit duties on the bullocks of Virat Setti were to be remitted as before. The residents were also given the authority to administer justice in the Peth in the Gotsabha. If the Got was unable to dispose of cases successfully, then only they were to be referred to the Peshwa Government. Letters informing the establishment of this Peth were despatched to the Savanur Nawab Abdul Majid Khan, one to him and one to his Diwan, to the ruler of Bidnur and his Karbhari, to the ruler of Sondhe and his Karbhari, to Huchappa Desai and Virappa Setti of Mudehal, to Daulatrao Ghorpade, Nargundkar, Navalgundkar, the commandant of the Hubli fort, to the Subhedar, Havaladar and Karkun of the Dharwad fort. (KJ/49. Yadi—dated 1750).

ASEPTIC PRECAUTIONS REGARDING FOOD AND DRINK REVEALED BY VEDIC LITERATURE-II

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Abbreviations

1. C.U. = *Chandogya Upanishad*
2. R V = *Rigveda Samhitha*
3. S.B. = *Satha Patha Bramhana*
4. S.U. = *Subala Upanishad*
5. T S. = *Taittiriya Samhitha*

Before continuing our discussion on the legend referred to in the previous Article (S. B. 1,2,5,24-26), it would be appropriate to add a few lines about the hero of the legend. Brihaspathi Angirasa is described in Rigveda Samhitha as the descendent of Angiras (R.V. 6,73,1). He is also known as an expert in the sterilisation process-killing of Rakshas (R.V. 2, 23, 14). The entire Rigveda Samhitha is in metric form, Max Muller has found that the Vedic Age has four distinct periods, the Chandas (metric), Manthra, Bramhana, and the Suthra periods (page 62 of Ref. 3). The last being fixed as within 450 years of the commencement of the age of "Kali" 3100 B.C. (page 4 of Introduction to ref. 5 and the Hindu Astronomical calendar). It has also been calculated mathematically from certain astronomical data in Rigveda Samhitha that it belongs to a period between 4500 B.C. and 2500 B.C. (page 74-75 of Ref. 4). Brihaspathi Angirasa described in *Rigveda Samhitha* of the Chandas or Metric period must have lived about 6000 years back.

Now, adverting to the legend, it has been narrated in it that people who sacrificed by touching the altar and the ablutions suffered from wretched consequences. These include not only diseases and epidemics but also adverse social consequences. For, according to Vedic microbiology, micro organisms not only cause diseases and epidemics but also emotional outbursts such as anger which may bring on adverse social consequences such as rift between husband and wife or quarrels among comrades (R. V. 10. 87. 13).

It is well established in modern science (Nitrogen cycle) that micro-organisms in the soil break down complex organic compounds in the plant and animal refuse, into simpler nitrogen salts which can easily be absorbed by the roots of plants. They exercise the same function when they come in contact with the living cells of the skin or mucous membrane. But the living cells resist such attack by their immune mechanisms resulting in the disturbances in these living cells. Vedic seers had the special faculty of detecting such disturbances by which they were able to study the micro-organisms without microscopes as we have seen in the previous article. Evidently with this same faculty they have established the microbiological origin of the emotional outbursts. This also appeals to us to be plainly rational in view of the close relationship between sense perceptions and emotional reactions. It may be easy for modern psychiatrists to confirm this very early.

The outcome of investigations on the microbiological origin of emotional reactions will have importance in planning measures against the occurrence of such adverse reactions in human society in economical, social and political fields, to enable people "to live harmoniously in a changing total environment" as envisaged by the World Health Organisation under head e) of the their Constitution and responsibilities.

The reference in the legend that "Gods verily subsist on what is offered up from this world" is part of the oft-quoted

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verse from the Black Yajurveda (T. S. 3,2,9.7) which states that "Gods subsist on what is offered up from this world and men subsist on what is granted by the Gods". This interdependence between Gods and men is interesting. A clear concept of it as given below elevates modern science to its sublime heights.

The manner in which the great phenomena of the Universe along with the creative powers (the Gods) that control them, evolve from the Self and dissolve into it successively with an eternal rhythm, is systematically portrayed in the 5th and 9th cantos of Subala Upanishad (ref. 7). The channels through which the life forces pass from the Self to the respective Gods and the worlds under them, depicted in this Upanishad, correspond anatomically to the brain centres and the nerves connecting the different organs of the body. When the nourishment reaches the nerve centres through the blood, the Gods (the creative powers controlling the phenomena like the sun, the oceans, the winds and the rains), work harmoniously resulting in the timely occurrence of heat, light and rain on the earth, with the formation of food for man, when man takes food he nourishes the nerve centres and the gods again. This cycle of operations can be called the universal food cycle and explains the interdependence between men and gods.

This relation between the nourishment taken by an individual and the events in the external universe is also explained under Pranagnihotra in *Chandogya Upanishad* (C. U. 5. 19-24) wherein each morsel of food taken by the individual is addressed to the life forces within him, which convey the nourishment from the digestive system to the brain centres and the Gods, with the knowledge that it nourishes all the beings ruled over by these Gods.

Vedas have declared that Gods are afraid of the disturbances caused by the micro-organisms and that therefore micro-organisms must be destroyed from the very commencement of

the sacrifice (S. B. 1. 3. 1. 5). The application of the principles of Asepsis in Pranagnihotra sacrifice where man actually takes food is not only consistent with these Vedic declarations but also in full consonance with modern science. But in sacrifices where food is offered to gods imagined to exist outside, through fire in which all foods are totally sterilised before reaching their destination, the application of the principles of asepsis appears to be plainly irrational and unnecessary and Brihaspathi's order would sound futile. But an examination of the following aspects will justify his order.

1) As explained earlier, the external Gods are manifestations of creative energy from the Self and are nourished from the brain centres. Vedas have repeatedly asserted that these external manifestation neither eat nor drink (C. U. 3. 6-10). Therefore an offer in these sacrifices is a devotion offer-a token of devout submission to a mighty being imagined to exist outside. This is a sound psychological technique peculiar to Vedic religion. It is calculated to procure easily an effective mental concentration. Without going into the details of this technique suffice it to say that a reverential submission of sterilised food in due respect to the habit of the Gods (S. B. 1. 3. 1. 5) is conducive to harmonious mental concentration yielding good results.

2) As explained in the previous article, Brihaspathi discovered that men engaged in spiritual practices are more vulnerable to infections and that even touching contaminations would cause adverse reactions of various degrees. His order therefore would protect the sacrificer.

3) The remains of the offering are partaken by the sacrificer, his relatives and guests as a token of blessings from the Gods. If such offerings are contaminated they would damage the more delicate mucous membrane of their digestive system causing the wretched consequences.

Summary

The legend alludes to a scientific epidemiological investigation by Brihaspathi Angirasa, of two groups of people, wherein it was discovered that men engaged in spiritual practices were more vulnerable to infections and therefore ordained an aseptic discipline to avert adverse consequences.

The phenomenon of reduction in immunity during mental concentrations and the microbiological origin of emotional outbursts revealed in Vedas attract modern scientists.

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ARCHAEOLOGICAL DATA ON METALS IN SOUTH INDIA

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A proper study of ancient Indian metallurgy has not attracted the scientists and archaeologists to the extent it ought to have done. This is not due to the paucity of material because metal was known in India right from the time of the Neolithic-Chalcolithic age going back to the Indus Valley civilisation. Hundreds of Chalcolithic and Megalithic sites have been discovered all over India and a large quantity of copper, bronze, silver, gold and iron objects have been recovered from them either through proper excavations or as surface collections. Even the metal tools and other metallic objects that have been discovered so far have been simply subjected to a descriptive study and at best form a chapter or a section where they are illustrated and faithfully described. Further scientific examination of these objects, their source, the various processes involved in making either the tools or other objects, the impurities contained in the metal, the percentage of the metal content and other allied problems have been seldom done. That is why we are not in a position to make a systematic and proper technological analysis of ancient Indian metallurgy, with particular reference to Pre and Protohistoric periods. However, some preliminary studies have been made of the Indus Valley metal objects and these studies have revealed very important data on the origin and spread of ancient Indian metallurgy¹. Majority of the scholars agree that this technology came to India from Afghanistan-Baluchistan region and transformed itself into technology with the

local knowledge. However, some scholars argue that though the impetus came outside, the ancient Indians developed a technology that is entirely their own². Unless more studies are undertaken, such problems cannot be solved.

When we turn our attention to South India with which we are immediately concerned, the position is worse. Though a large number of sites with various metals have been either known or excavated in South India, most of these studies have been concentrated on the principle of typology. Thus we have an excellent typological classification of metallic objects found at various sites in South India. It has to be stated with regret that we have not marched further beyond typology in these studies. This is not to minimise the objects but only to stress the point that such studies have their own limitations.

The emergence of the knowledge of metals brought out a revolution in the history of mankind. It was responsible for the transformation of human life from the earlier cumbersome hunting, pastoralism and agriculture into more durable economy based on metallurgy and contributed to the all round development of life. It is even called a revolution by some as prehistoric man who began as a stone tool maker realised the multiple advantages of metal tools in the course of his life and gradually discarded stone tools and made metallic tools. Then he used the knowledge of metal for other purposes also. Metal tools have stronger and sharper cutting edges as compared to stone tools; blunt or unserviceable stone tools had to be discarded whereas such metallic tools could be melted and made into fresh tools. With metallic tools his hunting and even agriculture became more advanced and brought about an economic change and urban centres came into existence. However, it is difficult to say when and where exactly this change took place in South India under

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this background archaeological data on copper, bronze, gold, silver and iron will be examined here.

Copper was the earliest metal to make a great impact on the culture of man. It was the first metal used by man in South India and the age in which copper appears for the first time is called by archaeologists as Chalcolithic age. It consists of two words *chalco* and *lithos* meaning copper and stone for making their tools. In fact the stone of the preceding period continued in large quantities whereas copper was gradually making its presence felt. This has prompted some archaeologists to say that there was no exclusive copper or bronze age in South India. Whether this contribution is correct or not, what is important is that almost all the Chalcolithic sites in South India show a dominance of stone over copper in making tools. This may be explained as due to the paucity of the ore or its technological knowledge. It is now accepted by all that the South Indian Chalcolithic is derived from the Central or Western Indian Chalcolithic cultures which were in a flourishing state as early as 1800-1600 B.C. The significance of the copper implements found at Ahar by Sankalia assumes great importance both from the chronological and technological points of view⁴. K. T. M. Hegde's study and analysis of the copper industry from Ahar is also important in understanding the copper technology of India⁵. These people from Ahar and other sites with a superior technology of copper came into contact with South India or *vice-versa* especially Karnataka and this ushered in the Chalcolithic culture of the Deccan and South India. Hence middle of second millennium B.C. can roughly be taken as the date of the emergence of copper technology in South India.

Now let us examine the sites in South India where copper objects have been found in abundance. Tekkalakota near Bellary is an important neolithic site and was subjected to

small scale excavations⁶. The site has yielded typical neolithic antiquities. Six copper objects have been obtained from this excavation. One of the more important is a heavy solid copper axe measuring 11 x 7 x 15 cms found in the Phase I of the culture. It is rectangular and flat, both faces converging to a bifacial cutting edge. Its weight 553.3 grams. The lower level is early neolithic and the discovery of such a tool there is important. It has to be noted that copper is available in Bellary district in plenty. Hence the question is whether the neolithic people smelted the ore and prepared this tool is a moot point. The other copper objects are a spiral, copper wire, ring, nailhead and a piece of copper. The copper objects of this site were chemically examined⁷. It indicated that the copper was comparatively pure. The small quantities of iron, lead, manganese, nickel, cobalt and chromium are derived from the copper ore itself. The source of the copper could not be located as the ores found in Bellary and nearby areas have not been studied and examined. The date is about 2000 B.C.

Hallur in Dharwad is another important Neolithic Chalcolithic site, which has been excavated⁸. It has two periods and they have been dated to 1800 B.C. to 1100 and 1100 to 800 B.C. The first period has yielded three copper objects. One of them is a miniature double edge axe. The second one is also a flat miniature axe with a broad cutting edge and the third one is a small fish hook. Period two accounted for only one piece of copper rod.

Maski is another important site of the neolithic complex and was subjected to excavation by Thapar⁹. The excavation yielded thirteen copper objects of which seven were mere shapeless bits. Among the others, a rod, piece of bangle, a rattle with a slit, a four-sided conical miniature object could be identified. No chemical examination of these objects

has been made. The chalcolithic phase of this site has been dated to 1000 to 400 B.C.

Brahmagiri is one of the sites excavated by Sir Mortimer Wheeler on scientific lines. It has yielded neolithic, megalithic and early historic cultures in regular sequence¹⁰. The neolithic cultural levels here yielded a copper circular bangle, a copper flat axe and a copper rod. No copper objects of the neolithic level have been found at T. Narasipur, Pariyampalli, Palavoy and Nagarjuna Konda.

Piklihal, excavated by F.R. Alchin is a neolithic-megalithic site of great importance¹¹. The upper layers of neolithic yielded a copper chisel of rectangular section, and two fragments of the rim of a small copper bowl. These were examined by a metallurgist also¹². The chisel was hammered out of a bar of copper. It has close resemblance to copper chisels of the Indus Valley. In the case of two fragments they contain no tin or any other metal. The form is similar to the bowls found at Adichanallur.

In Arikamedu excavation, a copper rattle was found which has been assigned to the second century A.D. by Wheeler¹³. This is of the early historic period. Dr. T.V. Mahalingam has noticed copper objects in the excavation in the lower Kaveri Valley sites, all belonging to the early historical period¹⁴: Tirukkampuliyur excavations yielded copper objects such as bangles, rings, antimony rods and a broken piece of a rattle. These objects are similar to those found in Brahmagiri, Piklihal, Sanur and Maski¹⁵. The excavations at Alagiri yielded copper finger rings and small thin rods. The rings have a diameter ranging from 2cm to 5cm. Some of the bigger rings might have been used as bangles.¹⁶

Though iron was the most dominant metal during the megalithic period, copper continued to be in use, of course

in small quantities, Kunnattur has yielded household utensils, like bowls, bells, rings and bangles¹⁷. Copper ornaments have also been found from the megalithic. Thus copper objects have been archaeologically recorded in South India from about 1600 B.C. to about 200 A.D. In various excavation in Tamilnadu, Andhra, Karnataka and Kerala.

Now let us try to examine the technical knowledge these people had with regard to copper. The Chalcolithic people of the Deccan seem to have obtained copper ore from the Aravali hills, the percentage of copper is rather poor. Chemical analysis of the Deccan Chalcolithic has shown that copper used there contained traces of Arsenic, antimony and sulphur¹⁸. It is difficult to answer the question as to how smelting of copper was done either by the chalcolithic people or by the later people. So far no furnaces have been found in India which can be definitely said to have been in smelting copper by the Chalcolithic people. In this connection it is worth mentioning that the excavations at Inamgam have yielded some traces of kilns, crucibles and furnaces that might have been used by the chalcolithic people. But these details are yet to be published as the excavation work is still in progress. As copper melts at 1083°C, a slightly higher temperature, say 1200°C would be required to separate the metal from the ore. It is known that the ordinary charcoal fire can produce a temperature upto 700°C. Hence an enclosed space or sealed space is required to raise the temperature to 1200°C. Another important point is that the chalcolithic copper objects are found to be pure upto 98 percent. This is possible if copper ore is properly dressed, roasted, and smelted in proper conditions. This shows that, the chalcolithic copper metallic technology in India was of a high order. From all these evidences it could be said with certainty that South India had an advanced knowledge of copper metallurgy as early as 1500 B.C. if not earlier.

Bronze : Another important metal in the early history of man was bronze. India did not have a bronze age as Europe had. But bronze was used for tools and vessels along with copper in the chalcolithic phase itself. Bronze objects have not been reported from the chalcolithic sites of Hallur, Tekkalakota, Maski and T. Narasipur. At Brahmagiri was found five bronze objects ranging in date from the stone age culture to the early historic¹⁸. They were a bronze rod (perhaps a pin) with circular section thinning towards one end; a bronze finger ring; a bronze bracelet with an indented edge; bronze rattle with decoration in low relief and a pyramidal shaped bronze bell. Piklibal yielded a single specimen of bronze bangle, closely resembling the one from Brahmagiri²⁰. Tirukkampuliyur, Alagarai and Arikamedu have not yielded any bronze objects.

The most important bronze objects both in quantity and quality is found at the famous site Adichanallur, belonging to the iron age period. Though it had no lithic appendage, by its culture it can be included in the megalithic phase of South India. Alexander Rea's excavations here has provided a remarkable series of vessels, some with lids and frequently decorated with animal figures and bells²¹. Vessels of different shapes and sizes are also noteworthy. However one is impressed by eleven bronze diadems, of different shapes and sizes. A large number of bracelets, bangles, anklets, bells and rings show superior workmanship in bronze. The figures of animals are very finely made and attract our attention. Animals like rams with twisted horns, cocks, antelopes, dogs, buffaloes and tigers are important. The decoration on the vessels consisted of embossed dots, incised grooves in geometric forms and wavy lines. The lids are of special interest. Usually they have animals on their top. Vessels included small cups, bowls of various sizes upto nine inches in diameter, jars, vases and frying pans. However one notices the absence of bronze tools and implements. This has been taken by some

to mean that the bronze activity was confined to richer section of the community, as most of these objects were decorative in character and tools and implements used by ordinary people are altogether absent. Whatever may be the correctness of this statement, one thing is certain that bronze objects are of very high standard as far as workmanship is concerned. This is a clear indication of their skill in handling and manipulating bronze which was malleable because it contained a high percentage of tin, namely 23 percent²². In this connection it is noteworthy that the bronze objects of western Deccan of the chalcolithic period when analysed showed a low percentage of tin, namely 3.2 to 12.82 percent²³.

As it is well known, bronze is harder and stronger than copper and mixing the latter with tin makes it more suitable for casting and forging. The chalcolithic bronze objects were used for various purposes, whereas the Adichanallur bronze was specially used for manufacturing decorative items mentioned above. Hence it is possible to presume that higher percentage of tin in Adichanallur is a deliberate attempt by the people to produce a more malleable bronze. It is also worth remembering that tin was a scarce metal and the chalcolithic people could not afford to use more tin than necessary in making bronze. However, we have to remember that we are comparing bronze of two periods and of two difficult areas.

Another rich assemblage of bronze objects are recovered from the Nilgiri megaliths²⁴. Their workmanship is also very elegant and shows a highly technical progress in the field of bronze metallurgy. The bowls of varying shapes have fair decoration including fluting. Richards who discovered them tried in vain to connect them in the similar vessels of gold found in about 3500 B. C. But the Nilgiri megalithic culture cannot be dated back to 3500 B.C. At best they may be assigned to the early centuries of Christian era.

However, some scholars are of the opinion that the remote ancestors of the present day Todas who inhabit the Nilgiris now, must have been responsible for this bronze assemblage²⁵. Considering the cultural and scientific level of the Nilgiri Todas this seems to be impossible. In addition to that, the Nilgiri bronze contains 29.89 percent of tin and such an alloy is not at all locally available²⁶. However, it is possible to turn our attention to the Mediterranean region where such objects were available. South India had trade connection with Rome in the early centuries of the Christian era and the Nilgiri megalithic people had opportunities of coming into contact with Roman merchants. In this connection it is interesting to note that one Roman gold coin was found in a megalith at the Nilgiris by James Hough²⁷. Taking all these factors into consideration it has been assumed by some that the bronze objects must have been imported from Rome, by the megalithic people. Similarly the Adichanallur bronze objects have been taken to be the inspiration from West Asia (Palestine, Cyprus and Syria)²⁸. Further field studies and technological studies and analysis of the bronze objects from these two distant areas, in a comparative basis along can bring out the fact. This is a promising and fruitful area of research for archaeologists and metallurgists. South India had a strong tradition of bronze art in later times and it is worth while exploring the possibility of the origin of this tradition in chalcolithic and megalithic times.

Gold : The love for gold is not a new phenomenon. It is as old as the chalcolithic culture in India, dating back to the Indus Civilization. Kolar gold mines and Hatti gold mines supplied gold to the cities of the Indus valley both by sea and land routes. Indus gold is of light yellow colour indicating a high percentage of silver in it. The gold obtained at Kolar and Hatti are similar in nature and the spectroscopic examination of gold from Indus cities and Kolar indicate the similarity of the two²⁹. This proves beyond doubt that

as early as 2500 B. C. South India had learnt the technology of smelting gold on a commercial basis. That this is not an isolated phenomenon is proved by other chalcolithic sites where gold objects have been reported. Geologically, the Raichur doab as well as the country further south upto Kolar is known for gold deposits, gold bearing sands in the rivers, and ancient gold workings. It is in this context the name Suvarnagiri, the Asokan capital becomes meaningful. Even the name Honnavara, a port on the Western coast is interesting; perhaps it was the port from where the gold was exported to Lothal, an Indian city in Gujarat. Exploration of place names connected with gold in South India is sure to yield interesting results in this regard.

Tekkalakota yielded two gold ornaments in the Phase I of the chalcolithic culture³⁰. Both the objects are discovered in the earliest levels. One of the ornaments is a gold pendant or ear ornament with three coils. Another one was also an ornament of coils. The first one weighed 7.49 gms and the second one was 4.37 gms. T. Narasipur excavations yielded one gold spherical bead from the upper stratum of the Neolithic levels³¹. At Hallur the chalcolithic levels did not yield any gold but a gold bead was found in the iron age levels³². Similarly Maski also yielded a gold bead and a small indeterminate fragmentary leaf from the Megalithic levels³³. At Brahmagiri were found 33 gold beads from a single megalithic (ix), all of which lay closely scattered. Of them thirty are long-cylinder-circular while the remaining three are disc-cylinder-circular.³⁴

Gold becomes more prolific in the megalithic period. In this connection the antiquities gold recovered from the iron age burials of Adichanallur becomes important. Nineteen gold diadems were discovered here. These are generally oval in shape and some of them have a strip prolonged at each extremity. In the ends of these strips are holes for a wire

or thread to fix the diadem on the forehead. Some of them ornamented with dots, designs, parallel lines, leaf like design etc. On the whole these diadems of gold are very important. Coming to historical period, gold becomes common and we get many references to it. Roman trade with South India has to be viewed under this background. Allchin's remark "The similarity of ancient gold working of Mysore to that recorded on the Red sea coast of Egypt by Agarthacrides in the second century B.C. is interesting" also points to the same direction³⁶. He even goes a step further and states that gold was locally extracted from the ores on a small scale mainly on surface during the neolithic period on the evidence of a large number of settlements near Maski and Hattig³⁶. Francis refers to gold wasting in the hills near Chigateri, south of Bellary.³⁷ Thus the antiquity of mining gold had started as early as the neolithic chalcolithic times in South India and had made a good progress technically to supply to Indus cities on a commercial basis.

Finally we come to iron which is a metal par excellence which changed the entire concept of urbanisation in South India. Small and compact neolithic-chalcolithic communities underwent a change beyond recognition. The growth of big urban centres was simply accelerated by the introduction and use of iron as an important metal throughout South India. Iron provided not only hard and sharp tools of his daily needs but made him conscious of the rudiments of defence and even offence against the enemies. In South India this metal was introduced by those people who built megalithic tombs and hence called as the 'Megalithic culture', whereas in north, iron using communities do not have this lithic appendage. Thus in South India Megalithic culture is a synonym of iron age culture.

The entire South India is literally dotted with thousands of megalithic tombs which fall into various types. Whatever

may be the exterior difference or typology of the megalithic tombs, they have a common trait and that is the presence of iron objects. Those megalithic people believed and practised a type of religion in which they buried along with the dead things that were used by that person, obviously for his future journey. That included pots, pans and iron objects. Thanks to this practice, archaeologists are able to recover thousands of iron implements of various shapes and uses from technological aspects could be understood. From this point of view, of all the metal technologies of protohistory, iron is best represented and studied in India.³⁸

As already remarked, a large number of megaliths have been excavated in South India and consequently thousands of iron objects have been recovered from them. Hence it is not possible here to list all of them or even the more important of them. So it is sufficient to mention some of the main types of iron objects obtained from the megalithic excavations from all over South India. They include the following types: knives with or without handles, daggers, arrow heads, wedges, spears, leafy shaped lances, axes, adzes, sickles, hoes, hooks, chisels, crowbars, frying pans, rings, bangles, bracelets, diadems, pins, nails, spikes, tridents, hangers, tripods, rods, javelins, swords, and various ornaments and beads. These were used for various purposes such as weapons and tools, for agriculture; vessels for household purposes; as ornaments and some for religious purposes. The occurrence of trident or *trisula* and spikes or *sula* is interesting from the religious point of view. Though they might have been used by horse riders as weapons, many scholars have taken them as *sula* and *trisula* associated with Siva, Durga and Muruga. There is nothing improbable in this assumption. From Adichanallur was obtained an iron trident (length 3'2", breadth at top portion 7", shaft 2").³⁹ Its handle is long, square in section with a pointed knob at the end. The three prongs are flat in section tapering to points. This can be taken as the *trisula* of Siva. Single pronged spikes can be taken as the *vel*, the weapon of Muruga.

For a more detailed study of the inventory of the iron objects one may refer to the excavation reports of Brahmagiri, Adichanallur, Maski, Sanur, Kunattur, Amritamangalam, Hallur, Kesarapalli, Piklihal, Jadigenhalli, Alagarai, Tirukampalliyur, sites in the Nilgiris, Palani hills, Coimbatore etc⁴⁰.

Now we may turn our attention towards the technological aspect of the iron obtained in these places. The various items of iron mentioned above presupposes that the megalithic people had a sound knowledge of iron technology. Otherwise they could not have produced a variety of iron objects of excellent workmanship. Iron requires a higher temperature than copper for smelting. Iron requires 1534° C whereas 1083° C is sufficient for copper. Generally iron ore contains more impurities than copper. Further smelting of iron requires a balance between reducing and oxidising conditions. Unless this balance is maintained, the quality of iron will not be satisfactory. In the early stages, chronologically in about 1000 B.C., iron using communities seem to have made experiments in producing iron as can be gleaned from the poor quality of iron produced by them. For South India Hallur has given a Radio carbon date of 1100-900 B.C. for the introduction of iron here. But by the fourth century or slightly earlier, Indian iron or rather steel had become famous outside India. Its fame had spread far and wide. Herodotus, Alexander, Ktesias, Curtius and others expressed great admiration for Indian steel.⁴¹ This shows that there were two stages of the development of iron technology; first when they were still experimenting at the initial stage and produced ordinary iron and the second stage when they were able to produce excellent iron which had won the acclaim of the Greeks and Romans.

Earlier writers like Allchin and Banerjee suggested that iron technology was introduced into India from Afghanistan and Iran. But we have to remember that ancient Indians had a good knowledge of smelting copper and gold as early as in 2000 B.C., if not earlier. For such a people smelting

of iron could not have posed a big problem. They might have used the long tradition of advanced copper technology that was available locally and began experimenting with iron smelting. This is the stage of experiment which produced slightly low quality iron to which a reference has been made above. In course of time they improved the technology so much and produced high quality steel which won the admiration of the foreigners like Greeks and Romans. Thus we can postulate an indigenous origin for iron technology in India.

The M. S. University of Baroda made a study of the iron technology of the objects obtained from Dhatwa in Gujarat. It revealed that the method adopted was simple. Iron ore was roasted first and then it was reduced, followed by forging the metal into various shapes. They exploited the locally available iron ore, roasted it to expel water content, carbon dioxide and sulphur. Roasting also made the ore fragile and hence easier to crush and more suitable for reduction in furnaces. Their furnaces were small. Iron ore was placed in crucibles in alternate layers of iron and charcoal and then sealed with clay; placed in the furnace and heated. Iron ore is reduced with carbon monoxide to produce steel and carbon dioxide. The molten liquid is tapped out and allowed to become solid by cooling, after absorbing sufficient quantity of carbon. This was supplemented by the technique of quenching or dipping the red hot iron in water to harden it and also tempering or heating the metal repeatedly and hammering it and gradually cooled off. From there repeated processes the iron gets impregnated with sufficient carbon to become hard steel. This technology is adopted by most of the blacksmiths in South Indian villages even today and this shows that there was a long tradition of iron smelting from the days of the Megalithic people, three thousand years ago.

Finally it has to be noted that though South India had mastered such techniques of smelting copper, bronze, gold and iron, unfortunately they have not left behind any literature

about these processes. As was the case in ancient India, most of these technologies were hereditary in nature and their knowledge was passed on from father to son. Hence it is advisable to examine the oral tradition available in remote parts of South India regarding metallurgy. The tribals may be able to give the details of tradition not easily influenced by modern methods.

Secondly a time has come when archaeologists and metallurgists have to work in close collaboration, to solve the problems of pre and protohistoric metallurgy. Spectroscopic examination of archaeological metallic objects and comparing them with the locally available metallic ores should be undertaken to know the sources of the metals. This will give a clue to the indigenous nature or otherwise of the processes involved. With such objectives in view, extensive explorations and excavations should be undertaken throughout South India. Only a concerted effort will bring to light the mysteries of metallurgy our ancient forefathers had practised and passed on to us as their most prized heritage which we should study and understand and be proud of.

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started. It is also the period in which metal technology made its impact.

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35. Bridget and Raymond Alchin, *The Birth of Indian Civilization*, p. 205.
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40. For a detailed discussion on megalithic sites in South India and the typology of the implements, see B.K. Gururaja Rao, *Megalithic Culture of South India*, Mysore, 1972
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ALADANGAḌY INSCRIPTION OF RAMĀDEVĪ

Y. UMANATH SHENOY*

This Inscription engraved on a stone-slab 56 cms. by 49 cms. and of some thickness was discovered at the right side of the central cella of Śrī Pārśvanātha Basadi at Aladangaḍy, Belṭangaḍy Taluk, in South Kanara District. The top portion and the right-hand-side corner of the slab (as seen in the photograph) is found weathered away mostly due to some hammerage. Though some figure at the top of the stone slab is not clearly seen due to this, the whole text of inscription is safe and thus available to us. The Inscription has been engraved in 17 lines. The language and script of the epigraph is Kannada of the middle-ages.

The date of the Inscription is Śake 1411. Saumya Samat, first day of Mīna month, Sunday, which corresponds to Thursday, February 25, 1490 A.D., according to the *Indian Ephemeris*. But the day mentioned in the epigraph does not tally with the day given in the *Ephemeris*.

The author of the Inscription is Ramā Dēvi, the mother of Mahāmaṇḍalika Perṇam-ṇarasa Vodeya (1460-1490 A.D.) of the Ajila royal family ruling (over Punjalika Rājya) from Vēṇūr, Belṭangaḍy Taluk, South Kanara District. Ramā Dēvi is also referred as Kāma Dēvi in one record (S.I.I. Vol. VII, No : 257) and she is also believed to have been ruling around 1440 A.D.

The Text of the Inscription is as follows :

1. ಸ್ವಸ್ತಿಶ್ರೀ ವರ್ಧಮಾನಾದಿ ದೇವರು | ಶ್ರೀಮ(ತ್)ಪರಮ ಗಂಭೀರ
2. ಸ್ವಾಧ್ಯಾದಾಮೋಘಲಾಂಛನಂ ಜೀಯಾತ್ಯಲೋಕನಾಥಸ್ಯ ಶಾಸನಂ ಜಿ

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3. ನ ಶಾಸನಂ|| ಸ್ವಸ್ತಿಶ್ರೀಮತು ಸಕವರ್ಷ ೧೪೧೧ನೆಯ ಸೌಮ್ಯ
4. ಸಂವತ್ಸರದ ಮೀನ ಮಾಸಂ ಪ್ರಥಮನೆಯಲು ಆದಿತ್ಯವಾರದಂದು ಅ
5. ಉವದಂಗಳಿಯ ಬಸ್ತಿಯ ಪಾರ್ಶ್ವದೇವರ ಶ್ರೀಪಾದ ಪದ್ಮಾರಾಧಕರೂದೇಸಿಗ
6. ಗಣಾಗ್ರಗಣ್ಯರುಮಪ್ಪ ಶ್ರೀ ದೇವಚಂದ್ರ ಭಟ್ಟಾರಕ ದೇವರು ಮುಖ್ಯರಾಗಿ
- ಮಾಂಡಳಿ
7. ಕ ಸೋಮನಾಥ ಪೆಣ್ಣಂಣರಸ ಪೊಡಿಯರ ತಾಳಿ ರಾಮಾದೇವಿಯರ ನಿರೂ
8. ಪದಿಂದ ಚಾತುರ್ವರ್ಣ್ಯಕ್ಕಾಹಾರ ದಾನಕ್ಕೆ ಮಾಡಿದ ಧರ್ಮ ಅಳುವದಂಗಡಿ
9. ಯ ಸಮಸ್ತ ಹಲರು ಮುಂತಾಗಿ ಸಾಣೆಜದ ಬಯಲಲು
10. ದೇವಸ್ಥದ ಗದ್ದೆಗಳು ೭ ಬಿತ್ತುವಬಿದೆಕಾರು ಬಳ್ಳಿ ೩೦ ಟಿ ಲೆಕ್ಕದ ಮೂ
11. ಡೆ ೦೨ ಹಂನೇಡು ಬಯಲ ಮೂಡಣದಿಕ್ಕಿನ ಬೆಟ್ಟುಗಳು ಬಿದೆ
12. ಕಾರು ಕಿಣಿಯ ಮೂಡೆ **ಯಾ ಭೂಮಿಗುಳ್ಳ ಕಿರಮೋ***
13. ದಿಂದ ಪ್ರತಿವರ್ಷ ೧ ಕ್ಕಂ ಭತ್ತಮೂಡೆ ೩೬ ಮೂ[ವತ್ತಾ]ರು
14. ಆ ಚಂದಾರ್ಕ್ಕ ಸ್ಥಾಯಾಗಿ ಈ ಧರ್ಮವನು ನಡೆಸಿಬಹುದು ಇ
15. ದಕ್ಕೆ ದುಃಖ ವೂಸಗೆ ಕಾಣಿಕೆ ಯೆತ್ತು ಅರಸಾಯವಿಲ್ಲ ಇಷ್ಟಕ್ಕೆ ಅ
16. ಉಪಿದವರು ಸ್ವದತ್ತಂ ಪರದತ್ತಂ ವಾ ಯೋ ಹರೇಚ್ಚ ವಸಂಧ
17. ರಾ [೦] ಪಷ್ಪಿರ್ವರ್ಷ ಸಹಸ್ರಾಣಿ ವಿಷ್ಣುಯೂಂ ಜಾಯತೇ ಕಿಮಿಃ

Translation :

Be it well. Gods Śrī Vardhamāna etc. May the doctrine of Jina be victorious, the doctrine of the lord of the three worlds, the unfailing characteristic of which is the glorious and the most profound syādvāda. Be it well On Sunday, the first day of the month of Mīna, of the year Saumya, of the victorious śaka year 1411, this charity (is) made for foodserv- ing to the four-castes, according to the orders of Ramā Dēvi the mother of Māṇḍalika Sōmanātha Perṇam-ṇarasa Vodeya, with Śrī Dēvachambra Bhaṭṭāraka Dēva, the worshiper of the lotus feet of Pārśvadēva of the basti of Aluvadamgady, the principal (Agraganya) of Dēśi-gaṇa, being the chief.

All the Jaina merchants (Halaru) of Aluvadangady, joining together, should observe the charity so long as sun and moon endure, collecting, annually, paddy of 12 muras for 30 Balla land of 7 fields in the temple-land in the plain of Sanimja.... small murās for dryland to the east (of this), 36 murās for each year for the sake of tank etc., on the land, no worry, gift, presentation, service of oxes, tax to the kind for this (land). Those who violate this and seize the land given away by themselves or by others will be born as worms in ordure for sixty thousand years.

Importance

This inscription refers to the land grant made by Ramā Dēvi in the presence of Śrī Dēvachandra Bhattāraka on February 25 1490 A.D., in the Pārasvanātha Basadi at Aladangady, Beltan-gady Taluk, South Kanara District. According to the inscription, all the Jaina merchants of Aladangady had to observe this charity as long as sun and moon endure, collecting the income from temple lands at Sānimja and from the lands east to this. The inscription mentions that the lands were free from different kinds of taxes. It is also stated in the inscription, like other inscriptions that in case of violation to this, the person responsible for that will be born as worm in the ordure for sixty thousand years.

This is an unreported and unpublished inscription. Apart from referring to a land-grant, this inscription clearly states the relation between Ramā Dēvi and Perṇna-maṇarasa Voḍeya of Vēṇūr. It can be known from the inscription that Ramā Dēvi, who is believed to be ruling around 1440 A. D., was not in power in 1490 A. D. (at the time of engraving this inscription) and also that she was living at that time. Further, that the rule of Perṇnamnarasa Voḍeya of Vēṇūr continued upto 1490, can be determined from this inscription. The reference to Pārsvanātha Basadi in this inscription leads to the conclusion that the Basadi was built before that date.

(Thanks to Mr. B. Vasantha Shetty, of S. M. S. College, Brahmavar, for assisting in copying the Inscription.)

BORDER DISPUTES BETWEEN KARNATAKA AND NEIGHBOURING STATES *

PROF. (DR.) K. V. VISWANATHAIAH **

The States in India were reorganised on November 1st, 1956 on a linguistic basis as a result of the passage of the States Reorganisation Act, 1956. The S R. Act, 1956 was based on the recommendations of the States Reorganisation Commission, 1955. The States Reorganisation Commission while recommending laid great stress on unity and security of India as well as on financial, economic and administrative considerations. It did not give much importance to language and culture. However, it opined: "It is neither possible nor desirable to reorganise States on the basis of the single test of either language or culture. What is required is a balanced approach to the whole problem in the interests of national unity."

The then Government of Bombay soon after the formation of the new States invoked the provisions of Section 21 (2) (b) of the States Re-organisation Act, 1956 and it submitted a memorandum to the Government of India wherein it objected to the inclusion of the Marathi speaking areas in Karnataka. It said: "A large number of territorial adjustments still remain to be considered. The fixation of boundaries between the two States should not be considered as final".

The Government of India requested the Western Zonal Council to consider this but its consideration was deferred on the ground that the matter was under discussion between the Chief Ministers of the States.

* Dr. M. V. Krishna Rao Memorial Lecture, delivered on 10-8-86 at The Mythic Society.

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In the meantime the Bombay Re-organisation Act was passed on 25th April 1960 and this Act bifurcated the bilingual state of Bombay into Maharashtra and Gujarat. Consequently, these States came into existence on 1st May, 1960. The State of Karnataka which was a member of the Western Zonal Council ceased to be a Member of that zone and only the State of Maharashtra was put under that zone. The State of Karnataka was put in the Southern Zone. As such, the Zonal Council of any one Zone, either Western or Southern, could not take up this issue and it was left to the Chief Ministers of the disputing States to settle the matter amongst themselves. The State of Maharashtra took the lead in the matter. Through the good offices of late Shri G. B. Pant the then Home Minister, Govt. of India, the Chief Ministers of Karnataka and Maharashtra, Messrs Y. B. Chavan and B. D. Jatti appointed four representatives—two representatives for each State (30th November 1960). Shri H. V. Pathaskar and Shri M. D. Bhat represented Maharashtra side; Shri S. Channaiah and Shri S. S. Malimath represented Karnataka side on behalf of their respective Governments. These representatives met and discussed things to the disputed areas. As they could not come to any agreement, they agreed to submit their respective reports to their Governments.

According to the report submitted by Messrs H. V. Pathaskar and M. D. Bhat, large areas contiguous to the Maharashtra State wherein the people speak Marathi language have been included in Karnataka State and a few areas contiguous to the new Karnataka State wherein the people speak Kannada language have been included in the Maharashtra State. This anomaly requires correction. This could be done if "Village Unit Theory" or formula is accepted and if the boundaries between these two States are resettled accordingly.

According to this formula, the village should be taken as the unit: simple linguistic majority of the population of the

village should be the deciding factor to settle whether the concerned village should go either to Maharashtra or Karnataka: relative majority should be adopted where more than two languages are spoken: continuity to the State to which it has to be transferred also should be there; and the 1951 Census figures should be relied upon to decide the simple linguistic majority of the population. The Government of Maharashtra put forth this "Village Unit Theory" before the Governments of Karnataka and the Govt. of India and urged that the boundaries should be re-settled accordingly. It claimed 2806 sq. miles involving 814 villages with a population of 6,70,228 now in the State of Karnataka. On the same basis it also showed that 260 villages with a population of 3,25,260 covering an area of 1,180 sq. miles now in Maharashtra should be treated as Kannada speaking and it should be transferred to Karnataka. Further, the Govt. of Maharashtra pleaded that by accepting this 'Village Unit Theory' the linguistic minorities in both the States could be reduced to a minimum and the boundaries between these disputing States could be settled once for all. The number of towns and villages it claimed were as follows :

District	Taluks	Total No. of Villages & Towns	Basis of the claim : Linguistic percentage as per 1951 Census		
			Marathi	Kannada	Others
<i>Belgaum</i>	Belgaum	84	61	23	16
<i>Belgaum</i>	Khanapur	206	77	12	11
	Athani	10	61	33	06
	Chikodi	41	73	17	10
	Hukeri	18	80	15	05
<i>Karwar</i>	Karwar	50	78	15	07
	Supa	131	84	06	10
	Haliyal	120	67	17	16
<i>Bidar</i>	Humnabad	28	63	16	21
	Bhalki	49	59	30	11
	Santhpur	69	60	26	14
<i>Gulbarga</i>	Aland	08	68	24	08

The Govt. of Karnataka also studied the report as submitted by Messers T. Channaih and S.S. Malimath. Later on, it came out with a brochure entitled "Views of the Govt. of Mysore on Border Disputes between the States of Maharashtra and Mysore." It rejected the principle of "Village Unit Theory", to take the 1951 Census figures to decide simple linguistic majority of the population of the Village and said, "the settlement of the boundaries of the States under the S.R. Act, 1956 was neither tentative nor flexible but final. The question of boundaries as settled by the S.R. Act, 1956 should not be raked up again..... However, it does not mind in rectifying the maladjustments if any, and if such a thing is found while implementing the S.R. Act." ⁴ The Govt. of Karnataka made it clear to the Govt. of Maharashtra whatever the views it has submitted to the States Re-organisation Commission, 1955 regarding the re-adjustment of boundaries. In its Memorandum to the States Reorganisation Commission, it had mentioned that the adjustments should be confined to a ten-mile belt in the District of Maharashtra State (adjoining Karnataka on the other side) on either side of the existing boundary lines. Within this ten-mile belt only the villages where more than 70 per cent of the population speak Marathi or Kannada should be included in Maharashtra or Karnataka respectively. In an area where the majority of one language spoken was less than 70 per cent, that area should be considered as bilingual or multi-lingual as the case may be. The mere fact that a certain language group has a substantial majority in a certain area should not be the sole deciding factor. If any boundary question is opened once again, many other States may start fresh claims against their neighbours. If at all such questions are re-opened, they will have to be settled simultaneously along with those of Maharashtra by applying one common principle to all the States. The Govt. of Karnataka repeated that this boundary question should not be re-opened.

Thus, both the States could not come to agreement to solve their boundary disputes. Both the States were aware

of the recommendations made by the different Commissions from time to time regarding the basic unit to be adopted to demarcate the boundaries and also the percentage of population to be taken into consideration in order to determine the linguistic majority of the population. For instance, the Dhar Commission of 1948 said that an area should be considered as uni-lingual if the majority of one language spoken in that area was at least 70 per cent; otherwise, such an area should be considered as bi-lingual or multi-lingual as the case may be.⁵ The Wanchoo Commission of 1953 examined the issue of the formation of Andhra State out of the composite Madras State. It suggested that District should be adopted as the basic unit to settle the boundary disputes, but it made an exception so far Bellary District was concerned. In Bellary District, seven Taluks were predominantly Kannada speaking and three Taluks were predominantly Telugu speaking. As such, the Wanchoo Commission said that the matter should be settled by a separate Boundary Commission. But Andhra and Tamil Nadu settled the whole thing amongst themselves instead of seeking for the appointment of a separate Boundary Commission and referring the matter to it. When Karnataka State was formed, Adoni, Alur and Rayadurg Taluks were transferred to Andhra Pradesh and the rest of the Taluks including Bellary were transferred to Karnataka State. The Wanchoo Commission adopted the District as the basic unit to settle the boundary disputes and further it relied on the following criteria: (a) Village to be the unit for purposes of border adjustment (b) small pockets to be avoided (c) that a majority of over 50 per cent of any language in a village should be enough for the purpose of adjustment of this boundary (d) geographical features such as rivers, hills, mountains will constitute the mutual boundaries and (e) economic factors such as the location of the Headworks of a project or Irrigation sources and their ayacuts in the same state should be relied upon to settle the issue. *

The States Re-organisation Commission of 1955 rejected the demand to adopt village as the basic unit to settle the boundary disputes between the two States. Rather, it adopted District as the basic unit for making territorial adjustments between the disputing States. In its opinion such a thing will do immense good and will promote national growth. Moreover, the District had been developed into organic units over a period of years. It had promoted administrative unity and economic betterment of people. The States Reorganisation Commission said if any such adjustment had to be made due to necessity, they should be made only by mutual agreement on the part of disputing States. "We have departed from this rule only when for ensuring geographical contiguity or for some other important administrative or economic considerations, detachment of part of a District has become imperative." ⁶ Thus, the above facts indicate that both Karnataka and Maharashtra were aware of the recommendations made by different Commissions.

The Mahajan Commission, 1967. The Govt. of Maharashtra requested the Govt. of India to take steps to settle the border disputes. There was agitation also. The All India Congress Committee in its session held at Bangalore in July 1965 passed a resolution to the effect "That all efforts shall be made to settle such disputes in matters relating to borders, river waters etc. by mutual negotiations backed by a sincere desire to find fair and equitable solutions. In cases where such efforts do not succeed, the Govt. of India shall take steps to set up an appropriate machinery for a speedy and final settlement of the disputes"⁷

The matter had to be deferred on account of Pakistan's aggression and later on on the sad demise of the then Prime Minister Shri Lal Bhadur Shastri, when Mrs. Indira Gandhi became the Prime Minister of India. In May 1966, the All India Congress session was held at Bombay. The pressure was brought by the then political leaders and the public of

Maharashtra on the Prime Minister to solve the border problem. A resolution was passed at that session to set-up "a One-Man Commission" by the Govt. of India to solve the boundary disputes between Karnataka, Maharashtra and Kerala. In Karnataka, there was agitation on the part of the public not to re-open the issue but to stick to the S.R. Act of 1956. The Congress Working Committee met again on July 5th, 1966 and requested the Chief Ministers of both the States to settle this issue by mutual discussion. As usual, the Chief Ministers of both the States did not come to any agreement though they had three meetings. The Congress Working Committee which met in New Delhi on 9th October 1966 passed another resolution requesting the Govt. of India "to set up a Commission which shall hear the concerned parties to the dispute and shall give its final decisions." The then Chief Minister of Maharashtra Shri V. P. Naik was happy and said at New Delhi that he was satisfied with that resolution. He said that the verdict of the Commission would be binding on all the disputing States as well as on the Union Govt. The Karnataka Govt. objected to this development and the steps taken on this issue. However, it had to reconcile itself ultimately. The Govt. of India appointed Shri Mehr Chand Mahajan as One-Man Commission on 25th Oct. 1966 to resolve the border disputes between States of Karnataka, Maharashtra and Kerala. It presented its report to the Govt. of India on 25-8-1967. The same was released to the public on November 4th, 1967. It may be noted here that the States of Karnataka and Maharashtra had submitted the memorandum to this One-Man Commission. The Govt. of Maharashtra had claimed 814 villages with a population of 6, 70, 228 from the State of Karnataka. It had also suggested the transfer of 260 villages with a population of 3, 25, 260 from the State of Maharashtra to Karnataka. It had further urged that the Village should be taken as the Unit, that the 1951 Census should be taken into consideration to determine the simple linguistic majority of the population and also there should be geographical contiguity.

Whereas the Govt. of Karnataka in its Memorandum to the Commission had laid claims to the following areas :

- 1) Gadhinglaj Taluk of Kolhapur District
- 2) Sholapur Town.
- 3) The whole of the Taluk of South Sholapur in Sholapur District
- 4) The whole of Jath Taluk in Sangli District.
- 5) The whole Taluk of Chandghad in the District of Kolhapur.
- 6) The whole Taluk of Akkalkot in Sholapur District and
- 7) The Taluk of Kasargod in Kerala State.

The Mahajan Commission had studied all these things before submitting its report to the Govt. of India. In its report as submitted and released to the press, the village was not the proper unit to determine the linguistic homogeneity due to the variation in sizes and population of the villages. It expressed the difficulty in adopting rigidly the "Village Unit formula" as it does not furnish any scientific basis for resolving the boundary disputes. The Commission adopted a formula known as "The Tract Theory". It said, "Where there is a sizable compact tract where a language group predominates and the population is at least 20,000, that area may be considered as a Unit for resolving the boundary disputes".⁸

Regarding the question of contiguity between border villages on one side or the other, the Commission said, "Such contiguity must be something more than a mere geographical contiguity of lands. It must ensure free mobility and inter-course of the people speaking a language since the question under consideration is the transfer of population. The test is whether the people of the two Units have normal facilities to meet each other, have reasonable connection by roads and that there are no natural barriers such as hills and forests to separate them. Two Units which have no means of communication or where geographical boundary runs through a dense forest or over a steep hill and the inhabited areas and cultivated areas on either side are far away from the geographical boundary, there is no real contiguity".⁹

Let us examine the claims of Maharashtra to certain other areas on special grounds :

(1) *Belgaum Problem.* It claimed Belgaum City and Belgaum District. As regards Belgaum City, it said that city had always had a Marathi speaking majority. The first Panch Committee for Belgaum was set-up on December 1st, 1851 and a Municipality was set-up in 1853. The records of the Panch Committee from 1851 onwards and the records of the Municipality from 1853 have all along been kept in Marathi. Further the Belgaum city and the surrounding Marathi tracts have vital economic connections with the important Commercial centres of Maharashtra like Bombay, Poona, Kolhapur, Sangli, Ratnagiri, etc. The City is connected with South Konkan which has no rail connection. Belgaum provides road connection and marketing facilities for export and import for the Ratnagiri District. The trade link with the District of Ratnagiri is established by two routes - one via Kolhapur and the other Sawantwadi and Vengurla. Belgaum and Belgaum city are the cultural centres for the Marathi speaking people. As such both should go to Maharashtra.

Karnataka Govt. objected to this claim. According to its view, from 1920 onwards, the whole of Belgaum District including the city of Belgaum was included in the Karnataka Provincial Congress Committee Circle. The Congress Session was held at Belgaum in 1924 under the Presidentship of Late Mahatma Gandhi. The place where the session was held was called Vijayanagara in proud memory of the Vijayanagar Empire. The Maharashtrians might have conducted a Marathi literary Conference sometime in 1929. It is also a centre for the cultural activities of Kannadigas. In the District, Kannada language is spoken by the majority of the people. After the formation of Karnataka State, Belgaum has been made as the Divisional Headquarters by the Govt. of Karnataka. Karnataka Govt. is trying to develop this area economically also and already certain developments have taken place in this region. Further it cited the States Re-organisation

Commission Report, 1955. The SRC said, "The Chandighad Taluk of Belgaum District is predominantly Marathi speaking. It can conveniently be transferred to the State of Bombay and Karnataka State should have no objection to this proposal." (Para 347)

"As regards the remaining Taluks of Belgaum District, it has been claimed that two of them Khanapur and Belgaum (including Belgaum Town) as well as portions of Chikodi Taluk have closer affiliations with the Marathi speaking Districts of Bombay than with the adjoining areas in the proposed Karnataka State. The Marathi majorities in Khanapur and Belgaum Taluks are only marginal, that being, 53.9 and 51.4 per cent respectively. Six out of the remaining seven Taluks are predominantly Kannada speaking and in the seventh only, namely, Chikodi, the Kannadigas constitute the largest single language group. All the Taluks of Belgaum District have economic relations with both the Marathi and the Kannada speaking areas, which are chiefly in cotton and oil seeds. Neither the Belgaum Town nor the other disputed areas have particularly any marked economic affiliations with the Marathi speaking Districts of Bombay. There is no case, therefore, for detaching either Khanapur or Belgaum or portions of Chikodi from the rest of the Belgaum District." (Para 348)

"It has been argued that the Belgaum Town had an absolute Marathi majority and that due consideration should be given to this factor. Separate mother-tongue figures for this town were not compiled during the last Census.—Even if it is admitted that this Belgaum Town has now a Marathi majority, in view of the very Marathi majority in the Taluk of Belgaum and the fact that Economic relations are not particularly marked with any linguistic area, the future both of the Taluk and that of the Town, should be decided more properly on administrative grounds. If as many as nine out of the eleven Taluks go to Karnataka (Chandighad going to

Bombay and Belgaum being disputed), then on administrative grounds, the Belgaum Town which is the District Headquarters, along with the Belgaum Taluk, should also go to Karnataka (Para 349)" ¹⁰

The Mahajan Commission in its Report said, "The Marathi speakers in Belgaum City, Shahpur and Cantonment, which at present form the urban area, constitute 46 per cent of the population. In order to give the City lungs and room for expansion, I have included five villages (i.e. Mr. Mahajan said) which are Marathi majority villages near about the City area but even with this addition, the linguistic percentage does not go above 47 per cent. Therefore, on the basis of linguistic gravity, Belgaum City along with Shahpur and Cantonment, cannot be transferred to the State of Maharashtra." (Para 252)

Further, it said, "The total population of the urban area with the five Villages kept in the city, namely, Belgaum (Rural), Madhavpur, Anagol, Wadagaon and Dhamne (South Belgaum) works out to 1, 74, 425 out of which speakers of Marathi language are 83,762 and speakers of Kannada language are 46, 793 and speakers of other languages constitute the rest of which about 25,000 are Muslims, for the benefit of 83,672 Marathi speakers, I do not find it just and equitable to throw over 90,000 non-Marathi speakers into uni-lingual State of Maharashtra. 46 or 47 per cent speakers of one language cannot carry with it 54 per cent of other language groups." (Para 253)

Further, the Mahajan Commission Report said, Geographically also Belgaum Town is situated on the border of the Marathi predominant compact area to the West of it and to the South-West of it. In its North, East and South, is the Kannada predominant area."

In Para 269, it said,— "I cannot recommend the inclusion of the City of Belgaum and the five villages round about

it and the two villages of the Industrial Estate-Majagaon and Peeranwadi in the State of Maharashtra." ¹¹

2) *Karwar-Haliyal-Supa Problem* : In the District of Uttara Kannada, Haliyal and Supa, Konkani is spoken by the people. The Government of Maharashtra put forth its claims specially to these areas on the ground that Konkani language is a dialect of Marathi. Scholars like Dr. R.G. Bhandarkar, Dr. P.D. Gune, Dr. V.S. Sukthankar, Simeon Potter, Dr. Baburam Saksena, Dr. George Grierson, Mr. Max Muller, Dr. Suniti Kumar Chatterjee and others have opined like that.

The Govt. of Karnataka said, regarding Konkani language, there are three schools of thought namely, (a) that Konkani is a dialect of Marathi (b) that Marathi is derived from Konkani and (c) that Konkani language is an independent language and has no affinity with Marathi. In its opinion, it is an independent language. The scholars like Dr. S.M. Katre, Dr. P.B. Desai, Shri Govind Pai, Shri Kakasaheb Kalekar, Dr. B.A. Salekore, Shri Warde, Shri Walawalker, Mr. George Moraes, Shri N. Purushottam Mallya, Sri C.P. Ramaswamy Iyer and Shri T.P. Meenakshi Sundaram and other linguists have opined that it is an independent language. This language has been treated as an independent language even in Census from 1931 to 1961. Konkani speaking people cannot be clubbed with Marathi speaking people in these Taluks and these Taluks should remain in Karnataka.

Mr. Mehar Chand Mahajan in his report said, "I have no hesitation however, in deciding that Konkani speakers of these areas cannot be added to Marathi speakers for the purpose of giving Marathi language predominance and give the Marathi speakers the benefit of the principle of linguistic homogeneity which would entitle them to take these villages to Maharashtra..... (Further) that these Taluks themselves have no geographical contiguity with the existing border of Maharashtra." ¹²

(3) *Problems of other areas* : Regarding the disputed areas of Chikodi, Hukeri, Athani and Khanapur Taluks of Belgaum District, Bhalki, Humnabad and Santapur Taluks of Bidar District, Aland Taluk of Gulbarga District claimed by Maharashtra and the disputed areas of Sholapur City, North Sholapur, South Sholapur, Mangalwedha, Akalkot Taluk of Sholapur District, Jath Taluk of Sangli District, Shirol, Chandghad and Gadhinglaj Taluks of Kolhapur District claimed by Karnataka, the Mahajan Commission adopted a common policy and decided the issues. Mr. Mehar Chand Mahajan said in his report : "The fundamental basis of re organisation of States is linguistic homogeneity..... The linguistic group claiming transfer to a unilingual State of any area or City should have preponderance in the population of the area or the City and that preponderance should be substantial and not of a slight nature or merely of a fluctuating character. I have also held that the percentage of population over and above 50 per cent and ordinarily 60 per cent should be regarded as stable and if the population of the language group is below this percentage, no change in the status-quo should be made." ¹³

4) *Kasargod problem* : The present Kasargod Taluk and the present Hosadurga Taluk-both formed one Kasargod Taluk until the Re-organisation of States in India in Nov. 1956: Kasargod Taluk was a part of South Kanara District which was then in the Madras State. The States Re-organisation Commission recommended the transfer of the District of South Kanara to Karnataka. But the whole of the then Kasargod Taluk was cut off and joined to the newly formed Kerala State. The Kerala Govt. split this into two separate Taluks-the Southern portion (Hosadurga) and the Northern portion (Kasargod). While doing this the Kerala Govt. recognised Chandra-giri and Payaswini Rivers as the natural boundaries between these two portions. In the southern portion, Malayalam is predominantly spoken whereas in the northern portion, Kannada is predominantly spoken. The claim of Karnataka is restricted to the area north of Chandragiri river which con-

stitute the present Kasargod Taluk minus the eight villages (Bandadka, Kuttikole, Bedadka, Kolathuru, Tekkila, Perambale, Chemnad and Kalanadu) which not only lie to the South of the river but are predominantly Malayali speaking. Further, Whatever the area claimed by Karnataka State, that area is geographically contiguous to it. Kasargod Taluk, according to historical evidence had links with Karnataka. Originally, this portion was called "Tuluvanadu". This had trade connections with old Mysore and Kodagu as well as with Puttur and Mangalore. The official language of Kasargod Taluk has always been Kannada. The Govt. of Karnataka claimed this portion on account of administrative convenience, language homogeneity, political background, geographical contiguity and cultural unity. No wonder if the people of Kasargod Taluk carried on an agitation to merge themselves with Karnataka.

When the Mahajan Commission was appointed in 1956, there was President's rule. The matter could not be taken up with the Kerala Govt. till the popular Govt. was established. This Govt. came into being in 1967. When the Kerala Govt. was approached, it did not submit any memorandum to Mahajan Commission. It kept quiet. It did not say anything to the Commission on Kasargod Issue even though the Commission made several attempts to get a reply and its views. The Govt. of Kerala was non-co-operative and it did not send any observers to watch the proceedings when the Commission came to receive the memoranda from others. So the Commission gave ex-parte decision, that being, that Kasargod should go to Karnataka.

After the Commission's report was released to the Press, Kerala Govt. objected to this on the ground that this area has been added to it by the S.R. Act which is final. This question should not be re-opened just because there is agitation. This ex-parte decision cannot be accepted by Kerala Govt. It said

"that it is better to allow the present borders to continue since no other State borders are being re-demarcated."¹⁴

Subsequent Developments

The Govt. of Maharashtra was thoroughly disappointed after seeing the Commission's Report. It came out with a pamphlet called "Maharashtra-Mysore Boundary-Mahajan Report-A Bundle of Inconsistencies, 1968" wherein it criticised the report and rejected its recommendations. It said that its recommendations were not binding on the State Govt. of Maharashtra. Whereas the Govt. of Karnataka said that "the recommendations of Mahajan Commission's Report is binding on both the Governments, i.e. Maharashtra and Karnataka. The Parliament should approve it and should see that its recommendations are implemented. by the Govt." However, the problem pertaining to the border adjustments between Karnataka and Maharashtra and Karnataka and Kerala has remained unsolved till now.

The subsequent developments show that a number of riots, arson and looting have taken place in various places at different times between Marathi speaking people and Kannada speaking people. The cordial relations which existed in the past between these two different language speaking groups has come to be affected and no more such relations exist. Even the politicians have to be blamed for this. Further, the Govt. of Maharashtra has seen that this issue has been kept alive. Repeatedly, it has urged the Govt. of India and the Govt. of Karnataka to solve the border issues. It has made it clear that the recommendations made by Mahajan in his Report were mandatory in nature. It criticised the Commission's recommendations on the ground they were discriminatory and arbitrary. It was the bounden duty of the people of Maharashtra to fight for the cause of their brethren residing in the border areas and there was nothing unjustifiable in their action. The Govt. of Maharashtra as well as the State

Govt. of Karnataka started pressurising the Union Govt. to solve the border issues. On August 19, 1974 Shri Uma Shankar Dixit, the then Minister for Home Affairs stated in the Lok Sabha that the border dispute between Karnataka and Maharashtra would be solved before 1976 General Elections. Again on April 21st, 1976 Shri Brahmananda Reddy replying to a question put by Shri Madhu Dandavate said that the border dispute would be solved on the basis of accepted principles. Mr. Brahmananda Reddy had expressed the hope that the dispute would be solved before the next General Elections. He made it clear that the suggestions or recommendations of Mahajan Commission were not the last word. Afterwards, former Union Home Ministers Messers H. M. Patel (under Janata Govt. Rule) and P.C. Sethi stated in the Parliament that the Maharashtra-Karnataka Border dispute did exist. All these things show that the Government of Maharashtra has kept up the issue alive and has urged the Govt. of India repeatedly to solve this issue

All M. P.s from Maharashtra and the leaders of Maharashtra Ekikaran Samiti (M.E.S.) went on a Joint Delegation and met the Prime Minister Shri Rajiv Gandhi on August 19th, 1985 and requested him to solve this border dispute. The Prime Minister then assured that Joint Delegation that he would get the boundary dispute examined through his Office, would here the Karnataka Chief Minister, and if necessary, call the members of the Delegation again before taking a decision. However, nothing of this sort took place as the Govt. of Karnataka insisted that the Govt. of India should implement the recommendations of Mahajan Commission Report.

Shri R.S. Mane, M.L.A. and President of the Central Committee of M.E.S. said on May 10th, 1986 that "the Maharashtra Govt. has rejected the recommendations of Mahajan Commission on the ground that it does not properly appreciate the facts, completely discards popular wishes democratically expressed, shows scant respect for the opinion

of the linguistic experts, lacks any scientific approach or coherent principles and is generally discriminatory and arbitrary. The M.E.S. stands totally opposed to the recommendations of the Mahajan Commission as a Unit, geographical contiguity demanded by the Samiti have not been followed by the Commission." He further said, Mr. Ramakrishna Hegde, the Chief Minister of Karnataka, should know that anything which was unprincipled, discriminatory and arbitrary. be it an enactment or an award or a report would not be allowed to remain in this democratic country. The Mahajan Commission's recommendations could not be an exception to this and have therefore, received the treatment they deserved from the Central Govt. and the Governments of Maharashtra and Kerala".¹⁵

In the meanwhile, when the Mathew Commission's terms of reference was published to solve the border disputes between Punjab and Haryana, the Govt. of Maharashtra as well as political leaders and the leaders of M. E. S. urged the Govt. of India to appoint another Commission to issue the following guidelines to solve the border dispute between Maharashtra and Karnataka and Karnataka and Kerala : The Village Unit theory; the Principles of Linguistic homogeneity and Geographical Contiguity. Shri Kiran D. Thakur also said in his "Tarun Bharat", "If the Centre does not review the Maharashtra-Karnataka border disputes with the same principles, it would amount to adopting double standards." Chief Minister Ramakrishna Hegde said on May 14th, 1986 "If at all the Maharashtra leaders wish to refer to Punjab as the model, it must only be to draw the lessons from what was happening there even after the Punjab accord was signed."¹⁶

Prime Minister Mr. Rajiv Gandhi observed on May, 27th 1986 "That the Mahajan Commission had gone into the gamut of the problem and had submitted its report to the Govt. of India. If all issues are to be re-opened after relevant decisions

have been taken on them then there is no meaning in setting up such institutions. There has to be some sanctity to the institutions we set up."¹⁷ Mr. Sharad Pawar, Leader of the Opposition in the Maharashtra Legislative Assembly said while reacting to the Prime Minister's statement that the Central Govt. had already declared that the Mahajan Commission's Report was not final. Besides, former Home Ministers like Messers H.M. Patel and P.C. Sethi have stated in Parliament that the Maharashtra-Karnataka Border dispute did exist.¹⁸

Maharashtra Chief Minister Shri S.B Chavan said on June 18, 1986 that "the Centre could be called upon to intervene in the boundary dispute between Maharashtra and Karnataka only after a congenial atmosphere of greater understanding was created. A settlement on the issue was not beyond reach but in the prevailing atmosphere, it was not right to ask for intervention—— He was prepared to meet his counter-part in Karnataka as many times as might be necessary to try and create such an atmosphere."¹⁹ The Maharashtra Legislative Assembly passed a Resolution "That the Border Dispute between Karnataka and Maharashtra shall be solved by taking 1951 Census, the people's will and other factors as the basis."²⁰ A few intellectuals both in Karnataka and Maharashtra have opined that even now it will not be too late for the Govt. of India and these two State Governments to settle this dispute amicably by identifying the villages to be transferred without insisting upon the proof regarding the question whether they are Kannada-speaking or Marathi-speaking villages. Even the Union Home Minister of State Gulam Nabi Azad emphasised on June 19th, 1986 "the need for the Chief Ministers of Maharashtra and Karnataka to meet first to find a solution to the boundary dispute."²¹

Prime Minister Shri Gandhi said in Calcutta while addressing the intellectuals on July 2nd, 1986 that "he was totally opposed to the concept of linguistic States but at the moment

the Centre is not going to do away with them. The need of the hour was a linguistic culture. Language should not be made a vehicle of political doom. Regretting that culture had been taken out of languages and were made a political weapon, (he said) we should reverse this trend and cry a halt to the approach of some people who are trying to have tiny units for themselves."²² As such, one wonders if the Chief Minister of Maharashtra has stated that, namely, that the time is not ripe to call for Central intervention to solve this issue.

In the interest of Marathi-speaking and Kannada speaking people living in the border areas of Maharashtra, Karnataka and Kerala, in the interests of national integration and to promote their well-being and overall development, the Chief Ministers of Karnataka, Maharashtra and Kerala should sit together giving up their rigid stand: they should discuss and evolve an acceptable formula or a set of principles: on the basis of these they should solve their boundary disputes after making necessary territorial readjustments with the permission of the Union Govt. and the Indian Parliament's approval.

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A NOTE ON THE MALAIYADIKKURICHCHI INSCRIPTION OF MĀRĀN-CHĒNDAN, YEAR 17

Dr. M. D. SAMPATH *

A rock-out cave temple of Mahādēva at Malaiyaḍikkurichchi, Sankaranayinarkoil Taluk, Tirunelveli District, Tamilnadu has yielded a very interesting record.¹ It is engraved on the decorated corbel of the southern pillar, third from the proper right. The fascimile of this unique record is reproduced in the Annual Report (Plate III a). This is taken up for discussion here with the kind permission of the Director of Epigraphy and the Chief Epigraphist, Mysore.

The language of the record is Tamil and the characters are Vaṭṭeḷuttu of the early seventh century A. D.

The object of the record is that this stone temple (*karriruk-kōyil*) was caused to be excavated by Pāṇḍimaṅgalavadiaraṣaṇ Śāttan-Eraṇ, the *kiḷāṇ* of Sēvūr, under the orders of the king Māraṇ Chēndan, in his 17th year. On the basis of the architectural details of the cave under study it may be suggested that it was originally a Jaina structure that was converted later as a Śaiva structure. A number of instances of similar nature are not unknown during this period.

The palaeography of this inscription is of special interest. The Vaṭṭeḷuttu character, so called, is distinguishable from its Tamil counterpart, in that the former has certain angularities and oblique forms. The letters found here which are not met with in contemporary Tamil script are *cha*, *ya*, *ma* and *pa*. The pulli is marked to the side of the top as in *ñ*, *n*, *ṇ*, *ṇ*, *ṇ*, *ṇ*, (line 3), to right top as in *ṇ* (line 2), *ṇ* (line 2 & 3),

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y (line 3) and on the top as in *ṇ* (line 2), *ṇ* (line 2) and *ṇ* (line 3). The *kombu* and the *kāl* used here are early. The sign for medial *ē* is not uniform, e.g.,

chēṇ^o (line 1)

cheḷ^o (line 1)

ṇē (line 1)

Sēvū^o (line 2)

The form of *cha* found used here is not met with in Tamil. It is an angularised type seen uniformly. In the tripartite *ya*, the left arm has taken a deep curve more than the middle arm. This is typical of the Vaṭṭeḷuttu script. The letter *ṇ* used here is similar to the form present in the Vallam cave record of Pallava king Mahēndra I.² The vertical stem of the Brāhmī *ṇ* has forked at the top and the top horizontal line has taken two curves one to the left and another to the right touching the bottom line. It appears to be an ornamental type of alphabet. But this letter has evolved from the Archchalūr form of Roman 'Z' into two concave curves in the earliest Vaṭṭeḷuttu form occurring in the Irulappatti record³ and in the unpublished Pūḷaṅkurichchi record of Chēndan Kūraṇ. Thus the form of the present record is definitely of the Tamil script which is characterised by the two concave curves seen horizontally and being connected to the base line. The letter *y* has taken the full form and not opened up as seen in the Irulappatti record where the right curve tried to join the left stem near the top.

P has taken an oblique base line comparable with a similar form occurring in the Kūram plates of Paramēśvaravarman⁴ in contrast to straight or curved line of the early forms seen in the Vaṭṭeḷuttu script of a century and a half earlier. The curve of *ṇ* drawn in continuation of the base line in the early Vaṭṭeḷuttu forms has developed into two horizontal concave curves leaving no room to guess for a midrib that once existed.

BOOK REVIEWS

I

Devotional Songs of Narsi Mehta : Translated by Swami Mahadevananda with an Introduction by Sivapriyananda, Motilal Benarasidas, Delhi, 1985, pp. 146, Rs. 80.

Here is a rich fare of 100 select devotional songs of the great poet saint Narsi Mehta (1414-1480 A D.), translated into English by Swami Madhavananda, an Englishman who has embraced Hinduism and taken the ochre robes. Seventy of them have for their theme the celestial love of the Gopis led by Radha for Krishna in the great tradition of the *Bhagavata* and Jayadeva's *Gita Govinda*. The remaining have Bhakti-Jñāna-Vairāgya for their theme. For a true appreciation, one has to view the songs through Hindu eyes, remembering that a devotee "may take the emotional attitude of a servant to his master (*dāsya*) : or of one friend to another (*sakhya*); or of a parent to a child (*vātsalya*); or of a child to a parent (*śānta*); or of a wife to her husband (*kānta*); or of a beloved to her lover (*rati* or *mādhurya*); or of a godhater towards god (*dveṣa*)." (page 3.) Any of these emotions that come naturally to a devotee would lead him to the goal-salvation. Sister Nivedita has stated that she understood Christianity in its true spirit only on coming to India and had a knowledge of these diverse forms of devotion. The renderings of the songs are free and simple and touch the heart. We have, in Radha's words, a sample of a mystic's agony in :

"I search for you in every street
And endlessly I look
For footprints of the yellow clad,
So mad I am with passion filled,

My footprints are unsteady.
So fast I run like a frightened doe,
I lose my sense for love of you."

And the unbounded joy in attaining celestial bliss in :

"We are joined as one forever, My king
I feel your stirrings in each part of me.
Not for one second are we separate hearts,
You are my slender love, my life and soul,
You are before my eyes both night and day,
When I look through the door I see you stand,
When I look through the window there you sit,
Even in the street you walk with me."

(Songs 23 & 21.)

The great saints of the Hindus, with solitary exceptions were concerned with salvation, not social reform. It is by taking their spiritual message to one and all, it is by the life they led, free from all mundane prejudices, rich and poor, high-born and low-born, they cleansed our lives, not by any frontal attack on caste or any other social evil. Narsi Mehta lived and spoke in the same tradition. He says succinctly :

"The Lord does not divide bhaktas-one from another,
It is we in our ignorance, who stand apart." (Song 75.)

Again, when charged with violating well-established caste customs by mixing freely with Harijans and other low castes,

"——Narsi says with folded hands,
I love all devotees of Hari." (Song 90.)

The scholarly Introduction of Mādhavānandaji gives us an account of the saint's life and his works, and the traditional religious background of the songs. The Notes appended to each of the songs go a long way in helping those who are not brought up in the Hindu tradition to get the best out of them. Of special interest to students of History is the fac

that the songs vary often in language from the Gujarati prevalent in the saint's days ; many linguistic changes have crept in because of the immense popularity of the songs among the people at large over centuries. A valuable bibliography is appended.

The Publisher is to be complemented on the very fine way the book has been produced.

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II

Political History of the Chalukyas of Badami: by Dr. D.P. Dikshit ; Abhinav Prakashan, New Delhi ; 1980 ; pp.i-xi + 1-313 ; Price, Rs. 95/-

The book is an authentic record of a concise history of the Chalukyas of Badami. It deals with the subject in ten chapters, with the introduction (Ch.I), the chapters being : II. The Origin and Early History ; III. The Foundation of the Dynasty ; IV. The Chalukyas at their Zenith ; V. The Successors of Pulakesin II ; VI. The Era of Peace and Prosperity ; VII. The Decline of the Chalukyan Power ; VIII. General Administration ; IX. Fiscal Administration ; and X. Army Organization. Appendix A gives a list of inscriptions of the Chalukyas of Badami ; and Appendix B gives the chart of the genealogy and chronology of the Chalukyas. With the Bibliography and the Index the book has been brought out in a nice form. The perusal of the book leaves one fully impressed by the erudition of the author and the presentation of the material so painstakingly collected and systematically arranged. The author has taken into account the views of earlier scholars in the field,

and has tapped all available sources, that include literary, archaeological and numismatic.

As the author points out, the name Chalukya is variously spelt as Chalukya, Chaluki, Chalukya, Chalkya and Chalikyā. It is proposed that the original name was Chalkya, of which the others are variants. Discussing the topic of the original home of the Chalukyas, the author takes note of all other opinions, also mentioning the various branches of the family. He rejects the opinion about the possible identity of the Chalukyas with the Sogdians. He suggests that the family might have its original home at the border of the Maharashtra and Karnataka. The suggestion gets support from the fact that most of the records of the Chalukyan kings are from the present state of Maharashtra. It is significant to note, in this connection that Hiuen Tsang refers to the Chalukyan king Pulakesin II as a ruler of Mo-ho-lo-cha, by which he means Maharashtra. It is to be noted that, even now ; many families calling themselves Chalukya reside in the area bordering Maharashtra and Karnataka. The suggestion of the author that the region of Bidar and Osmanabad was the original home of the Chalukyas is, hence, acceptable. From this region they spread to the north and the south, and established a powerful empire at Badami (=Vātāpi). The author traces the lineage of the Chalukyan kings ; and the exploits of each individual king are carefully recorded, starting from the first king, Jayasimha. The ticklish point of the clash between Mangaleśha and the famous Pulakesin II has been well established, by pointing out how the illustrious uncle Mangaleśha wanted to usurp the throne for his sons for good, side-tracking the legal heir Pulakesin II, and how the latter finally achieved glory. Fresh light has been shed on the identification of certain places mentioned in the Kolhapur plates, also, the identity of Kāmera is freshly examined, while dealing with Pārasika and Simhala. The suggestion by some scholars that Kāmera refers to Khmer (Indo-China) and that it was this region that was annexed by the Chalukyas is refuted by the author ; and it is suggested, and

convincingly, that the Khmer traders settled on the west coast of India were subjugated by the Chalukyas who held sway from sea to sea. It is pointed out that the Tajika army (Arabs) invaded the west coast first in the reign of Vikramāditya II, The chapters on the decline of the Chalukyas and that on the General administration are noteworthy and full of interest due to aptness of analysis and details. The power, which at one time challenged the great Harsha, came to decline due to natural causes like extensiveness of empire and lack of proper control, weak successors, Arab invasions, southern incursions from the trio-Chola, Pāṇḍya and Pallava. The chapter on "General Administration" deals with such topics as Kingship, Order of Succession, Royal Consecration, Education of Princes etc. The royal titles indicate the nature of prowess of the Chalukyan kings. They are : Paramēśvara, Mahārājādhirāja, Bhāṭṭāraka ; and the usual chain of titles is : Satyāśraya Śrīprthivivallabha Mahārājādhirāja Paramēśvara Bhāṭṭāraka. The religious epithets are : Paramabhāgavata, Paramamāheśvara and Dharma-mahārāja. These attributes betray the dynasty's attitude towards the subjects and also the religion. They also indicate the ethical basis of their rule.

The author has done well in tracing the lines of central administration also. The administrative divisions of the Chalukyas had such divisions as Nāḍu, Maṇḍala, Viśaya, Bhoga, Āhāra, Grāma Pura-Nagara. Through these units the kingdom was governed. Some of the administrative officers are : Divirapati, Deshādhipati, Deshillaka, Vishayapati, Bhogika, Rashtrakūṭa, Grāmakūṭa, Gamuṇḍaka, Grāmabhogika ; and a host of others are mentioned. Many of these are not found in the earlier texts on polity, and are, obviously, of latter origin. The author has spared no pains in recording all aspects of the Chalukyan administrative system.

Some places create unpalatability. Thus, for example, the statement, "the performance of Vedic sacrifices after the purificatory bath" (p. 37) does not agree with the tradition. The "puri-

ficatory bath" (*avabhr̥ta*) is the last in the sacrifice ! Yet, it is interesting to note the record of a number of fresh sacrifices performed by the Chalukyan kings, such as Bahusuvāna, Pauṇḍarika and Hiranyagarbha. The last named actually comes in the Shrauta tradition as an expiatory ritual and not as a main sacrifice. About the Mushakas, the author's surmise is that they were the Mūlakas said to have been conquered by Sātavāhana. In this connection, we may refer to the book : *A History of the Mūshika-vamsha*, by Dr. N.P. Unni (Trivandrum, published in the same year, 1980), which treat the Mūshikas as a separate clan. The mention of Vatsarāja, with some doubt, as a legendary figure at one place (p. 153) and, with certainty, at another (p. 159) as Udayana, the hero of the drama *Svapnavasavadattam*, could have been trimmed with confidence. But, such places are extremely few. The book commends itself to scholars of ancient history. It has to be accepted as a safe record of the Chalukyas of Badami.

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NATIONAL SEMINAR ON SCIENTIFIC HERITAGE OF INDIA : A REPORT

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A National Seminar on SCIENTIFIC HERITAGE OF INDIA was organised by the Mythic Society in collaboration with the Indian Institute of World Culture's Centre for History and Philosophy of Science and the Bangalore University, on 19-21 September 1986 in the premises of the Mythic Society. The Seminar was dedicated to Bhaskaracharya II the celebrated Indian mathematician-astronomer of the 12th Century A. D. Hailing from Karnataka, this great intellectual, through his *magnum opus*, the *Siddhanta-Shiromani*, won approbation of scholars both in and outside India. He was verily a beacon to the succeeding generations of mathematicians and astronomers.

The Seminar was intended to provide a viable forum for presentation of several aspects of history of science and technology in India in the light of the new scholarly inputs and perspectives.

The total number of papers presented at this seminar on different aspects of the scientific heritage of India, was 40 (7 on astronomy; 8 on mathematics; 9 on medicine and biological sciences; 8 on technology and architecture; 8 on conceptual methodologies, man, nature and society: Indian approach). One lecture on Food and Nutrition in Ancient India was also delivered.

It was indeed heartening that the authors of all the papers had taken great pains not only in preparing their papers but also in bringing out various dimensions of the scientific heritage

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in a rational and objective manner. The discussions were lively and academically delightful.

The total number of participants including those who presented their papers were over a hundred. Three scholars from abroad Dr. A. I. Volodarsky (USSR), Dr. Karl Kadlez (Austria), and Mr. Yukoi Ohasi (Japan; currently working in the Lucknow University) specially participated in the Seminar and presented the papers.

An important aspect of the Seminar was the exchange of views amongst scholars during and outside the Seminar, which would enable them to augment their own subsequent scholarly pursuits. Such interactions had also the possibilities of bringing to the fore, in the foreseeable future, a critical delienation of the scientific heritage of India through their devoted efforts.

The Seminar was inaugurated by Dr. D. Shankar Narayan, Vice-Chancellor, Bangalore University, and the inaugural session was presided over by Shri T. R. Satishchandran, I A S, Chief Secretary to the Government of Karnataka. Dr. Shankar Narayan throw light on the great strides made by the ancient Indian savants of science in astronomy, mathematics and medicine. He deplored the fact that the facilities available in the Indian Universities for teaching of, and research in, history of science was indeed inadequate and needed to be strengthened. Shri T. R. Satishchandran wondered whether the country could claim to have, at present, a real scientific base and the scientific temper, even though it had the rich scientific heritage. He stressed the fact that the scientific heritage had to be recaptured and meaningfully applied in the present context which unfortunately has its own scientific imbalances. Professor E.C.G. Sudarshan, in his Valedictory Address, pointed out that in the past, 'self-knowledge' was of fundamental importance and that the scientific temper was fostered to a great extent in India. The Indian tradition gave much encouragement to creativity

and excellence as well as unity of all knowledge. He also dwelt at length on the present state of affairs in the field of science and technology, stressing the fact that the nation had to evolve its own standards of science, including science education and research.

The session on Astronomy brought out the nature and structure of source-materials, both composite, religious texts and secular ones; the determination of various epochs in our history using the *Uttarayana* as yard-stick; methodologies of *Panchanga* computations; ecliptic components of parallax and the impact of West Asian astronomers on India.

The session on Mathematics highlighted the mathematical heritage of India, starting from the Indus Valley civilization and the contributions of Brahmagupta, Mahavira and Bhaskaracharya II and the enrichment of mathematical science in India through Arabic and Persian sources.

The session on Medicine was deeply concerned with the basic postulates and issues of both the Ayurvedic and the Siddha systems, as also the Unani medicine during the Moghal rule. Since the traditional systems of medicines continue to be an integral part of the medicare of our country even today, the importance of these systems was stressed both in relation to its holistic and composite approach, as also its relevance now in the context of the analytical and multi-level fragmentary approach of the Western system of medicine, the limitations of which are now looming large. It was pointed out that the traditional systems had tremendous insights which needed an indepth study, specially in respect of neuro sciences and the psycho-somatic aspects. It was stressed that the concept of *Nadi* and other fundamental principles needed a thorough scientific investigation with multi-dimensional methodologies and these systems should shine in the perceptions of the present. An additional aspect of this session was that the medical investigations in the regions of Goa and

Kerala as also the systematic botany in ancient India, were presented and discussed.

The session on Technology and Architecture related to the significant aspect of ancient mining and metallurgy, in copper, zinc and iron, as also the agricultural practices and irrigation in ancient India. The principles of Hindu architecture and the town planning in temple cities highlighted the general ethos in these fields.

The session on Conceptual Methodologies, Man, Nature and Society: Indian Approach, brought out the general integrative trends as well as the inadequacies in respect of the Indian logical approach to formal sciences. However, it was refreshing to learn from Dr. Karl Kadlez who presented the paper on Evolution of Epistemologies vis-a-vis the paradigm of a qualitative science with some reference to Indian thinking, that certain aspects of modern scientific epistemological positions, have their parallels in some of the Indian thought structures and the Eastern wisdom is of great value to the modern scientific epistemology to develop its growth-points. In any case, it was generally recognised by the participants that there was a great need for a critical understanding of the over-all attitude, both conceptual and practical, which has characterised the Indian culture-area.

The last session on Science and Social Values emphasised that, though one ought to be legitimately proud of the scientific heritage of India, it is desirable, indeed necessary, to be critical and objective as well as to take a comprehensive view of the intellectual endeavours of the ancient savants of science, who themselves tried to lead an integrated life.

The Indian sub-continent, by virtue of its geographical position and the multi-dimensional endeavours of its inhabitants, played a pivotal role in the dynamics of scientific ideas and techniques in the ancient and medieval periods. There were

significant and endogenous achievements, not unoften fortified by exogenous influences. A spirit of inquiry, and an assimilative attitude lay at the bottom of practically of the entire Indian thought-structure of which the various sciences were an integral part. The scientific endeavours in astronomy, mathematics, medicine, and chemical practices were assiduously fostered over a long period, as evidenced by a wide variety of extant manuscripts whose number is indeed legion. Likewise, the impressive inventory of archaeological data reveals the heights scaled by the Indian artisans and craftsmen.

The incredibly vast sources, both literary and archaeological, relating to the history of science and technology in India, have attracted the attention of scholars alike Indian and foreign. Since Independence, Indian scholars, though their number is woefully insignificant in comparison with those in other areas of study, have been making concerted efforts even with the limited support available to them. Most of these scholars are in the universities and other institutions engaged in critical studies on the history of science, out of their own volition. The National Commission for the compilation of history of sciences in India, has been, over the last twenty years, promoting studies in this field.

The History of Science, as an academic discipline, can meaningfully flourish only in the Universities. Even though a number of good universities have a wealth of scientific source-materials including manuscripts in their Oriental libraries, and also the linguistic expertise, it is indeed unfortunate that, for one reason or the other, the history of science, as an interdisciplinary study, has not yet been able to develop its own viable roots in any of the Indian Universities. Perhaps, in the near future, this situation may change if at least a few universities take a positive attitude towards the promotion of teaching of and research in history of science. In the meantime, seminars of this type continue to play a sustaining supportive role in keeping the interest in the subject alive.

COMMENTARY

This has reference to the article "Lapidary Section in Bhoja's Yuktikalpataru-An Assessment" by Drs. N. Gangadharan & K.C. Rajashekharan-vol. LXXVII Nos. 1-2, p. 136-154 of *QJMS*, Jan-Jun, 1986. While gemmology is the science of the study of gems, lapidary is the technology of cutting and polishing of gemstones. The material observations presented in the paper by the learned authors deal essentially with the science of gemmology. Hence, it appears to be rather erroneous to title the paper under study as lapidary instead gemmology.

It would have been helpful if the authors could have made some observations on the chronology of the various Sanskrit texts considered for comparison in the body of the paper. The most important gemmological texts in Sanskrit are *Arthashastra*, *Byhatsamhita*, *Garudapurāṇam* and *Skandapurāṇam* of 3rd century B.C., 5th century A.D., about 10th century A.D. and 13th or 14th century A.D. respectively. *Manimala* of S.N. Tagore is of the 19th century. The date of *Yuktikalpataru* is wanted in the paper for a clear assessment how much of the descriptive material by Bhoja is drawn from earlier texts and how much is his own contribution to the discipline. In the absence of a discussion on the date of the texts, it would be difficult to make remarks on its original contributions, if any.

In the absence of standardisation of gemmological terminologies in Sanskrit with the modern mineralogical nomenclature it is rather difficult to equate zircon for *gomeda* as some others equate it with hessonite garnet; *vaidurya* as cat's eye since many minerals exhibit the property of cat's eye effect; sapphire may not be *indraneela* only - it may also mean *mahanee'la*; *marakata* could be emerald or jade-when addressed as *taarkshya*; *karketana*-what species of quartz is it; *rudhirakhya*

is equated simply as *ratna*-what *ratna* is it; *sphatika* is equated as crystal-almost all gemstones are crystalline only; then what crystal is *spatika*?

It is difficult to understand why *ayaskanta* - magnet or may be lodestone - is included under the head of *alankarayukti* by Bhojadeva. If it were to help the princes in the study of gems, the instructions by Kautilya appear to be rather more helpful in identifying the gems that are entered to be treasury or for personal decoration by kings.

However, in the absence of any information on the text in English, the attempt by the authors is commendable.

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A NOTE ON TWO INSCRIPTIONS

AT BELGAUM - A D 1204

G.R. KUPPUSWAMY

There are two stone inscriptions¹ in Kannada language and script, now preserved in the Department of British and Medieval Antiquities of the British Museum, London. These inscriptions belong to the reign of *Mahāmandalēswara* Kārtaviraya IV, one of the princes of Ratta family of Saundatti. Both the records bear the same date S. 1127 corresponding to Saturday, 25th December 1204. Originally, the two inscriptions were set up in one or another of the three Jain temples, remains of which are found in the Fort of Belgaum. While the Fort itself belongs to a later period, it is learnt from the record itself that one of the temples "Ratta Jinālaya" was built by Bichana or Bichiraja (different from the Royal temple of Rattas at Saundatti mentioned as Rattara Patṭa Jinālaya built some time in 985.),² and grant of land, sites, houses and dues made to one Śubhachandra Bhattarakadēva and the *Achārya* of the said Śāntinātha temple, attached to the Maṭha at Hanasoge (K.R. Nagar taluk, Mysore dt.), by Prince Kātavīrya himself on the date sp. at Vēṇugrāma. alternately Vēṇugrāme and Vēlūgrāme, identified with Belgaum. The donations were to be utilised for the upkeep of the temple. The two stone tablets bearing the inscriptions were removed to the British museum sometime during the latter quarter of the 19th century or so.³ The first of the two inscriptions is a unique inscription in so far as it throws light on the town-planning and economic organisation of Belgaum or Venugrame, an important commercial and industrial town of the 13th century, a second capital of the Rattas and the chief town of a small district of 70 villages, the area of the Ratta Kingdom roughly corresponding to the Belgaum district.

Incidentally, it throws light on the system of currency, weights and measures of the times in Medieval Karnataka. Evidently, the population though mixed in character, with settlers from Gujarat and Kerala, were fully conversant with the Kannada language and script and Kannada was also the official language of the Royal family. The second one,⁴ mentioning a similar grant to the same Jain temple, refers to other places in Belgaum dt, some of which remain to be identified, evidently parts of Ratta Kingdom and heart of old Karnataka, where Kannada was spoken and written.

Town Planning : The population of the town of Belgaum, composite in character, consisted of 4000 *mahajanas* or burghesses, probably the normal residents of the place, and the merchant classes made up of local merchants (*sthalada mummuridanḍar*), *mummuridanḍas* of both classes of itinerant traders of Kūṇḍi 3000 corresponding to Belgaum dt, evidently rural (Kūṇḍi *mūsāsirada pattaṇiga modalāda ubhaya nānādeś mummuridanḍar*), merchants from Gujarat (*lāla vyavaharigalu*) and Maleyāla or Kēraḷa (*Maleyāla vyavahārīgālu*). Apart from these, there were also the gold workers (*Chinnageyikadavaru*), clothiers (*dāsīgaru*), chiefs of other traders (*paradaru*) which also must have included many more small traders, as oil mongers (*telīgaru*), dealers in varnishes and paints (? *drinksalīgaru*) etc., who in an assembly made the grants and dues to God. Among others, incidental reference to whom are made in the inscription, mention may be made of horse dealers of the north and south, Veṇuḡrāma serving as *entrepot* and of the other animals used as pack-animals, such as ox (*ettu*) and buffalo (*kāna*), shops dealing with cotton textiles (*hatti vasara*), jewellery (*maṇigāra*), perfumes (*gandha*), perfumes' bazar (*gandha vaṇigara angaḍi*) and gold smith's booth (*akkasalegammata*). There were also grocers of consumable articles some of which were imported from outside including cloth, imported in bundles (*sireya Kadage*), perfume, imported in parcel (*gandha vana*); cotton, imported in carts (*hattiyabhaṇḍi*) and

bales (*pēru*); paddy, imported in carts (*bhattada bhaṇḍi*) and head loads (*pēru*) and also sold to the extent of *anakaṇa* and in shops in the bazar; rice (*akki*), black pepper (*meṇasina hēru*) brought on head loads, asafoetida (*ingu peṭṭige*) brought in boxes; green ginger (*alla*), turmeric (*arisina*); arecanuts (*aḍale heru*); betel leaves (*ele-heru and hore*), cocoanuts (*tengina kāyi - hēru*); palm leaves (*ōle-hēru and hore*); jaggery, imported from outside (*bellada bhaṇḍi, hore*); plantains (*bāle-kāyi heru, hore*), myrobalans (*nellikāyi hēru*), sugar cane (*karvun hagara*) and pot stone (? *balaha*, is it *palaha* or *bal pa kallu*). Apart from oil mongers there were also oil mills (*gāṇigam*) for locally crushed oil.

The inscription refers to streets or wards (*kēri*) within the town and those leaving from Belgaum to other places. Among the former, mention is made of the great eastern street (or ward) with its western course (*hādi*) and western street (or ward) with its westerly course, the building of the great god Kapilesvara with white plaster, and sālabasadi and the house situated in their neighbourhood. There is also reference to western gate and a road leading to Aneyakere and, another large tank identified with the one on the north of the Fort of Belgaum, along east side of which goes the road of Kanbargi referred to in the inscription as Kaṇamburige (*Kaṇambūrige Alūrim paduvaṇa heggere*) and the land therein. There is also reference to western market in the town and to street on the south of the market. There is reference of *Rāyavīdi*, the bazar on its east side at the western and of northern street (ward) (*angaḍi baḍagaēriyabadagana wāḍiya paḍuvaṇa kaḍeyol rājavithiyim mūḍal*). A house measuring 5 cubits (*keyi*) in width and 21 cubits in length which was also granted which gives some idea of the dimensions of the house built (63' x 13'-4")

Some idea of the weights, and measures, and currency can also be had. Some articles of consumption such as rice, paddy, black pepper, oil and myrobalans were measured, whereas others,

like coconuts, betel leaves, arecaunt, plantains, sugar cane and jaggery were counted. Some articles like asafoetida, *alla* and turmeric were weighed. Articles were either carried in *bhandi*, and calculated as such, *pettige* (box), *heru* (perhapson pack animals) *hore*, (head load), *kadage* (bundle), *javala*, *sindu*, *acchuor* blocks (as in the case of jaggery) and *hagara*. The units of weight mentioned are *sollage*, *māna* or *vāna*, *pavam* *valls* or *tūka*. The units of currency consisted of the *gadyana* ($\frac{1}{2}$ sovereign) *hāga kani*, *tāra* and *hiriya hāga*. Specific land measure such as *mattar kamma* and measuring rod as *Venugramada kōl* and *Kanabargiyā kol*, are found mentioned.

A correct interpretation of the inscription is impossible at this stage as the reading of the text at some places is inaccurate or not clear or the translation is imperfect. For instance the use of the term *kaksha* and the contribution based on it, *ankanār-thada-battam*, etc. The translations of the terms *gēri* or *kēri* as street seems to be inaccurate. It would be more appropriate to translate them as ward, and the term *hari* has no meaning unless it is *hādi*. Further the term *vasara* in translated as shop which is questionable.

The second inscription refers to some places in Belgaum dist. which have been identified. For instance, Koravalli is the ancient name for Chikodi itself, headquarters of a division of the same name. Two miles south east of Chikodi is umbarani or Umrāni, mentioned in the record. Belgodu is Belkud, three miles south east of Umrāni. Bammavāda is Bambalwad, 2.5 miles south east of Umrāni. Karavase in Kharosi, four miles W.S.W. of Umrani. Karbur is Kabbur 11 miles south east of Chikodi, Hingalge is Nahinglaj, 7 miles W.S.W. of Chikodi, Na distinguishing the place from Gad Hinglaj in Kolhapur district. There are a number of other places in Kundi 3000 (larger part of Belgaum Dist.) which need to be identified.

Notes :

1. *EI* XIII No. 3-3 A & B from Belgaum, now in London Museum; L.D. Barnett, pp 15-36.
2. *J.B.B. of R.A.S.*, Vol. 10, p 204.
3. *EI* XIII 3A p 16.
4. *Ibid* 3 B

TO THE CONTRIBUTORS

- E.g.**

Book; Pandit, M.P., *The Upanishads*, Ganesan & Co.,
Madras, 1968, p. 51

paper : Reo, N.L. "Géographical Notes.", *QJMS*, 1973
LXIV, 1-4, pp. 1-8

5. The contributors should indicate their degrees, academic and occupational position and postal address
6. The contributors are entitled to receive two copies of the number in which their papers are published and 20 reprints.
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எழும்பூர், சென்னை-600 008.**

தவணைத்தாள்.

சே. எண் :

ப. எண் :

[illegible]

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